



COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

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October 19, 2017

TO: Each Supervisor

FROM: Mark Pestrella 
Director of Public Works

**BOARD MEETING OF OCTOBER 21, 2014, AGENDA ITEM NO. 34
ROADMAP TO A SUSTAINABLE WASTE MANAGEMENT FUTURE
ANNUAL REPORT: OCTOBER 2016 THROUGH OCTOBER 2017**

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 the Department of Public Works to submit annual reports on the progress of the implementation of the Roadmap and consolidate previously submitted solid waste management status reports into the Roadmap report.

Attached is the report for the period of October 2016 through October 2017. 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.

VO:jl

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Attach.

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

2017

Report to the Board of Supervisors

**Roadmap to a Sustainable
Waste Management Future**



October 19, 2017

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
Mental Health
Military and Veterans Affairs
Parks and Recreation
Probation
Public Library
Public Social Services
Registrar-Recorder/County Clerk
Treasurer and Tax Collector

Participating Cities:

City of Burbank
City of Long Beach
City of Palmdale

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 third Annual Report on the Roadmap summarizes the activities, initiatives, and programs implemented by the Department of Public Works (Public Works) in coordination with the Roadmap Interdepartmental Working Group (Working Group) for the 12-month period ending on October 21, 2017.

The Working Group has continued to work on the priorities and initiatives outlined in the Roadmap and has identified additional initiatives the Working Group can implement to further 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.

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 developing and/or implementing Organic Waste Management Plans for all three focus areas. The identification, monitoring, and education of businesses and County of Los Angeles (County) facilities has been expanded to include the second tier of compliance under Assembly Bill (AB) 1826. Public Works, in coordination with the Department of Public Health and other stakeholders, is developing a Food Donation and Recovery Outreach Program (Food DROP). The program will facilitate and promote safe donation and distribution of excess edible food to reduce food waste in the County unincorporated communities and help feed the hungry. Additionally, the County Sanitation Districts (Sanitation Districts) have initiated steps to accept and process additional organic waste at the Puente Hills Materials Recovery Facility.



Conversion Technologies: The Sanitation Districts have taken initial steps to convert additional food waste to electricity at their Joint Water Pollution Control Plant as well as to produce transportation fuel from food waste. Public Works, in collaboration with the Sanitation Districts, initiated a feasibility study for a potential anaerobic digestion (AD) facility at the Calabasas Landfill. Public Works also continues to explore the feasibility of a potential project at the Pitchess Detention Center in collaboration with the Sheriff's Department. The CR&R AD project in Perris is operating its first phase with a processing capacity of 83,750 tons-per-year. The second phase of the project is expected to begin operation later this year. As directed by the Board, Public Works continues to advocate for changes in State law and regulation that would facilitate the development of Conversion Technology projects in the County.



Product Stewardship/Extended Producer Responsibility: On November 22, 2016, the Board approved a motion 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 and have the EPR Working Group prepare a report to the Board summarizing the technical experts' findings and recommendations. The report is anticipated to be submitted to the Board in December 2017.



Household Hazardous Waste and Electronic Waste: To offer additional convenient opportunities for residents to properly dispose of their Household Hazardous Waste and Electronic Waste (HHW/E-Waste) the Los Angeles County Environmental Collection Center at EDCO Signal Hill (EDCO Center) increased collection from once to twice a month beginning in August 2017. The EDCO Center is a collaborate partnership of the County and EDCO Recycling and Transfer, the Sanitation Districts, and the Cities of Long Beach and Signal Hill. Public Works also introduced the use of handheld electronic survey devices that will replace the paper surveys used to gather information during collection events.



Emergency Management and Regional Debris Management Planning: Public Works continues to develop a mass debris management plan specific to the Unincorporated County Communities (UA Plan). The UA Plan may be implemented following a declared disaster to provide policy and guidance for the removal and disposition of disaster debris located within road and flood right-of-way within the unincorporated areas of the County.



Waste Prevention and Source Reduction: The Working Group developed a Bring Your Own (BYO) flyer to encourage County employees to BYO mugs, utensils, and food ware to work. The flyer is now being further developed to include location specific messaging, i.e., BYO to work, home, and at play. A BYO Campaign through iHeart Media is also being developed.



Construction and Demolition Debris: 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 will be updated to require a 70 percent recycling and reuse rate, which exceeds the California Standards Building Code minimum required recycling rate of 65 percent. County projects are exempt from the Construction and Demolition (C&D) Recycling and Reuse Ordinance. However, County contractors are required to submit a monthly debris recycling report and there is no penalty for noncompliance. The project specification for County Capital Projects have been modified to include language to encourage timely reporting by County contractors. Public Works is evaluating the feasibility of assessing liquidated damages to County contractors who do not meet the Debris Recycling and Diversion requirements in the contract specifications.



Resource Recovery Centers: Resource recovery centers allow materials to be dropped off for donation or buyback and provide a place to co-locate synergistic diversion-related activities. Two County operated HHW/E-Waste permanent centers are being considered for onsite resource recovery centers for public reuse of viable products acquired at collection events. Public Works is researching other reuse programs and working with the permanent center owners and operators to establish an effective reuse program.



Assessment and Evaluation: The existing Commercial and Industrial Recycling Program (CIRP) contract provides the resources to help businesses and institutions, 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 has conducted ten site visits at various County facilities, including the Los Angeles County Museum of Art; LAC+USC Medical Center; Animal Care and Control Center No. 3; Beaches and Harbors (Via Dolce Yard); MacLaren Children Center; Workforce Development, Aging, and Community Services (East Los Angeles Community Center); Augustus Hawkins Mental Health Center; Antelope Valley Rehabilitation Center; Bonelli Park; and Central Juvenile Hall. Public Works will analyze the Resource Management Plans (RMP) prepared for each

facility and will assist with implementing waste prevention and recycling programs, including programs to handle food waste and other organic waste.

In addition to the CIRP program and site visits, a contract is being finalized for a comprehensive waste characterization study for all unincorporated areas of the County. Sampling work for the study is expected to begin in Spring 2018 and will help determine where best to target future waste reduction efforts outlined in the Roadmap.



Facilitating Sustainable Practices: The Working Group continues to evaluate and improve programs to facilitate waste reduction and recycling to further increase diversion rates. This includes educating County departments of programs/policies in place, such as the Countywide Surplus Property Disposal Program Policy which facilitates the exchange of surplus materials between County departments as well as provides the opportunity, when appropriate, to offer the materials to approved non-profit organizations thereby diverting surplus materials from landfills.



Local Green Business and Market Development: Public Works continued to serve as the Los Angeles County Recycling Market Development Zone (RMDZ) Program Administrator. The RMDZ program helps connect businesses that manufacture products using recycled-content feedstock or process materials for recycling, with financial and marketing assistance. To promote the program, an online and print advertising campaign will be launched within a year. Public Works working with its Smart Business Recycling Program consultants developed draft guidelines with selection categories and criteria for a green business recognition program to encourage businesses to implement sustainable practices. Public Works met with other County Departments to discuss ideas for a name for the awards program, how to promote the program, and other categories and criteria for selecting recipients of the award. Public Works will work with our consultants to identify businesses eligible to receive the award.



Outreach and Education: The Working Group continues to develop educational materials and outreach strategies to inform County staff and the public on sustainable practices. Outreach and education have been developed for specific programs/initiatives, such as the Beverage Container Recycling program, BYO Campaign, HHW/E-Waste, 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 County 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 declined from 3.92 pounds per person per day (ppd) in 2014 to 3.76 ppd (75 percent diversion) in 2016. Therefore, 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 third 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 including some newly added initiatives to the Roadmap effort.

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 elements 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 its 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 have been 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 have been 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 we can improve the program. Improvements to the website/program will be discussed and proposed during the next reporting year. We also continue to encourage interdepartmental collaboration, such as working with 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 both 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 Internal Services Department (ISD) on revising 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. The Surplus Program is further discussed in the County Operations section of this report.

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. On June 14, 2016, the Board of Supervisors adopted a Motion, which directed a voluntary Pharmaceutical and Sharps Industry-led (Industry) program consisting of public education and outreach and quarterly collection events for the unincorporated communities of the County.

On August 12, 2016, the EPR Working Group received Industry's revised Education and Outreach Campaign Plan, Quarterly Take-Back Event Days Plan, and Benchmarks and Outcome Measurements Plan. The plans were evaluated to determine if they met, partially met, or did not meet the requirements specified in the June 14, 2016, Board of Supervisors Motion. After careful review by the EPR Working Group, it was determined that the plans could not be approved because they did

not meet the requirements of the Board of Supervisors Motion in several ways, which are detailed below:

- The education and outreach campaign continued to promote “in-home” disposal and did not target the 300,000 households in the unincorporated areas;
- The take-back event days plan placed sole responsibility on the Los Angeles County Sheriff’s Department (LASD) to organize, plan, and conduct the events; did not provide an alternative plan for the operation of the take-back event days in the event LASD did not want to assume this responsibility; lacked sufficient detail about the collection, transportation, and disposal of the collected medicines and sharps; and did not identify event sites within the 10 recommended unincorporated area communities across the five Supervisorial Districts.
- Benchmarks were not established to measure the effectiveness of the education and outreach efforts and take-back event days in the unincorporated areas.

On August 26, 2016, Public Health notified the Industry that the plans could not be approved because they did not meet the requirements specified in the Board of Supervisors Motion. The Industry was also provided with Plan Correction Sheets that identified those components that met, did not meet, or only partially met the requirements of the Motion as well as recommendations for how the Industry could strengthen its proposal for resubmittal. The EPR Working Group did not receive a response to Public Health’s August 26, 2016, letter, and the Industry never resubmitted revised plans for review and approval by Public Health.

The EPR Working Group evaluated the total industry effort in response to this Motion and reported back to the Board of Supervisors on October 27, 2016, that this effort did not yield the results envisioned by the Board of Supervisors and highlighted the challenges in relying on a voluntary approach to address this critical public health and environmental problem with the urgency it warrants. The complexity of the pharmaceutical and sharps manufacturing industry suggests that an EPR-based regulatory solution may be the optimal method to achieve the policy goals previously adopted by the Board of Supervisors.

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 EPR Working Group identified several potential technical experts and is continuing to work with them to have them provide reports back. The final report is anticipated to be 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.
- ❖ **Newly Initiated Roadmap Element:** 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)
- ❖ **Newly Initiated Roadmap Element:** Research the feasibility of implementing product bans or disposal bans where sustainable alternatives are readily available and reasonable.

Background

In November 2011, the County of Los Angeles undertook an extensive outreach and stakeholder engagement process to explore the feasibility of banning expanded polystyrene (EPS) products in the unincorporated areas of the County. At the conclusion, the County issued a Feasibility Report in 2011 concluding that viable alternatives to EPS food packaging existed and that an EPS food container ban was feasible. The County decided to hold off on adopting an ordinance in the unincorporated County areas banning EPS food containers pending a State bill that was making its way through the California Legislature that would have banned EPS containers Statewide. That legislation was never enacted. Over the last six years, new technologies and products have come to market, which offer even more attractive cost-effective alternatives to polystyrene food service ware. Over one hundred municipalities in California including Santa Monica, Calabasas, Culver City, Hermosa Beach, Malibu, Manhattan Beach, Pasadena, South Pasadena, and West Hollywood have adopted ordinances prohibiting or restricting polystyrene Food Service Ware and instead require the utilization of cost-effective reusable, recyclable, or biodegradable alternatives.

Currently, Public Works administers trash collection and recycling contracts under two main types of systems within the County unincorporated communities.

Garbage Disposal District (GDD) System: Under this system, a County contracted waste hauler provides residential and commercial (i.e., dumpster/roll off 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, 21 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.

Accomplishments and Milestones for the Next Annual Reporting Period

On August 1, 2017, the Board of Supervisors passed a Motion directing Public Works 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 EPS and rigid polystyrene. The report will take into consideration costs, impacts to small business, new recycling options, and health effects among other things. The report is scheduled for completion late 2017. The outcome of this study and future recommended actions will be reported in the 2018 Roadmap Annual Report.

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 are scheduled to be rebid. To align with the Roadmap's initiatives, the contracts will include new and enhanced services and programs, such as incentives to customers that choose to use smaller trash carts and possibly

receive a discount, 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 trash contracts throughout the unincorporated County areas 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:

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

Background

AB 1826 requires businesses to recycle and/or donate their organic waste, depending on the amount of waste they generate per week. Senate Bill (SB) 1383 sets the following State targets to reduce organic waste landfill disposal: 50 percent reduction in Statewide organic waste disposal by 2020 and 75 percent reduction in Statewide organic waste disposal by 2025. To help businesses comply with AB 1826 requirements and assist the State in meeting SB 1383 targets, the County developed the food waste collection pilot and is developing the Food DROP Program for businesses operating in the CUCs.

Accomplishments and Milestones for the Next Annual Reporting Period

In the previous 2015-16 reporting period, Public Works identified and conducted outreach to nearly 1,300 large generators of commercial organic waste. These commercial businesses were identified through analysis of hauler-submitted data and revealed that these locations would be ideal targets for the County's organic waste diversion efforts. Since then, focus has shifted to identifying those commercial businesses that would be subject to Tiers 2 and 3 of the State's AB 1826 diversion mandates:

- Public Works conducted approximately 900 site visits to additional large generator accounts.
- Each location received personalized on-site consultations, which included both a waste assessment and evaluation of the business' solid waste collection and management practices. Each location will be provided with a report detailing Public Works' findings as well as recommendations as to how the businesses can reach compliance with the existing organic waste recycling regulations.
- Developed database that captures all food waste generators operating in CUCs and identified large food waste generators to target AB 1826/SB 1383 and food donation outreach efforts, including markets, restaurants, and hotels.
- Established partnerships with 40 non-profits in Los Angeles County for food recovery and redistribution components of Food DROP.

- Drafted Food DROP brochure that includes information on the Bill Emerson Good Samaritan Food Donation Act to address liability concerns and promote the program.

Food Donation and Recovery Outreach Program (Food DROP) - Public Works, in coordination with the Department of Public Health and other stakeholders, has begun developing the Food DROP. Its aim is to facilitate and promote safe donation and distribution of excess edible food to reduce food waste in the County unincorporated communities and help improve food security in Los Angeles County. This program will focus on food establishments in the County unincorporated areas and will offer businesses education about AB 1826; free consultative services for safe food donation; a recognition program for participants; and a grant program to help fund food recovery infrastructure in the County. In addition to Food DROP, the Department of Public Health has taken the lead of the Los Angeles County Food Redistribution Initiative (LACFRI). This effort works with other stakeholders to prevent food waste from occurring, promote safe food donation, and promote safe food waste recycling.

Collection of Food Waste Pilot Project - In November 2016 the GDD's Food Waste Pilot Program ended. Approximately 55 businesses (mostly restaurants and small grocers) from the Belvedere and Firestone GDDs participated in the year-long program and successfully diverted nearly 250 tons of food waste. As part of the pilot, Republic Services delivered the organic material to the Puente Hills Materials Recovery Facility, which is operated by the County Sanitation Districts. The material was then sent to a third-party waste management company for processing. The resultant slurry was transported to the County Sanitation Districts' Joint Water Pollution Control Plant (JWPCP) in Carson for co-digestion with biosolids. Additionally, in July 2016 a pilot food waste collection program was started with three County Commercial Franchise haulers. This pilot project is scheduled to run for 12 months and to date has collected over 500 tons of food waste. Similar to the GDD pilot, all food waste collected in the Commercial Franchise food waste diversion pilot is sent to Puente Hills MRF for pre-processing, and is eventually anaerobically digested at the JWPCP in Carson. Public Works is considering extending the pilot for an additional 12 months to allow for greater participation from other businesses and/or waste haulers.

Food Waste Diversion Plans - In March 2017, Public Works sent out a template Food Waste Diversion Plan, which all Commercial Franchise waste haulers were required to submit as a condition of the Non-Exclusive Commercial Franchise Agreement. Public Works hosted two workshops in April 2017 to assist the haulers in understanding and fully completing this plan, which outlines how the Commercial Franchise haulers intend to collect and manage their food and green waste. These plans indicate details such as intended processing facilities, collection methods and equipment, contamination prevention, leakage mitigation, and training for waste hauling staff and businesses as well as outreach and education plans. All Food Waste Diversion plans have been reviewed and finalized as of June 2017.

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 elements 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, 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 Fall 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 the Public Works Divisions involved in construction projects and is currently incorporating feedback from those meetings. Once the logistics are determined for County projects, Public Works will move forward with the other stakeholders such as land developers, construction companies, demolition companies, C&D debris recycling facilities, and waste haulers to obtain input prior to finalizing the Ordinance. Public Works will subsequently submit the revised C&D Ordinance to the Board of Supervisors for its consideration in Fall 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 has been gathered from July 1, 2005, to June 30, 2017, on C&D plans:

- 8,499 C&D plans approved
- 4,220 of the 8,499 C&D approved plans submitted Final Compliance Reports
 - 4,279 C&D projects did not submit Final Compliance Reports
- 166 C&D projects were issued administrative monetary penalties
 - 92 of the 166 C&D projects paid the administrative monetary penalties

During calendar year 2016, for the unincorporated County areas, completed projects generated 74,131 tons of C&D debris and recycled 65,373 tons of C&D debris for an overall recycling rate of 88 percent. This number combines mixed and inert C&D debris. In addition, projects generated 46,887 tons of soil of which 100 percent was recycled. The recycling rate from C&D increased 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 elements 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 revised the Scope of Work for the County's Waste Characterization Study for the Los Angeles County Unincorporated Areas Request for Proposals (RFP) and is in the process of

negotiating with the selected contractor. Project work is now projected to begin in 2018 as discussed on page 3. 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. A large-scale study may be needed every 5 years with smaller individual assessments on a more frequent basis, including waste surveys at County facilities.

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. The County may need multiple solutions tailored to specific situations. Existing County programs need to be continually evaluated for effectiveness and cost, and assessed to determine if such programs would best serve the Roadmap's objectives through program expansion, modification, or termination.

Initiative C: Ensure Sustainable Funding and Alignment of Incentives with Program Goals in County Unincorporated Communities

The Working Group began addressing Initiative C this year. 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 right-of-ways, such as paint, carpet, furniture, and mattresses.

Background

Antelope Valley is currently not a Garbage Disposal District or Franchise District. The area is serviced by Waste Management and Republic Services who operates the Lancaster Landfill and the Palmdale Landfill respectively. Waste Management and Republic Services provides one annual bulky item pick-up where residents can dispose of up to 1-ton of waste for free. Residents are charged a fee if they need to dispose of a bulky item such as mattress on a day other than the annual free disposal day. As a result, residents illegally dump mattresses in the public right-of-way. In response, Public Works in coordination with the Antelope Valley Illegal Dumping Taskforce and the Mattress Recycling Council (MRC) conducts mattress collection events for Antelope Valley residents once a year. The first mattress collection events occurred in May 2015.

Accomplishments and Milestones for the Next Annual Reporting Period

Public Works completed six mattress recycling collection events with over 1,000 mattresses collected during this reporting period. Public Works also coordinated with PaintCare and hosted a paint recycling collection event in June 2017 in Lancaster. In addition, the MRC established agreements with the Palmdale Landfill and the Lancaster Landfill to provide fulltime permanent mattress recycling services to Antelope Valley Residents at no cost to residents and provides a \$3 per mattress incentive to residents for recycling their used mattress in lieu of illegally dumping the mattresses in the public right-of-way. The MRC funds California mattress recycling programs and incentives through an \$11 per unit recycling fee collected from consumers when they buy a mattress or box spring. Public Works is evaluating the possibility of increasing the number of Mattress Collection Recycling Events for Antelope Valley Residents from once per year to twice per year and will work with the MRC and the Antelope Valley Illegal Dumping Taskforce 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, one of which is an ordinance that will include the formerly stand-alone Recycling and Solid Waste Ordinance. In the past year, Regional Planning continued convening its Green Zones Inter-Agency Coordinating Committee and Stakeholder Committee quarterly. Below are some highlights on Regional Planning's progress in 2017:

- Regional Planning held internal working meetings this Spring where the concepts of environmental justice was presented and how it will be approached through the Green Zones Program. Regional Planning also received initial input on recycling and solid waste facilities from these meetings.
- Regional Planning received a grant from the California Strategic Growth Council's Sustainable Communities Planning Grant and Incentives Program Best Practices Pilot to conduct ground truthing activities in the unincorporated communities of East Los Angeles and Florence-Firestone.
- Regional Planning secured a consultant to develop a toxic hotspots map and screening tool that will provide analyzed information on cumulative pollution impacts within the County.

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

The Working Group began addressing Initiative C this year. 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.

Background

The Los Angeles County Recycling Market Development Zone (RMDZ) serves the County unincorporated areas and 19 member cities. The RMDZ program provides financial, technical, and marketing assistance to businesses that manufacture products from recycled materials that would otherwise be sent to landfills. Public Works has served as the Zone Administrator for the Los Angeles County RMDZ since 2004.

Accomplishments and Milestones for the Next Annual Reporting Period

During the past year, the County Zone Administrator met with four companies. While none of the companies that we met with are in the CUCs, Zone Incentive Funds (ZIF) provided by the California Department of Resources and Recovery (CalRecycle) will be used to advertise the program throughout Los Angeles County, including the unincorporated communities. Advertisements in the LATimes.com business section and the Los Angeles Business Journal will launch in Fall 2017 to inform the business community of the program and to attract new green businesses to locate in the CUCs.

Newly Added Roadmap Initiative: Emergency Management/Mass Debris Management Plan for the County Unincorporated Communities

The Working Group began addressing this newly added Roadmap Initiative. 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.

Background

The County recognized that it is vulnerable to a multitude of major disasters with the potential to generate large quantities of debris throughout the County and having a plan for the removal and disposition of disaster-generated mass debris following a major disaster event is imperative. As the lead agency in coordination of debris removal for the Unincorporated Areas of Los Angeles County, Public Works is preparing an Unincorporated Areas Mass Debris Management Plan (UA Plan).

Accomplishments and Milestones for the Next Annual Reporting Period

The UA Plan may be implemented following a declared disaster to provide policy and guidance for the removal and disposition of disaster debris located within road and flood right-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 and comment and will ultimately be submitted 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.
- ❖ **Newly Initiated Key Element:** Educate businesses on recycling programs that can help them reduce their disposal costs and increase their recycling rate.
- ❖ **Added Roadmap Element:** Develop a beverage container recycling outreach and education plan for multifamily resident's in the CUCs.

Background

The existing Smart Businesses Recycling (SBR) Program consists of providing free waste reduction, recycling education, and outreach consultation services to assist businesses in optimizing their waste reduction strategies. The SBR Program aims to help businesses comply with State laws, reduce disposal costs, and increase recycling. During this reporting period, the SBR Program consultants and Public Works staff supported Public Works' waste reduction efforts by conducting site visits and on-site consultations to large commercial waste generating accounts in the CUCs. The SBR Program also launched a targeted expanded Beverage Container Recycling outreach initiative to multifamily residential properties throughout the CUCs.

Accomplishments and Milestones for the Next Annual Reporting Period

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 site visits and provided on-site consultations to approximately 900 large waste generator accounts. Locations of interest will receive a report detailing Public Works' findings and recommendations on how the businesses can reach compliance with existing organic waste recycling regulations.

In addition, Public Works implemented a beverage container recycling outreach program for multifamily residences in the unincorporated areas of the County and at County facilities. Public Works collaborated with the Chief Executive Office (CEO) to identify key County facilities and multifamily residential properties in the CUCs as a part of the targeted expanded beverage container recycling outreach initiative. The goals of this outreach initiative were to:

- Increase awareness of recycling options for both California Refund Value (CRV)-redemptive and non-CRV redemptive beverage containers.
- To educate residents and employees of the benefits of recycling.

With respect to the multifamily residential properties, outreach materials in the form of flyers and postcards were developed to communicate the benefits of recycling beverage containers, as well as educating residents on their recycling options. Through the use of the County's SBR Program's consultants, 12 properties in eight different communities were given this outreach material, along with in-unit containers and bags. A total of 1,253 sets of in-unit containers and recycling bags were delivered to multifamily residents in the Belvedere, Firestone, and Lennox Garbage Disposal Districts, along with the unincorporated communities of Topanga Canyon, Altadena, Quartz Hill, Rowland Heights, and Hacienda Heights.

Participating County facilities were provided with beverage recycling containers appropriate for their facilities. The beverage recycling containers were placed in a location frequented by the public. The participating facilities also received outreach materials, such as flyers and posters to display near the beverage recycling containers for visitors to see. In-person outreach was also conducted at each participating facility. The goal of the program is to keep beverage containers out of the landfill by encouraging visitors to the facilities to recycle.

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

In addition to what was previously discussed in the CUC section, on June 14, 2016, the Board of Supervisors also directed the EPR Working Group to:

- Work with Walgreens in order to assess the performance of Walgreens' 24-hour kiosks located throughout the County.
- Report back on any established benchmarks and best practices that may have been developed as a result of their take-back operation within Walgreens' pharmacies.

On August 12, 2016, the EPR Working Group received information from Walgreens regarding its safe medication disposal kiosk program. Walgreens indicated that it began rolling out its campaign in Los Angeles County at the end of April 2016 and had seven kiosk locations participating in the pharmacy-based, on-site take-back program. For the months of May through July 2016, Walgreens reported that it collected the following amounts of pharmaceutical waste at its Los Angeles locations:

- May 2016 - 330 pounds
- June 2016 - 209 pounds
- July 2016 - 210 pounds

In October 2016 Walgreens provided the EPR Working Group with an update on the status of its take-back program. Walgreens indicated that it did not have any further specifics about the collection amounts in Los Angeles County and that it had not yet established benchmarks for its program. According to Walgreens, the program is still in the roll-out phase and the development of benchmarks may be something they consider after the program has been running for about a year. Additionally, as a best practice, it will be changing the signage on its bins to allow for liquids in the kiosks as well as provide information in Spanish to help reach even more customers looking to dispose of their unused and unwanted medications.

In an October 18, 2016, Press Release, Walgreens reported that on a national level involving 35 States and 500 pharmacies, it had collected more than 10 tons of pharmaceutical waste since the program's inception.

[Initiative B: Advocate for Extended Producer Responsibility and Manufacturer Responsibility at a Regional/Countywide Level](#)

The Working Group began addressing Initiative B this year. During this reporting period, the Working Group focused on the following key elements 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.

Background

In 2008, the County adopted a resolution and policy to consistently support EPR legislation and has been an active California Product Stewardship Council board member, which is a leading advocate for EPR.

Accomplishments and Milestones for the Next Annual Reporting Period

Last year, the County was a strong advocate in the passage of Proposition 67, which upheld current State law established per Senate Bill 270 (2014), banning single-use carryout bags Statewide. Public Works has been collaborating with partner agencies and municipalities to advocate for

improvements to the State’s Carpet Stewardship Program established per Assembly Bill (AB) 2398 (2010).

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:

- ❖ Newly Initiated Roadmap Element: 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.

Background

The Countywide Smart Gardening Program offers beginner and advance workshops, held on Saturdays in Los Angeles County communities. In the beginner workshop, residents learn about advance workshop, residents receive an introduction to organic gardening, landscaping with native-friendly and drought-tolerant plants; and integrated pest management.

Accomplishments and Milestones for the Next Annual Reporting Period

During this reporting period, the Countywide Smart Gardening Program held 167 Beginner Workshops, 30 Advance Workshops, and participated in 54 events Countywide, such as the Los Angeles County Fair, several Earth Day events, Home Gardening Symposium, etc.

In the 2016 calendar year, Public Works created raised-bed gardens at the following 16 schools:

	School	District
1	Juan Cabrillo Elementary	Hawthorne
2	Wing Lane Elementary	La Puente
3	Orange Grove Middle School	Hacienda Heights
4	Nelson Elementary	La Puente
5	Eastman Elementary	Los Angeles
6	San Fernando Middle School	San Fernando
7	Alliance Health Services Academy	Los Angeles
8	Judy Ivie Burton Tech Academy	Los Angeles
9	Shirpser Elementary	El Monte
10	Play Mountain Place	Los Angeles
11	Calvary Baptist	La Verne
12	Alameda Elementary	Downey
13	Anahuacalmecac University Prep	Los Angeles
14	Daniel Webster Middle School	Los Angeles
15	Calvary Christian	Pacific Palisades
16	Van Nuys Middle School	Sherman Oaks

Public Works continues to work on larger scale projects that incorporate the principles of environmental stewardship. The following table lists on-going or completed urban greening projects and grant amounts provided by the State of California Natural Resources Agency’s Strategic Growth Council.

Urban Greening Project [location]	Grant	Status
<p>Vanguard Learning Center [Unincorporated Willowbrook]:</p> <p>Developed an under-utilized school grass field into a community garden with drought-tolerant landscaping and shade trees, an outdoor learning center, and a system of bio-swales, which will not only improve air and water quality, but also reduce greenhouse gas emissions.</p>	\$75,000	Constructed (2016)
<p>Walnut Park Elementary School [Unincorporated Walnut Park]:</p> <p>Created a vegetable garden for students. Replaced swaths of asphalt pavement and grass into drought-tolerant landscaping, trees, and a walking path. This conserves water and reduces the heat island effects of this inner-city school.</p>	\$360,000	Constructed (2017)
<p>Hillcrest Drive Elementary School [View Park in City of L.A.]:</p> <p>Will replace a huge section of asphalt pavement into a meadow, amphitheater, garden, walking path, drought-tolerant landscaping bioswales, and shade trees.</p>	\$976,000	In planning
<p>Buford Seed Project [Unincorporated Lennox]:</p> <p>Will replace a hazardous asphalt sump area prone to flooding into a raised-bed garden with xeriscaping and trees.</p>	\$75,000	In planning
<p>Torrance Tree Project [City of Torrance]:</p> <p>Will redevelop a weedy corner of Madrona Marsh Preserve fronting two busy streets with visible drought-tolerant landscaping to demonstrate the effectiveness of xeriscaping to improve property.</p>	\$140,000	In planning



Vanguard Learning Center provides haven for students to unwind and for community to garden.

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 elements 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 schedule was adjusted to offer additional convenient opportunities for residents to properly dispose of their HHW/E-Waste. Three, 1-day collection events were added to the schedule and the EDCO permanent center increased collection to twice a month beginning in August 2017. A total of 59 collection events were held during this reporting period. The Program also introduced handheld electronic survey devices to eventually replace the paper surveys currently being used to gather information during collection events. A targeted public education and outreach campaign was conducted in conjunction with one of the additional 1-day collection events to encourage participation in an area where attendance has been historically low. The event was very successful and attendance at the end increased from 103 to 231. A similar, targeted campaign will also be launched in 2018 in another area of the County where attendance has been low.

Public Works launched a multi-media public education and outreach campaign in English and Spanish in September 2017. The campaign slogan, “Put it in the Box,” was developed to encourage residents to safely store their HHW/E-Waste until it could be properly disposed of at a collection event.

A conditional use permit was granted to the Chiquita Landfill, which includes the construction and operation of an additional permanent HHW/E-Waste collection center and possibly a reuse center. We anticipate construction plans for the center to be completed in 2018 followed by an operational agreement.

Collection Statistics

- Approximately 12.5 million pounds of HHW/E-Waste are collected through HHW/E-Waste collection events annually:
 - Approximately 3.3 million pounds of HHW/E-Waste are collected through **1-day** collection events annually.
 - Approximately 749,000 pounds of HHW/E-Waste are collected through the **Antelope Valley Environmental Collection Center** annually.
 - Approximately 738,000 pounds of HHW/E-Waste are collected through **EDCO Environmental Collection Center** annually.
 - 7.8 million pounds of HHW/E-Waste are collected through the cities **S.A.F.E.** centers annually.

Continued outreach and education has contributed to the increase in the total pounds collected and resident participation this year. In this report, we have itemized the various collection methods to reflect the pounds of HHW/E-Waste collected.

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, and disposal of the materials; and administrative functions.

One-Day Event Costs

- Average operational cost per pound - \$0.75
- Average operational cost per event - \$41,000
- Average number of households participating per event - 678
- Average cost per household per event - \$59

The average operational cost based on participation has remained consistent. The decrease in participating households can be attributed to the PaintCare Program, which allows residents to dispose of their paint at retail stores rather than our events and the EDCO permanent collection facility. Since the opening of EDCO, we eliminated one, 1-day event and redirect residents to the permanent facility where they have a more frequent disposal opportunity. The PaintCare Program combined with the EDCO collection center have diverted disposal costs of the 1-day collection events.

Permanent Collection Center Costs

- Average operational cost per pound - \$0.52
- Average operational cost per event - \$24,000
- Average number of households participating per event - 634
- Average cost per household per event - \$38

The increase in cost of the permanent collection centers is due to the continual increasing number of participating households.

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 element 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.
- ❖ **Newly Initiated Key Element:** 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.

Background

As previously mentioned, the County is an active California Product Stewardship Council Board member which is a leading advocate for EPR.

Accomplishments and Milestones for the Next Annual Reporting Period

Through the agreement with Bye Bye Mattress and Blue Marble Material to fund mattress collection events during this reporting period, six mattress recycling collection events were conducted with

over 1,000 mattresses collected and recycled in the Antelope Valley where illegal dumping is prevalent. Five additional mattress collection events are tentatively scheduled for Fall 2017.

As previously mentioned, the PaintCare Program, which allows residents to dispose of their paint at retail stores has been successful as it has attributed to the decrease in households participating in HHW/E-Waste events.

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 continues to actively have discussions with CalRecycle and other stakeholders to review viable options for additional funding.

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	Awarded
City/County Payment Program Beverage Container Recycling 16-17	CalRecycle	\$261,280	Funded

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 Spring 2018 to facilitate collaboration and action among stakeholders to advance CTs in Southern California.

Public Works is in the process of developing 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 later this year or early next year. Several CT projects within the County are in various stages of development, including:

Lancaster Landfill: Waste Management (WM) is no longer pursuing the development of a CT facility and instead has expressed the intent to develop a full-scale composting operation.

Joint Water Pollution Control Plant: The County Sanitation Districts continues to operate a CT demonstration project for co-digesting food waste at the District's JWPCP in the City of Carson. The Sanitation Districts have determined that it can be technically viable to expand the co-digestion project at JWPCP into a commercial-scale AD facility, if it is determined to be financially viable and after a consistent and clean food waste supply can be secured.

Waste Management recently increased the supply of food waste to JWPCP from 40 tons-per-day (tpd) to 62 tpd, due in part to the food waste collection pilot programs within the GDDs and CUC commercial franchise areas. This year, a front-end liquid waste disposal station with a capacity of 335 tpd will begin receiving food waste slurry at JWPCP. The Sanitation Districts are currently negotiating with several waste management companies to secure a front-end food waste supply. The Sanitation Districts also plan to construct upgraded back-end food waste receiving stations using funding from a \$4 million grant from CalRecycle. The back-end food waste receiving stations will be able to receive 310 tpd. The Sanitation Districts will directly inject the food waste into five of the existing digesters at JWPCP. The front-end liquid waste disposal station will be used to receive the excess. By the end of 2019, it is estimated that JWPCP will have the capacity to divert a total of 550 tpd of food waste.

Currently, digester gas at JWPCP generates power at the plant's Total Energy Facility. The Sanitation Districts plan to begin converting digester gas into compressed natural gas (CNG) for vehicle fueling. The Sanitation Districts expects to be able to produce about 2,300 to 3,500 gasoline gallon equivalents of CNG per day. The Sanitation Districts have received a \$2.5 million grant from the California Energy Commission (CEC) and has initiated the California Environmental Quality Act (CEQA) process to develop biogas conditioning infrastructure and expand the fueling station. The Sanitation Districts released a Request for Qualifications (RFQ) to determine the technology provider for this project, which is expected to start in 2018.

The Sanitation Districts have expressed intent to purchase a food waste pre-processing technology to remove contamination at Puente Hills Material Recovery Facility (PHMRF), which currently receives less than 12 tpd of food waste on average. A Doda bio-separator system will be installed at PHMRF in March 2018 to remove non-organics. The capacity is anticipated to be 165 tpd of food waste.

Pitchess Detention Center (PDC): Public Works, along with its technical consultant Alternative Resources Incorporated, is exploring the feasibility of an AD system at PDC, a cluster of jail facilities in Castaic. The preparation of the Request for Qualifications and Proposals (RFQP) for the AD system is on hold pending further direction from the Los Angeles County Sheriff's Department and the CEO.

Perris Materials Recovery Facility, CR&R Incorporated: A local solid waste management company, CR&R Waste and Recycling Services, has completed construction of the second phase of this AD project in Riverside County. This project converts organic waste into renewable fuels used by their waste collection vehicles. The first phase of the project, an 83,750 tons-per-year (tpy) digester, is currently operating. 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 unincorporated Los Angeles County. Phase II is expected to begin operating in late 2017. CR&R has completed construction of an on-site organic waste MRF that is now fully operational. CR&R has completed its interconnection to the pipeline, which will allow the facility to inject biogas from the AD operation into the pipeline. The facility expects to begin biogas injection by October 2017 once the compressors become operational.

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

- Continue analyzing the feasibility of developing a CT project at PDC, including exploring grant opportunities 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 for residences and businesses.
- Continue to educate stakeholders, such as other jurisdictions, 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 legislation facilitating CT project permitting, financing, and development in the County and Statewide.
- Continue to pursue legislation allowing thermal CTs to receive diversion credit instead of being considered disposal.

- Continue to pursue 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.
- ❖ Newly Initiated Key Element: Explore opportunities for co-digestion of source-separated commercial organics at wastewater treatment plants with excess digester capacity.

Background

Additional organics processing infrastructure is needed to meet the County’s needs for organic waste processing capacity. Siting and permitting new organics processing facilities can be costly and take years of development. The existing capacity at wastewater treatment plants to co-digest food waste can be utilized to supplement existing and future regional composting, anaerobic digestion, and chipping and grinding operations.

Accomplishments and Milestones for the Next Annual Reporting Period

Public Works prepared an organic waste management plan 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. A new section on the 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 organics 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 final organics 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 Sanitation Districts determined that it is technically viable to expand the co-digestion project at JWPCP in Carson into a commercial-scale AD facility as described above.

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 locate 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 with four companies who were looking for business assistance. Two companies qualified and received RMDZ loans to expand their business. The other two companies did not qualify for an RMDZ loan, but were provided with other business assistance resources. The two companies, rPlanet Earth and Three D Plastics, that qualified for a loan will each receive \$2 million. rPlanet Earth will purchase equipment to recycle post-consumer polyethylene terephthalate (PET) plastic to be used to manufacture plastic bottles and containers. Three D Plastics will use the loan to pay-off onerous debt and purchase new equipment to manufacture traffic safety products.

Zone Incentive Funds were provided to assist in promoting and educating businesses on the RMDZ program. A banner and table cover with RMDZ branding to use at business conferences and events were purchased through ZIF. To further promote the RMDZ program, funds will be used for an online and print ad campaign, which will launch in Fall 2017. Advertisements for the program will be placed on LATimes.com business section and the Los Angeles Business Journal to inform the local business community of the program.

Plans to collaborate efforts and funds with the City of Los Angeles RMDZ were put on hold temporarily due to a change in Zone Administrator for the City. We will continue to pursue a partnership to promote the RMDZ in the future.

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 is researching other reuse programs and working with the permanent center owners and operators to establish an effective reuse program. Once construction of the new permanent HHW/E-Waste collection facility at Chiquita Canyon Landfill is complete, Public Works anticipates to include that facility in the reuse program as well.

Initiative E: Emergency Management/Debris Management Plan at a Regional/Countywide Level

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

- ❖ Update County’s Debris Management Plan to maximize diversion of materials following emergencies and disasters.

Accomplishments and Milestones for the Next Annual Reporting Period

Public Works completed a Countywide Operational Area Mass Debris Management Plan (OA MDMP), which establishes roles and responsibilities, determines resources, assess operational threats and vulnerabilities, establishes mechanisms for collaboration, and prioritizes debris management efforts within the region, and serves as a guidance document template for the County and 88 cities within the Operational Area to develop a mass debris management plan for their jurisdictions. The Plan reflects input from key stakeholders, such as Disaster Management Area Coordinators, cities, Department of Public Health (DPH), County Sanitation Districts, Office of Emergency Management, and others. The OA MDMP was approved by the County of Los Angeles Emergency Management Council in September 2016.

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 elements 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 partnership 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 procured and launched 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: Public Works 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 2016-17 Clippers season to continue educating and increasing public awareness on the benefits and importance of beverage container recycling.

This media purchase included radio broadcasts with pre-, in-, and post-game, as well as live, in-game spots on Clippers Radio. Additional radio spots were aired on the Dan Patrick Show on AM 570 LA Sports following the game. Digital banners were posted on www.AM570LASports.com and displayed a link to the County's CleanLA.com website. The purchase also included social media postings on Facebook and Twitter to reiterate the message. Former Clippers Great, Corey Maggette, was the campaign spokesperson.

As added value to the campaign, there was an outreach recycling challenge with the Jr. Clippers Youth League Camp. The winning teams were invited to be recognized court side before a game and line-up in the Clippers Hi-Five tunnel to high five the players as they entered the court. In addition, custom designed, reusable bags were created for distribution at the game, with the message, "Don't Trash Your Cash," and included the Clippers, LA County, and Clean LA logos. This partnership presents an opportunity to reach over 4 million Los Angeles County residents.

- Dodgers: Public Works 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 2017 season to continue educating and increasing public awareness on the benefits and importance of beverage container recycling.

The media purchase included on-air spots broadcasted pre-, in-, and post-game, as well as live, in-game spots in English and Spanish; Digital Outdoor Bill Board of Supervisors postings; Digital banners posted on www.AM570LASports.com with a link to the County's CleanLA.com website; and social media postings on Facebook and Twitter to reiterate the message.

There was also a community outreach recycling competition with the Dodgers Foundation Rebuilding Baseball in Inner Cities at Dodger Dream Field parks. The top three teams were invited to a game for free. The winning team was recognized on the field and one player got to throw out the first pitch. The campaign was endorsed by Dodger third baseman, Justin Turner. This unique advertising opportunity added emphasis to the Beverage Container Recycling Program and sustainability initiative, plus provided extra encouragement for listeners to recycle their waste properly.

The two partnerships through iHeart media with the Clippers and Dodgers allowed Public Works to run a year-long Beverage Container Recycling campaign giving a more consistent recycling message and further broadening the targeted audience. Residents were educated that out of the 21 billion beverage containers sold in California each year, nearly 3 billion containers are eligible for CRV funds still end up in landfills equating to \$100 million CRV funds in the trash - literally. The campaign message emphasized the importance of recycling beverage containers to divert landfill waste and reminded residents to collect the CRV for themselves instead of trashing it.

Household Hazardous Waste - Florence/Firestone:

Public Works received a CalRecycle Grant to host and provide education and outreach for two HHW collection events in areas that have had historically low attendance. The Florence/Firestone community was identified as one of those areas, and an HHW collection event was held in April 2017. In conjunction with the HHW event, staff worked with the Florence/Firestone Community Leaders to host a community cleanup to prevent illegal dumping in the community. Combining these events leveraged the media outreach and further encouraged the message of sustainable and clean communities.

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, 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, 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 and encouraged participation in the HHW collection events and prevention of illegal dumping in their community.

Holiday Recycling:

To educate and encourage residents to reduce waste by recycling, reusing products, rethinking behaviors, and to increase participation in various County sustainable programs, Public Works solicited a holiday public education media purchase with iHeart Radio and KOST 103.5 FM during the 2016 Holiday season.

The media purchase included on air pre-recorded commercials; commercials with "Recycling Tips" for the holidays and the New Year; and live on-air endorsements during the KOST Holiday broadcast season. The purchase also included mention in the KOST E-Newsletter, social media postings, a contest on the portal and website, and digital banner displays with a link to the County's CleanLA.com website. Airing the message during the holiday season when trash disposal increases due to the holidays, allowed us to reach millions of listeners weekly. The campaign was endorsed by KOST's evening drive show host, Mark Wallengren.

"BYO – Bring Your Own:"

The Working Group in partnership with Public Works developed the "Bring Your Own" (BYO) campaign. Through the tag line, "Anywhere you go...BYO!," the campaign encourages 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. Multiple versions of flyers were developed to demonstrate the variety of places reusable items could be taken.

Household Hazardous Waste:

This campaign focused on proper storage of HHW at home and encouraged participation at HHW collection events for safe and proper disposal. The campaign slogan, "Put it in the Box," demonstrated to residents how to safely collect and store HHW products in the home until they are able to take them to a collection event for proper disposal. A special collection box was provided to residents at various outreach events to serve as a storage tool and to further enhance the message.

A joint multi-media purchase was procured for the "BYO" and HHW campaigns with iHeart Media (KOST 103.5 FM and KBIG 104.3 FM) in English and Entravision in Spanish. By combining the two campaigns and securing the media buys, we benefited from the economies of scale and added value provided by the vendors. The combined campaigns ran over an 8-week period, but each with its own unique message and celebrity endorsement.

The KOST 103.5 FM and KBIG 104.3 FM included broadcasting the messages in English (pre-recorded and live), on-air on both radio stations and on the Total Traffic and Weather Network. It also included digital streaming messages, run of site and geo-targeted banners displayed with click through to

CleanLA.com, and social media posts on Facebook and Twitter. The celebrity spokespersons were Mark Wallengren and Jill Escoto.

The Entravision purchase included broadcasting messages in Spanish (pre-recorded and live), on-air on their radio stations; digital streaming messages, run of site and geo-targeted banners displayed in Spanish and Asian languages with click through to CleanLA.com. It also included social media posts and videos on Facebook and Twitter. BYO and HHW program article displays were also included on their network sites. The celebrity spokesperson for this campaign was Eddie “Piolin” Sotelo.

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 will be to promote simple lifestyle changes motivating residents to live more sustainably by reducing the amount of waste entering the landfills, protecting the environment by properly disposing household hazardous waste, and looking for alternative, safer products.

Public Works continues to work on developing the scope of work to issue an RFP for a technical consultant and stakeholder engagement contract. The goal is to develop a scope of work that will provide the technical assistance and stakeholder engagement needed but not duplicate other efforts and ensure that the tasks included in the scope of work are not long-term tasks that can be better accomplished by permanent County employees. The draft language will include a creative strategist component with guidance from the Arts Commission.

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:

- ❖ **Newly Initiated Key Element:** 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.
- ❖ **Added Roadmap Element:** Identification of waste reduction opportunities at County facilities and develop Resource Management Plans (RMP) to assist these facilities to achieve sustainable operations.

Background

Reducing usage of materials, especially those that are not recyclable or compostable in commercial facilities in Los Angeles County, directly affects the waste stream. Although contracts that are available for any County department to use to purchase more environmentally-friendly products have been developed, reports on County product purchasing shows that there are still some products that are made available for County departments to purchase, which can be avoided in one way by changing the language used in County procurement and service contracts. ISD created a “Green Product Workgroup,” which consists of representatives from Public Health, Probation, LASD, and Public Works to evaluate the County’s existing Green Product policies, determine which policies should be updated, and identify new policies that should be developed.

Accomplishments and Milestones for the Next Annual Reporting Period

The Green Product Workgroup meetings have been placed on hold and in the meantime, Public Works has researched examples of practices from other jurisdictions with green purchasing practices.

The Commercial and Institutional Recycling Program (CIRP) consultant visited 10 County departments and is preparing a Resource Management Plan (RMP) for each site visited. These RMPs will provide recommendations for increased diversion, which may include 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 prepared a zero-waste events guide which will provide a simple checklist of activities and equipment necessary to prepare for and conduct a zero-waste event. Once completed, this guide will be shared with the Working Group, County departments, and external stakeholders through the Roadmap website.

Recommendations to update County policies and contracts were discussed with the Working Group. Additional contract language was discussed, such as providing minimum performance, reporting, and sustainable requirements, updating the list of best sustainable alternatives that meet these requirements, and providing a procedure for placing a new alternative on the list.

A total of three 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 did not have to be wasted. Thousands of water bottles have effectively been reduced according to the counters of the three stations. Public Works hopes to install one additional unit by the end of the year. Based on the success of the hydration stations, Public Works may recommend these be installed at additional County facilities.

Public Works developed a sole-source lease contract with Bigbelly for outdoor collection/compacting units for trash and recyclables to be placed at Public Works facilities. Public Works entered into a 36-month pilot lease contract with Bigbelly for outdoor solar compacting receptacles for trash and recyclables. A dual unit will be placed at the front entrance at Public Works Headquarters. The units are powered 100 percent by solar energy, provide 5 times more capacity than standard receptacles, cuts down on odors and liter overflow, and reduces collection frequency.

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

The Working Group began addressing 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.

Background

Since the inception of the County Department Recycling Program (CDRP) in 1990, the Board of Supervisors instituted several policies related to County purchasing practices. In 2007, ISD established the Purchase of Environmentally Preferable Products (Green Purchasing) Policy, which established objectives for the purchase of products that conserve natural resources, minimize environmental impacts, eliminate toxics, and reduce materials sent to landfills. Under this Purchasing Policy, recycled-content paper and remanufactured toner cartridge procurement contracts were implemented and a pricing advantage for green products was put in place.

Accomplishments and Milestones for the Next Annual Reporting Period

The Working Group discussed additional contract language, such as providing minimum performance, reporting, and sustainable requirements. These are all part of take-back language discussed to be added for County product procurement contracts, such as remanufactured toner cartridges. We plan to meet with departments who frequently purchase the products, as well as with ISD to discuss specific language to add and brainstorm on methods to follow up with the vendors.

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:

- ❖ **Newly Initiated Key Element:** 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.
- ❖ Expand the County Recycling Coordinator program and develop standardized reuse and recycling processes.

Background

In partnership with the CEO, Public Works developed an expanded beverage container recycling program, enlisting participation from public facing County facilities. Single-use water bottles are used throughout the world. Although these items are frequently recycled, particularly in States like California with the CRV, many of them continue to be part of the litter stream, which contributes to pollution to our environment.

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.

Currently ten County facilities are participating in the expanded beverage container recycling program. They include LAC/USC, Public Works Waterworks Malibu and Lancaster locations, Belvedere Park, City Terrace Park, Roybal Mental Health Center, the Zev Yaroslavsky Family Support Center, LASD (East LA Station), and Beaches and Harbors.

Initiative D: Recover Organic, 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.
- ❖ Newly Initiated Key Element: Encourage and incentivize organics collection or onsite management at venues with cafeterias, such as hospitals and detention centers.

Background

Public Works compiled a list of potential County facilities contracting for waste hauling services through ISD that would be required to comply with the first tier of AB 1826 generating more than 8 cubic yards of organic material per week. Public Works sent a letter to each County department informing them of the requirements of AB 1826 and included the Tier 1 list of facilities, which needed to sign-up for organics collection services starting in 2016. 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.

Accomplishments and Milestones for Next Annual Reporting Period

ISD executed contracts with three waste haulers for the amended Facility Ancillary Services Master Agreement waste hauling contract category that now require providing organics waste recycling in addition to trash hauling services to County departments. Public Works identified potential facilities that would be required to comply with Tier 2 benchmark of AB 1826, which are facilities that generate more than 4 cubic yards of organic material. These facilities were required to comply by January 1, 2017. In December 2016, Public Works sent out letters to County departments identifying the potential Tier 2 County facilities and providing further information on how all Tier 1 and Tier 2 could comply with AB 1826. In Fall 2017, Public Works will send out letters to County departments asking each Tier 1 and Tier 2 facility to provide an update on the status of their organic waste recycling programs. The letter will also provide more 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. Due to the complexities in collecting organic waste separately on-site, most County facilities are still setting-up the logistics.

Public Works is near completion of the process to start implementing a post-consumer food waste recycling program in its Headquarters building cafeteria. The program will require employees to dispose of food waste separately from other trash and beverage containers. Public Works is currently finalizing an employee outreach and education campaign and expects to begin the food waste program in Fall 2017.

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 donation 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 elements of this Roadmap initiative:

- ❖ Revise the County's Contract Specifications to:
 - Include a 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

We continued to work with divisions within Public Works being affected to revise the County Contract Specifications to incorporate a debris diversion rate that conforms with the rate specified in the County Ordinance and that equals or exceeds the diversion rates 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 Fall 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 to conduct waste generation and disposal surveys at County operations.

Accomplishments and Milestones for the Next Annual Reporting Period

Site visits and brief waste assessments were conducted at the LACMA; Workforce Development, Aging, and Community Services (East Los Angeles Community Center); Beaches and Harbors-Via Dolce Yard; Parks and Recreation-Bonelli Park; Probation-Central Juvenile Hall; Animal Care and Control; Children and Family Services-MacLaren Children's Center; Mental Health-Augustus Hawkins; and Public Health-Antelope Valley Rehabilitation Center through the CIRP Program. 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.

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.
- ❖ **Newly Initiated Key Element:** Look into ways to get more data for recycling and waste reduction such as collaboration with haulers and materials collection and processing facilities.
- ❖ **Added Roadmap Element:** Evaluate waste reduction practices for County employees through individual employee survey and to assess the reporting period performance of the Department Recycling Coordinators (DRCs).

Background

Benchmarking, monitoring, and evaluation is essential for continuous program improvement. For that reason, Public Works continues to determine the type of data that is needed and the best method of collection to be able to measure the effectiveness of programs.

Accomplishments and Milestones for the Next Annual Reporting Period

The Working Group finalized and distributed a Survey to each department. This survey provided feedback about current recycling efforts at County departments and assisted in determining the need for additional education and outreach about existing County recycling and diversion policies. An employee level survey will be developed to assess waste reduction practices of individual employees.

For the Food Recovery Challenge, Public Works set goals for 2016 to increase measurement of food recovery activities, such as source reduction and reuse, and to analyze new potential food recovery activities, such as diverting waste for animal feed. Public Works also set goals to try to increase food donation, if possible, and move forward with a small-scale anaerobic digester for Public Works Headquarters. In 2016, the amount of food waste source reduced was not measured, but the cafeteria utilized efficient purchasing practices and source reduced by not assembling plates of food prior to ordering. In 2016, 0.20 tons of edible food were donated and 0.48 tons of food waste were recycled through the pilot worm composting program and also through the cafeteria's practice of reusing leftover bread to make bread crumbs and leftover vegetables to make soup. On average, 7 percent of the pre-consumer food waste generated in the cafeteria each month is diverted through food donation or worm composting.

The 2017 diversion goals of the site for the Food Recovery Challenge are to prevent 0.25 tons of food from being wasted by working with cafeteria staff to conduct a study to measure food waste by category and determine the best method of diversion for each category. Another goal is to donate 0.20 tons of edible food and increase accuracy in recording the amount and type of food donated. The third goal is to recycle 12.15 tons of food waste by implementing the employee food-waste diversion program in the cafeteria and continuing the pilot worm composting program.

An easy-to-use electronic system to collect diversion data from County facilities for materials, such as paper, batteries, and toner is being discussed/developed. 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.

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.
 - Newly Initiated Subelement: 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.

Background

There are 104 County facilities potentially required to comply with AB 1826, generating an estimated total of 56,000 tpy of organic waste. There is an unknown number of additional County facilities that do not contract for waste services through ISD that may also be required to comply with AB 1826. In order to process this organic waste, additional in-County waste conversion capacity is needed. As part of its efforts to increase in-County CT capacity, Public Works has been conducting feasibility and economic analyses in order to facilitate the development of potential CT projects at County facilities. Public Works continues to implement on-site worm composting as described above.

Accomplishments and Milestones for the Next Annual Reporting Period

The potential commercial scale composting operation and an anaerobic digester at PDC continues to remain a viable option for recycling organic waste from County facilities. In order to be economically feasible, the PDC project would need at least 40,000 tpy of organic waste feedstock. PDC could provide 1,000 tpy of organic waste generated on-site. LASD's Twin Towers Correctional Facility and Men's Central Jail generate approximately 15,000 tpy of organic waste and could potentially supply a large portion of the project feedstock.

Public Works is exploring additional options for on-site organic waste processing at its Headquarters building, such as a small-scale anaerobic digester or in-vessel aerobic composter. Public Works is preparing a summary of on-site food waste technology options to distribute to other County departments that could be installed at County facilities.

Strategy 4: Outreach and Education

Initiative A: Stakeholder Engagement & Empowerment at County Facilities

The Working Group began addressing Initiative A this year. During this reporting period, the Working Group focused on the following key elements of this Roadmap initiative:

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

Background

Public Works began implementation of the CIRP program by executing a contract with a consultant to develop, among other tasks, an awards/recognition program for County departments and to conduct visits to County facilities and large venues located throughout the County in order to identify waste reduction opportunities and develop resource management plans to assist sites in utilizing the latest information and technology for increasing efficiency, cost-effectiveness, and productivity of sustainable operations.

Accomplishments and Milestones for the Next Annual Reporting Period

The existing CIRP program contract will provide the 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 develop with the assistance from CIRP, an award-recognition program to motivate County departments

to implement diversion programs and incorporate diversion and sustainability in their tasks and projects.

To promote the importance of beverage container recycling and to lead by example, Public Works launched an Employee Recycling Challenge in partnership with an existing outreach campaign with the Dodgers. The employee who recycled the most beverage containers joined Public Works Director, Mark Pestrella, and Dodgers third baseman, Justin Turner, on the field for the first pitch during the August 25, 2017, game. This challenge not only emphasized individual beverage container recycling, it reiterated office recycling and built a culture of pride, unity, and value across the Department.

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.
- ❖ Newly Initiated Key Element: Provide training for staff in advance of any new initiative impacting County-owned or operated facilities.
- ❖ Newly Initiated Key Element: 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.

Background

At the request of Public Works, the CEO sent a letter to each County department requesting they confirm or identify a Department Recycling Coordinator (DRC). The letter included a brief list of duties for the coordinator as well as a survey for each coordinator to complete to assess where improvements to the CDRP can be made. The completed DRC surveys were reviewed and evaluated to determine the type of resources the DRCs needed to fulfill their responsibilities.

Accomplishments and Milestones for the Next Annual 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.

A meeting with DRCs was held to provide participants with resources and education on various County programs, such as the Countywide Surplus 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 a Public Works division applied the steps outlined in the County Surplus Program to manage its surplus materials. The division first ensured that staff did not have a need for any of the surplus materials which included, rain boots, brochure holders, and other office supplies. The remaining items were offered to other Public Works Divisions, County Departments, and lastly non-profit organizations in that order.

The items diverted within Public works and other County departments included:

Item	Quantity
Hanging Folders (various sizes)	9 packages (25 each)
CD's	2 packages (100 each)
Binders (various sizes)	84
2 & 3-Hole Punchers	2
Document Holder	1
Brochure Holders	7
Metal Certificate Frame	1
Measuring Wheel	1
Foot Rests	2
Mud Boots	1

The items offered to approved non-profit organizations included:

Item	Quantity
2-Hole Puncher	1
6 Slot - Black Metal Divider	1
Plastic Paper Tray	1
CD's	16 packages (100 each)
Binders (various sizes)	16
Hanging Folders (various sizes)	9 packages (25 each)
Manila Folders	10

Through DRCs, Public Works will continue to educate all County staff on what they can do to help meet the Roadmap's diversion goals. Outreach materials, such as the BYO flyer have been distributed to encourage County staff to BYO mug or cup, plate, and utensils to use at work. Additionally, e-mail reminders of policies and sustainability tips are sent to DRCs to distribute to their Department staff.

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 towards 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 last year 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, especially AD facilities, will also provide the necessary organic waste recycling capacity to help businesses, multi-family residents, and County facilities comply with AB 1826. 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 continues to operate a CT demonstration project for co-digesting food waste from PHMRF at the District's JWPCP in the City of Carson. The food waste supplied to JWPCP recently increased from 40 tons-per-day (tpd) to 62 tpd, due in part to the food waste collection pilot programs within the GDDs and commercial franchise areas. These programs will provide insight on the challenges and costs associated with separate organic waste collection, which will assist the County in securing a feedstock for current and potential CT projects. The Sanitation Districts determined that it can be technically viable to expand the co-digestion project at JWPCP into a commercial-scale AD facility, if it is determined to be financially viable and after a consistent and clean food waste supply can be secured.

This year, a liquid waste disposal station with a capacity of 335 tpd of food waste will begin receiving food-waste at JWPCP. The Sanitation Districts also plans to construct upgraded food-waste receiving facilities at JWPCP by 2020 with the ability to receive 310 tpd. By 2020, the Sanitation Districts will begin direct injection of 310 tpd of food waste into five of the digesters at JWPCP and will use the liquid waste disposal station to store the excess. By the end of 2019, it is estimated that JWPCP will have the capacity to divert a total of 550 tpd of food-waste.

Currently, the digester gas at JWPCP is used on-site to generate electricity. The Sanitation Districts plans to convert digester gas at JWPCP to compressed natural gas for vehicle fueling. The Sanitation Districts has received a \$2.5 million grant from the California Energy Commission and has initiated the CEQA process to develop the biogas conditioning infrastructure and expand the fueling station. The Sanitation Districts released a Request for Qualifications to determine the technology provider for this project, which is expected to start-up in 2018.

- **Pitchess Detention Center:** Public Works, along with its technical consultant Alternative Resources Incorporated, is exploring the feasibility of an AD system at the PDC, a cluster of jail facilities in Castaic. A potential \$20 million AD project could digest 40,000 tons-per-year (tpy) of source-separated food and green waste from PDC, nearby County facilities and the surrounding region to create biogas for energy generation and heat, as well as compost for farming operations. However, additional consideration would need to be given to the availability and commitment of organic waste feedstock within the region.

- Perris Materials Recovery Facility, CR&R Incorporated: A local solid waste management company, CR&R Waste and Recycling Services, is currently operating the first phase of an anaerobic digestion project for 83,750 tpy and has completed construction of the second phase of this AD project in Riverside County. This project is designed to convert organic waste into renewable fuels for use by their waste collection vehicles. This facility has plans to scale-up in four equal phases and ultimately digest up to 335,000 tpy. Phase two is expected to begin operating in late 2017.

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	On-track
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 the passage of legislation that encourages the siting 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 creating solutions to those barriers, such as sponsoring legislation or advocating for legislative changes.
- Continue to pursue legislation facilitating CT project permitting, financing, and development in the County and Statewide.
- Continue analyzing the feasibility of developing a CT project at PDC.

- Secure new feedstock, especially organics, for CT facilities.
- Continue to educate stakeholders, such as other jurisdictions, 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.

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 2015, including disposal projections covering the planning period beginning 2015 through 2030 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.

In February 2016, Public Works resubmitted the document to the Task Force for their review. The Task Force considered the revised Preliminary Draft Siting Element in April 2016. In February 2017, an update was provided to the Task Force informing them that the base year would be updated from 2014 to 2015. 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
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
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 multi-family 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."