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# COUNTY OF LOS ANGELES

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October 21, 2015

IN REPLY PLEASE

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TO: Each Supervisor

FROM: Gail Farber *Gail Farber*  
Director of Public Works

**BOARD MEETING OF OCTOBER 21, 2014, AGENDA ITEM NO. 34  
ROADMAP TO A SUSTAINABLE WASTE MANAGEMENT FUTURE  
ANNUAL REPORT: OCTOBER 2014 THROUGH OCTOBER 2015**

On October 21, 2014, the Board adopted the Roadmap to a Sustainable Waste Management Future. The Roadmap lays out the general framework for the strategies and initiatives the County can implement in County Unincorporated Communities, Regional/Countywide, and at County Operations to decrease reliance on landfills.

The Board directed the Department of Public Works to submit annual reports to the Board on the progress of the implementation of the Roadmap to a Sustainable Waste Management Future, which was coordinated with the Roadmap Working Group consisting of 20 other departments.

Attached is a report in response to this Board action for the period of October 2014 through October 2015. 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](mailto:safshari@dpw.lacounty.gov).

VO:ak

H/ao/Roadmap Memo October 2015

Attach.

cc: Chief Executive Office (Sachi A. Hamai, Rochelle Goff)  
County Counsel  
Executive Office  
All County Departments

# 2015

## Report to the Board

# Roadmap to a Sustainable Waste Management Future

### Prepared by the following County Departments and Special Districts:

Agricultural Commissioner/Weights & Measures	Human Resources
Alternate Public Defender	Internal Services
Animal Care and Control	Medical Examiner – Coroner
Arts Commission	Office of Sustainability
Auditor-Controller	Parks and Recreation
Beaches and Harbors	Probation
Board of Supervisors	Public Health
Chief Executive Office	Public Works
County Counsel	Regional Planning
District Attorney	Sanitation Districts of L.A. County
Fire	Sheriff
Health Services	Treasurer and Tax Collector



October 21, 2015

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## EXECUTIVE SUMMARY

On October 21, 2014, the Los Angeles County Board of Supervisors (Board) adopted the Roadmap to a Sustainable Waste Management Future (Roadmap). The Roadmap identifies three Focus Areas (County Unincorporated Communities, Regional/Countywide, and County Operations) and lays out the general framework for the strategies and initiatives that the Los Angeles County (County) can implement to maximize the recovery of products, materials, and energy from waste that would otherwise be disposed at landfills.

The Board directed the Department of Public Works (Public Works) in coordination with the Interdepartmental Working Group (Working Group), including the Chief Executive Office (CEO), the Office of Sustainability, the Sheriff, and the Departments of Regional Planning, Internal Services (ISD), Public Health, Health Services, and the County Sanitation Districts, to develop implementation plans, as appropriate, for the strategies and initiatives within the Roadmap and to solicit feedback from stakeholders regarding the Roadmap. Additionally, the Board directed the Working Group to attain disposal reduction targets and submit annual reports to the Board on the progress of implementation.

Subsequent to the adoption of the Roadmap, the Working Group established four Implementation Subcommittees, one for each Focus Area and one for the Outreach and Education Priority Issue, to assist in the development of the implementation plans. The Implementation Subcommittees are comprised of various County Departments, the CEO, Board Office, and County Sanitation Districts.

The Roadmap identified 12 “priority issues.” During this first annual reporting period, the Working Group made significant progress on 11 of the 12 priority issues. The following is a highlighted summary of the progress to date for the priority issues:



**Facilitating Sustainable Practices:** Discussed ways to further increase our diversion rates to meet the disposal reduction targets identified in the Roadmap. Discussions have included evaluating alternate trash collection methods such as reducing collection frequency, adjusting the number of bins per customer, and analyzing whether to move toward an exclusive commercial franchise system from the current non-exclusive system, among many other topics.



**Local Green Business & Market Development:** Continued to serve as the Recycling Market Development Zone (RMDZ) program zone administrator for the County and helped connect businesses that manufacturer products using recycled-content or process materials for recycling with financial and marketing assistance.



**Waste Prevention and Source Reduction:** Continued to promote the free Los Angeles County Materials Exchange (LACoMAX) program which helps residents, businesses, and organizations find an alternative to the disposal of unwanted materials at landfills. Currently developing a food waste prevention program.



**Product Stewardship/Extended Producer Responsibility:** In response to the Board’s June 2, 2015, motion, prepared a report investigating the feasibility of adopting an ordinance for a pharmaceutical and sharps waste Extended Producer Responsibility (EPR) ordinance in which pharmaceutical manufacturers and producers would develop a

take-back program. Following the Board's August 11, 2015, motion, the development of a draft ordinance is ongoing.



**Organic Waste Management:** Because organic waste is the largest component of the waste stream currently being disposed, organics waste management is addressed across all Roadmap Focus Areas and Strategies. A comprehensive Organics Management Plan describing the County's role and efforts to comply with Assembly Bill 1826 (AB 1826, Mandatory Commercial Organics Recycling) has been drafted, and we are beginning the process of identifying and educating businesses required to comply with AB 1826.



**Conversion Technologies:** Submitted a report to the Board on August 20, 2015, that included clear benchmarks for measuring progress towards establishing conversion technology projects within the County. Conversion technologies are critical to reducing our reliance on landfills and recovering energy, fuels, and other products from waste, and the report notes that conversion technology facilities are being successfully developed. The Working Group will continue to facilitate the development of these projects in the County, and Public Works is providing technical assistance, educating stakeholders, and working to remove regulatory barriers.



**Household Hazardous and Electronic Waste:** Completed feasibility study for constructing additional permanent collection centers at County-owned sites. Potential sites will be presented to management in the coming year to decide whether to pursue further.



**Construction and Demolition (C&D) Debris:** Drafted revisions to the County's C&D Debris Recycling Ordinance, and initiated preparations to meet with public stakeholders such as land developers, construction companies, demolition companies, C&D debris recycling facilities, and waste haulers, which are expected to take place later this year.



**Resource Recovery Centers:** Providing places to co-locate synergistic diversion-related activities continues to be a priority for the Working Group. However, it is a mid- to long-term priority that will be addressed in future years.



**Emergency Management and Regional Debris Management Planning:** Began preparations for a new Countywide Mass Debris Management Plan, which is currently being developed by a consultant and will be shared with all 88 cities upon its completion.



**Assessment and Evaluation:** In the process of initiating a waste characterization study for the County Unincorporated Communities, which is projected to begin in 2016. A draft Request for Proposals (RFP) has been completed and is expected to be finalized later this year.



**Outreach and Education:** Began tailoring communications and stakeholder engagement plans, as needed, for initiatives in the three Focus Areas and as part of the development of the various implementation plans. The goal is to communicate key initiatives effectively to the appropriate stakeholders and target audiences.

Additionally, the Working Group addressed the following strategies and initiatives for each of the three Focus Areas:

**County Unincorporated Communities:** Identifying the largest contributors of waste that are currently being disposed but could be diverted will help identify where resources, efforts, and programs are needed, which will have the greatest impact to achieve the County's disposal reduction targets established in the Roadmap. As a result, a major waste characterization study for the County Unincorporated Communities is projected to begin in 2016. A draft RFP to complete this study has been completed and is expected to be released by the end of 2015. Commercial, institutional, industrial, residential, multifamily, self-haul, and drop off are sub-sectors that identify where various waste streams are generated and where existing and new programs could be initiated, expanded, modified, or eliminated. Each sector has unique waste management practices that need to be examined to identify waste reduction opportunities and determine options for waste diversion processing.

**Regional/Countywide:** Much of the funding that is used to support Countywide programs comes from the Solid Waste Management Fund. As disposal of waste decreases, so does funding for programs. Options discussed included increasing landfill disposal fees, creating a tiered approach for waste processing fees, or creating a waste generation fee. Public Works will continue to seek grants and other funding opportunities.

A significant portion of the waste stream that is currently being disposed is comprised of organic materials. One alternative to landfilling organic waste is processing this material at a Conversion Technology (CT) facility. The County continues to encourage the development of commercial scale CT projects within the County. Working with various cities in the County, Public Works has developed a list of potential CT sites. Many projects within the County are in various stages of development.

**County Operations** – The Working Group is working to improve coordination between County Departments for waste reduction and recycling programs to clearly identify roles and responsibilities. In response to two mandatory recycling laws (AB 341 and AB 1826) which require commercial entities including government buildings to sign up for recycling services for materials such as paper, cardboard, plastic, metal, and organics, it is necessary to know the type of waste and how much is generated by County facilities. The laws specify which facilities must comply based on the amount and type of waste they generate per week. To facilitate this effort and to improve the recycling efforts, Public Works has developed a Commercial and Institutional Recycling Program (CIRP) contract for performing waste studies of County facilities and large venues. The purpose of CIRP is to help County facilities and other institutions to achieve large-scale waste diversion and generally enhance the sustainability of their activities related to materials management. For example, the program would assist entities to develop source reduction policies, environmentally sustainable practices, and zero waste goals.

Additionally, the expiration of service contracts provides an opportunity for improvements in terms of performance and reporting. Public Works is currently working with ISD to re-evaluate the scope of work for the existing waste hauling contracts for County Departments. This will help to determine the appropriate method for soliciting a new waste hauling contract which will meet the recycling and waste disposal needs of all County Departments.

## INTRODUCTION/BACKGROUND

On October 21, 2014, the Los Angeles County Board of Supervisors (Board) adopted the Roadmap to a Sustainable Waste Management Future (Roadmap). The Roadmap identifies three Focus Areas (County Unincorporated Communities, Regional/Countywide, and County Operations) and lays out the general framework for the strategies and initiatives that the Los Angeles County (County) can implement to maximize the recovery of products, materials, and energy from waste that would otherwise be disposed at landfills.

The Board directed the Department of Public Works (Public Works) in coordination with the Interdepartmental Working Group (Working Group) to develop implementation plans, as appropriate, for the strategies and initiatives within the Roadmap and to solicit feedback from residents, businesses, public agencies, the waste industry, environmental organizations, and other stakeholders regarding the Roadmap. The implementation plans will incorporate specific details on feasibility, costs, timeline, and proposed funding. Stakeholder engagement may be conducted during the development of the implementation plans, as appropriate, or prior to implementation of the appropriate strategies and initiatives. Additionally, the Board directed the Working Group to attain the following disposal reduction targets and submit annual reports to the Board on the progress of implementation:

- Divert 80 percent of waste from landfill disposal by 2025, equivalent to disposing no more than 3 pounds per person per day;
- Divert 90 percent of waste from landfill disposal by 2035, equivalent to disposing no more than 1.5 pounds per person per day; and
- Divert 95+ percent of waste from landfill disposal by 2045, equivalent to disposing no more than 0.75 pounds per person per day.

The Board also directed that the 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 at the end of this annual report.

The purpose of the Roadmap is to provide general strategies for the County to achieve a sustainable waste management future and the disposal reduction targets identified above. The Roadmap identified the following four broad strategies for the three Focus Areas: (1) Programs and Services, (2) Measuring Results, (3) Facilities and Infrastructure, and (4) Outreach and Education. These four strategies establish a framework for the implementation of specific initiatives associated with the County Unincorporated Communities' residential and commercial sectors, Regional/Countywide infrastructure, and County operations, which include County-owned and/or operated facilities and offices as well as County-sponsored events.

In order to meet the objectives of the Roadmap and comply with current and future mandates, the Working Group established Implementation Subcommittees for each Focus Area and Outreach and Education. Each Implementation Subcommittee met monthly and supplemented their regular meetings with conference calls, webinars, and other forms of communication to accomplish its objectives. Identifying and reaching out to County Departments and other

organizations that are essential to specific initiatives has also been highly effective and has contributed to its inaugural year's accomplishments. A matrix summarizing the involvement of County Departments in the Roadmap's priorities is included as an appendix to this report (see Appendix A).

The County unincorporated area has been successful in reducing and diverting solid waste from landfills. Its per capita disposal rate are in compliance with the requirements of Assembly Bill (AB) 939 (50% diversion) and Senate Bill 1016 7.4 pounds generated per resident per day (ppd) and continues to decline from 5.15 in 2008 to 3.92 (74% diversion) in 2014. While some of this may be attributed to a slow economy, we believe the County's aggressive efforts and implementation of a vast array of waste reduction, recycling, and public education programs have made a significant difference.

The following report expands on the Roadmap's progress and accomplishments in its initial year of implementation. The Roadmap includes over 100 short- to long-term initiatives to recover organics, including food waste, to highest and best uses; advocate for extended producer responsibility; evaluate County purchasing practices; develop conversion technologies and integrated materials recovery facilities, and much more. This report focuses on the initiatives with significant progress this year.

## **PRIORITY ISSUES**

### **Facilitating Sustainable Practices**

The County has made great progress in recycling and waste diversion options; for example the 3-bin system of trash collection that includes curbside recycling and green waste collection is now nearly universal throughout the County Unincorporated Communities. Since adoption of the Roadmap, the Working Group and Implementation Subcommittees have had several productive discussions on ways to further increase our diversion rates to meet the disposal reduction targets identified in the Roadmap. These discussions have included looking into alternate trash collection methods, such as reducing collection frequency, adjusting the number of bins per customer, analyzing whether to move toward an exclusive commercial franchise system from the current non-exclusive system, among many other topics. Another very big challenge that has been discussed is having sustainable funding to support such efforts, since a large part of the funding for these activities currently is based on the Solid Waste Management Fee collected as disposal volume decreases so will the funding.

### **Local Green Business & Market Development**

**Local Green Business & Market Development:** The State of California has a program titled the Recycling Market Development Zone (RMDZ) where County staff serves as the zone administrator for the County including the unincorporated County areas as well as 19 member cities. The RMDZ program combines recycling with economic development to fuel new businesses, expand existing ones, create jobs, and divert waste from landfills. This program provides attractive loans, technical assistance, and free product marketing to businesses that use materials from the waste stream to manufacture their products and are located in a zone. In August 2015, a \$2.0 million loan was approved for U.S. Corrugated of Los Angeles, Inc., a local company, which may now purchase equipment for the new corrugated packaging manufacturing facility in the City of Santa Fe Springs. Local green business and market development efforts during this reporting period are discussed in further detail under the Regional/Countywide section of this report.

## Waste Prevention and Source Reduction

The United States Environmental Protection Agency (USEPA) defines source reduction as activities designed to reduce the volume or toxicity of waste generated including the design and manufacture of products with minimum toxic content, minimum volume of material, and/or a longer useful life. Source reduction is fundamentally different from the other waste management approaches. It is at the top of the County's resource management hierarchy because it is considered to be more effective and yield the highest benefits from an environmental, economic, and social standpoint. Finding opportunities to remove barriers to donating unwanted or excess materials at County Departments will help to prevent waste. The Los Angeles County Materials Exchange (LACoMAX) program is designed to help residents, businesses, and organizations find an alternative to the disposal of unwanted excess materials at landfills. Details on the waste prevention efforts are discussed in further detail under the County Unincorporated Communities section.

## Product Stewardship/Extended Producer Responsibility

Extended Producer Responsibility (EPR) is a policy approach in which a manufacturer or producer's responsibility, including cost for a product, is extended to the post-consumer stage of a product's life cycle. EPR provides incentive for producers to design their products in a less hazardous and/or easier to manage/recyclable manner at the end of their useful life. In 2008, a Board motion reaffirmed the County's support for EPR and made the County a member of the California Product Stewardship Council. During this reporting period, at the Board's direction, the Working Group investigated the feasibility of adopting an ordinance for a pharmaceutical and sharps waste EPR ordinance in which pharmaceutical manufacturers and producers would develop a take-back program. This ongoing effort is described in further detail under the County Unincorporated Communities and Regional/Countywide sections of the report.

## Organic Waste Management

AB 1826 requires a business generating specified thresholds beginning with 8 cubic yards or more per week of organic waste to arrange for "recycling services" for that organic waste. It also requires local jurisdictions to implement an organic waste recycling program to divert organic waste from businesses by April 1, 2016. If the Statewide goal of a 50 percent reduction in organic disposal is not met by 2020, the threshold drops to 2 cubic yards or more per week of any commercial waste by the summer/fall of 2021. Therefore, the Working Group and Subcommittees are preparing a comprehensive Organics Management Plan. Since organic waste is the largest component of the waste stream currently being disposed, it is discussed in further detail across all Focus Areas.

## Conversion Technologies

The goal for the Conversion Technologies (CT) Program is to reduce our dependence on landfills and ensure there is sufficient, sustainable capacity available to the County to meet future needs. Benchmarks for the program have been set based on current waste disposal quantities and the disposal reduction targets established in the Roadmap as well as State laws, such as AB 1828 which established a Statewide goal to reduce the amount of organic waste disposed in landfills from 2014 volumes by at least 50 percent by 2020. To meet this goal in the County would require diverting approximately 5,000 tons per day (tpd) of organic waste from landfill disposal. CT accomplishments during this reporting period are discussed in further detail under the Regional/Countywide section of this report.

## Household Hazardous Waste

The County operates a substantial household hazardous waste (HHW) and electronic waste (E-Waste) collection program. Through strategic partnerships, the County coordinates over 60 mobile events with participation from over 47,000 households each year, funds the operation of 9 permanent collection centers, and provides convenient additional drop-off locations for batteries, sharps and pharmaceuticals throughout the County. According to the USEPA and County data, permanent collection centers require a larger upfront investment than one-day collection, but they may reduce costs per participant in the long run. Identifying potential County-owned sites for this purpose will help address the need. HHW efforts during this reporting period are discussed in further detail under the Regional/Countywide section of this report.

## Construction and Demolition Debris Management

In January 2005, the Board adopted the County's Construction and Demolition (C&D) Debris Recycling Ordinance. C&D debris consists of materials like lumber, drywall, metals, masonry, carpet, plastics, pipe, rocks, dirt, paper, cardboard, or green waste related to land development. Revisions to the C&D Debris Recycling Ordinance will address greater diversion requirements from landfills and potential security deposits prior to issuance of permits to encourage meeting recycling requirements and completion of recycling reports. Prior to amending the ordinance, stakeholders will be consulted for their input. Additional details on the proposed revision of the ordinance are discussed under the County Unincorporated Communities section of the report.

## Resource Recovery Centers

A significant portion of materials disposed in the unincorporated area of the County are from self-haul customers at landfills and transfer stations. Resource Recovery Parks or Resource Recovery Centers are places where materials can be dropped off for donation or buyback and provides a place to co-locate synergistic diversion-related activities, including reuse, recycling, composting, processing, manufacturing, and distribution. A Resource Recovery Park can make the landfill or transfer station more sustainable by diversifying revenue for the facility owner, conserving capacity, and extending the useful life of those facilities.

## Emergency Management and Regional Debris Management Planning

The County's unique geography makes it susceptible to various forms of natural disasters including earthquakes, landslides, wildfires, flooding, mudflows, and tsunamis. In addition to natural disasters, there could also be man-made disasters. These occurrences have the potential to create large quantities of debris, which must be managed in order to protect and maintain public health and safety following a major disaster event that would impact the Los Angeles County Region, the unincorporated area of the County, and the contracted cities. This effort is discussed in more detail in the Regional/Countywide section of this report.

## Assessment and Evaluation

Identifying the largest contributors to the waste disposal system will help shape where resources and efforts are needed to achieve the County's disposal reduction goals. This will enable the County to maximize short-term waste diversion while prospective strategies and initiatives that will take longer to develop are being researched and developed, and appropriate funds are pursued and secured. Public Works is in the process of initiating a waste characterization study for the County Unincorporated Communities, which is projected to begin in 2016. Details on this effort are discussed in the County Unincorporated Communities section of this report.

## Outreach and Education

Effective public education will cultivate behavioral change that will lead toward a waste-free, safe, and healthy future in the County. The main goal of the Outreach and Education efforts is to support each Focus Area to communicate key initiatives effectively, to the appropriate stakeholders and target audiences. Given the importance of Outreach and Education, tailored communications and marketing messages are needed for each of the three Focus Areas.

To advance our efforts in general as well as support specific initiatives in the Roadmap, the Working Group identified the following outreach objectives:

1. Branding (Tagline/Slogan) – Developed a tagline and image that will allow people to identify and recognize the Roadmap efforts. The tagline is Sustainable is Attainable.
2. Identify Programs and Resources – Continue to identify programs and resources used by other jurisdictions that we can adapt to the County to help meet the diversion goals set in the Roadmap.
3. Develop Best Management Practices – Look at what programs, services, and resources the County has to offer, what other jurisdictions have, and develop resources and best practices that can easily be shared and utilized.
4. Communication Plans – Developing an internal communications plan to report within the County family, and developing external communications and stakeholder engagement plans for each key initiative to conduct tailored outreach and education.
5. Website – Developed a website to house information regarding the Roadmap, such as meeting agendas, summaries, presentations, fact sheets, tool kits, etc. The purpose of the website will be to show transparency and tell our story.
6. Target Each Focus Area with a Unique Outreach and Educational Program: Recognizing the different audiences for County Unincorporated Communities, County Operations, and Regional/Countywide Focus Areas and tailoring outreach and educational programs accordingly.

Public Works plans to issue a Request for Proposals (RFP) for a technical stakeholder engagement/outreach contract. The draft language is currently being developed and will include a creative strategist component with guidance from the Arts Commission. The work of the County's abundant creative sector, which consists of more than 3,600 nonprofit arts organizations and 228,500 artists, can be used to advance the strategies and initiatives of the Roadmap. The RFP will also include stakeholder engagement tasks for the strategies and initiatives for each of the Focus Areas of the Roadmap.

Detailed discussion of Outreach and Education for County Unincorporated Communities, Regional/Countywide areas, and County Operations are discussed in the respective sections of this report.

## PROGRESS OF INITIATIVES BY FOCUS AREA

The Working Group identified and worked on numerous initiatives during this reporting period. The following provides the progress and next steps for those initiatives advanced by the Working Group to date for this reporting period.

## 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 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.

#### Background

LACoMAX is a free service provided by Public Works. The primary goal of LACoMAX is to conserve landfill space by helping businesses, organizations, and institutions find alternatives to the disposal of valuable materials which are presently discarded as waste.

Users of this on-line materials exchange service can browse or post listings of a wide variety of available and wanted materials. Listings are categorized by 15 material classifications and 6 regions and include common items such as wood pallets, out-of-fashion textiles, and chemicals as well as more uncommon items. The listings also contain contact information, allowing you to make direct contact with the listing party. All exchanges are coordinated between the two interested parties.

#### Accomplishments and Milestones for the Next Annual Reporting Period

To generate traffic to the site, various forms of advertising have been used such as flyers, attending Earth Day events, and tweets with information on current listings from the website. During Earth Month 2015 we saw an increase in traffic to the site as a direct result of our tweets and advertising. To increase awareness of the program we plan to attend and/or provide informational flyers at community events in the unincorporated areas. We are also encouraging interdepartmental collaboration such as with the Arts Commission to tap into their large and diverse arts network that has the potential to create opportunities related to diversion recycling and repurposing.

#### *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 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.

## Background

Currently, there are very limited safe, convenient, and sustainable options for the public to dispose of pharmaceuticals and sharps waste in the County and there is a public safety and environmental need for safe disposal. Pharmaceutical waste includes unused and/or expired over-the-counter or prescription tablets, oral liquids and injectable products, but also may contain biomedical or bio-hazardous waste. In 2012, Alameda County passed the nation's first safe drug disposal ordinance requiring producers of prescription drugs to develop, manage, and pay for EPR programs to collect and dispose of unused medications from Alameda County's residential consumers. The Counties of San Francisco, San Mateo, and Santa Clara passed ordinances similar to Alameda County's. On May 27, 2015, the U.S. Supreme Court declined to review a challenge to Alameda County's Drug Disposal Ordinance. The Court's decision upholds the 9th Circuit Court of Appeals' opinion of September 30, 2014, which found that the ordinance, requiring pharmaceutical manufacturers to fund drug take-back programs in Alameda County, did not interfere with interstate commerce or discriminate against out-of-state manufacturers. Today in Los Angeles County, publicly financed take-back programs such as the drop boxes at the 21 Sheriff's stations are the only safe options for residents to dispose of sharps and pharmaceuticals; however, these programs are simply not adequate to manage the amount of unused pharmaceuticals produced in the County.

## Accomplishments

On June 2, 2015, the Board instructed Public Works, in coordination with the Chief Executive Office (CEO), County Counsel, Sheriff, Health Services, Mental Health, Public Health, and the County Sanitation Districts to report back in 30 days with findings and recommendations on the following: investigate the feasibility of adopting an EPR ordinance for pharmaceutical take back and investigate the feasibility of utilizing the County's purchasing power to negotiate producer/pharmacy take-back programs. The motion also requested a report back in four months regarding options for reducing improper use and disposal of pharmaceuticals; educating residents on the importance of properly storing and disposing of unused pharmaceuticals and the negative effects they can have on the environment; and opportunities to actively support and pursue EPR legislation and take-back programs for sharps and pharmaceuticals.

On July 2, 2015, a report was submitted to the Board entitled Managing Unused and Expired Medications and Sharps Waste in the County of Los Angeles which recommended the County prepare a pharmaceutical and sharps waste EPR ordinance in which pharmaceutical manufacturers and producers would develop and finance a product stewardship plan that addresses a take-back program providing: 1) collection services; 2) handling and disposal procedures; 3) public education and outreach strategies; and 4) tracking reports of disposal amounts, short-term and long-term goals for collection amounts, and education and promotion programs.

On August 11, 2015, the Board directed the CEO in collaboration with the County's Sustainability Council and the Pharmaceutical EPR Working Group to: 1) draft an ordinance which requires manufacturers and producers of prescription and nonprescription drugs and sharps to develop product stewardship take-back programs to collect and dispose of unused/unwanted pharmaceutical and sharps waste from County residents; 2) initiate stakeholder engagement with the pharmaceutical industry and other stakeholders to solicit feedback on the ordinance; communicate the need to provide safe, convenient, and sustainably financed take-back options for consumers to properly dispose of pharmaceutical and sharps waste; and generate awareness about the collection program that will be created; and 3) return to the Board within six months with the recommended ordinance for consideration. An amendment was made to initiate stakeholder engagement before drafting the ordinance.

On September 28, 2015, two stakeholder meetings were facilitated by the County's EPR Working Group. The first meeting was held with an Ordinance Advisory Group made up of representatives of pharmaceutical and sharps manufacturers, retailers, dispensers, and environmental, health, and consumer advocacy organizations. The second meeting was a public stakeholder meeting open to all interested residents and businesses. The purpose of the meetings was to engage with stakeholders and solicit feedback that will be used to prepare a draft ordinance.

On October 2, 2015, a report was submitted to the Board with findings and recommendations related to all of the items requested in the original June 2, 2015, Board motion as well as a status update regarding the Board's August 11, 2014, motion.

#### Milestones for the Next Annual Reporting Period

The EPR Working Group will continue to work together and host meetings to refine the concept of a pharmaceutical and sharps waste EPR ordinance. The draft ordinance will be submitted to the Board by February 2016.

#### *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 two-bin collection system (wet and dry) processed at a Materials Recovery Facility (MRF) for separation and recovery.

#### Background

In order to effectively reduce the amount of waste sent to disposal from the unincorporated areas, it will be necessary to make significant adjustments in the way we separate, collect, and process materials generated by residents and businesses in the County Unincorporated Communities. Different collection systems have a variety of pros and cons, and any change will require understanding and support from those affected, including the haulers currently picking up materials. In addition, the County Unincorporated Communities are very diverse and, therefore, one solution may not be ideally suited to all areas of the County.

#### Accomplishments and Milestones for the Next Annual Reporting Period

Completing the Organics Options Analysis, discussed in the next section, will assist us in determining what changes to the current system may be needed to comply with AB 1826 (2014 Statutes) and what changes may be infeasible. The Working Group will then identify certain recommended changes, which will then be piloted in different areas of the County and fine-tuned before being rolled out further.

#### *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 Recovery Outreach Program for unused edibles in County Unincorporated Communities.

### Background

In 2013, the County Unincorporated Communities sent approximately 764,000 tons of waste to landfills. Based on the percentages determined from the County's 2006 waste characterization studies performed on the County Unincorporated Communities, approximately 500,000 tons of that waste annually, equivalent to approximately 1,600 tons per day (tpd), would be classified as "organic waste." Organic waste accounts for over 66 percent of the entire unincorporated communities' wasted materials. About half of the organic waste can be recovered such as lumber, paper, cardboard, or soil whereas the other half can be composted such as food, leaves, or grass.

Food waste makes up a large percentage of each of the commercial, multifamily, and single-family sectors' waste streams, and, therefore, an important aspect in organic waste diversion. In the commercial sector, organic waste alone comprises approximately 23 percent of the waste stream.

### Accomplishments and Milestones for the Next Annual Reporting Period

The identification and education of businesses meeting the threshold in unincorporated areas began in February 2015 resulting in the collection of initial data:

- Waste haulers operating under the Commercial Franchise service more than 10,000 accounts, providing trash collection for businesses and multifamily units in unincorporated County areas.
- Public Works identified 1,300 accounts with the potential to generate a large amount of organic waste that may first need to comply with the first phase of AB 1826, which applies to businesses who generate 8 cubic yards or more of organic waste per week.

The Organics Management Plan for County Unincorporated Communities will describe the County's role and efforts to comply with AB 1826, including identification of unincorporated area businesses that will be required to comply with AB 1826; and educating businesses on organic recycling; developing monitoring tools; and gaining an understanding of barriers, and potential solutions to barriers involved with organic recycling. Potential options for commercial organics collection will be addressed such as source separation or wet/dry containers as well as established methods to ensure success such as an exclusive franchise system or an organics ordinance. The unincorporated organics plan with a recommended collection method is expected to be completed by December 31, 2015.

Food Donation Program - In addition, Public Works working closely with Public Health is developing a food donation and recovery program similar to the Waste Not OC program in Orange County. This program will focus on educating businesses in Los Angeles County about proper food donation and ways to get unused food to organizations that help feed hungry people.

Collection of Food Waste Pilot Project - In September 2015, the County initiated a pilot food waste collection program from select businesses in the Firestone Garbage Disposal District (GDD). Republic Services, the waste hauler contracted to provide waste and recycling services for residents and businesses in this GDD, outreached to restaurants and other large food waste generators in the GDD to sign them up to participate in this pilot program. During the pilot, Republic Services will receive an incentive to divert food waste for select businesses and deliver it to the Puente Hills Materials Recovery Facility operated by the County Sanitation Districts, who will subsequently process the waste and deliver it to an organic diversion facility. Ultimately, the intent is to augment

the food waste pilot program that sends food waste to the County Sanitation Districts' Waste Water Treatment Plant in Carson for co-digestion with sewage sludge.

*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 C&D Debris Recycling Ordinance

Background

In January 2005, the Board adopted the C&D Debris Recycling Ordinance. The existing ordinance requires C&D projects in the unincorporated County areas to recycle or reuse at least 50 percent of the debris generated. However, still roughly 25 percent, (by weight), of the County's unincorporated area total disposed tonnage is made up of C&D materials and more can be done to ensure that C&D materials are kept out of landfills. There are a number of facilities that will process and divert C&D debris within the County, recovering this material and offering it for beneficial activities within the County. The rates to send this material to such C&D processors is often lower than landfill disposal rates, so this may serve as an incentive for businesses to increase their participation in the recycling and reuse program offered by the County. Additionally, establishing higher minimum diversion rates for C&D materials will likely save project developers money while benefiting the environment and the local economy.

There are currently 31 cities within the County that have a C&D ordinance. Of these, 21 cities require a security deposit prior to the permits being issued. Experience has demonstrated that compliance is much higher when a security deposit is required. The deposit is an incentive to comply with the recycling requirement since most jurisdictions will return all or most of the security deposit if the recycling requirements are met. For Public Works, about 64 percent of applicants filed the Final Recycling Report as required. Public Works estimates that if a security deposit were required, compliance would increase to more than 80 percent. The County would benefit by being able to report additional C&D debris tonnage being recycled as well as diverting waste from landfills. Since the administrative penalties would be equal to the amount of the security deposit, no additional staff time is required to issue or pursue penalties. This change would make the process more cost-effective, consistent or uniform, and efficient.

At this time, applicants may submit paperwork to staff via e-mail, fax, or at the public counter. An electronic application is currently under development and when functional will allow applicants to complete and file the necessary paperwork online. This will minimize errors as the applicant will type in the information, expedite processing by staff, and reduce the number of phone calls, e-mails, faxes, and visits to the public counter.

The following data has been gathered from July 1, 2005, to June 30, 2014, on C&D plans:

- 3,869 C&D plans approved
- 2,495 of the 3,869 C&D approved plans submitted Final Compliance Reports
  - 1,374 C&D projects did not submit Final Compliance Reports
- 127 C&D projects were issued administrative monetary penalties
  - 56 of the 127 C&D projects paid the administrative monetary penalties

During calendar year 2014, for the unincorporated County areas, completed projects generated 61,997 tons of C&D debris and recycled 50,258 tons of C&D debris, for an overall recycling rate of 81 percent. In addition, projects generated 75,181 tons of soil and recycled the same amount.

### Accomplishments

With input from representatives from Building and Safety and the Roadmap Working Group's County Unincorporated Communities Subcommittee, proposed revisions to the C&D Debris Recycling Ordinance were drafted including (1) raising the requirement to 70 percent of C&D material to be recycled or reused; and (2) requiring a security deposit as an incentive for businesses to comply with the recycling requirement. Preparations have been made to meet with public stakeholders such as land developers, construction companies, demolition companies, C&D debris recycling facilities, and waste haulers.

### Milestones for the Next Annual Reporting Period

Public Works will submit the revised C&D ordinance to the Board in the next reporting cycle.

## **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 County Unincorporated Communities (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.

### Background

Disposal reduction goals will be more achievable if the County first identifies the largest contributors to the waste disposal system and further defines the contributors by their unique disposal characteristics, such as commercial, institutional, industrial, and residential. Once these measurements are obtained, programs can be initiated, expanded, modified, or eliminated to help achieve the Roadmap's long-term disposal targets. Each sector has unique waste management practices that once understood and measured can be assessed for opportunities and options for waste diversion.

The 2005, waste characterization found that the County Unincorporated Communities generated approximately 2.9 million tons of materials

- Equivalent to 14.8 ppd,
  - 1.45 million tons were being disposed at landfills.
  - Resulting in a diversion rate of 50 percent for the County, compared to a 1990 baseline.
- Currently, the County Unincorporated Communities dispose 4 ppd, achieving approximately a 70-percent diversion rate with respect to 2005 as the baseline year.

### Accomplishments and Milestones for the Next Annual Reporting Period

Public Works is in the process of initiating a waste characterization study for the County Unincorporated Communities, which is projected to begin in 2016. A draft RFP has been completed and is expected to be finalized later this year. Public Works will examine the solid waste composition

and generation rates, and the highest and best use alternatives for diverting the major components of the waste stream to achieve the long-term disposal targets. A large-scale study may be needed every five years, with smaller individual assessments on a more frequent basis, including waste surveys at County facilities.

The Working Group plans to assess the success of existing program measurements that have resulted in successful waste reduction programs, evaluating the feasibility of implementing them in the County, and assessing how these new programs would assist in achieving the County's overarching goals. Each new program or policy recommended through the Sustainable Waste Management Roadmap should be tailored to location and customer and coupled with clear, meaningful, and achievable performance measures. With an ongoing baseline of disposal and diversion measurements, we can assess 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 evaluated for effectiveness, costs, and determination of whether they should be maintained at their current resource expenditure level, expanded and/or modified, or eliminated.

### **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 elements 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 County Unincorporated Communities with AB 1826 compliance.

#### **Background**

As businesses begin to comply with AB 1826 (Mandatory Commercial Organics Recycling), additional organic waste such as food waste and green waste will be separately collected. The current local organics diversion facilities will not be able to process all of this additional material, therefore it is important to evaluate options to encourage the development of additional facilities and/or expansion of current facilities to meet this new demand.

#### **Accomplishments and Milestones for the Next Annual Reporting Period**

The Department of Regional Planning recently completed the revised General Plan for Los Angeles County, which placed additional emphasis on sustainability and enabling critical infrastructure such as organics diversion facilities. Regional Planning is now beginning to review the County's Recycling Ordinance, in order to update obsolete definitions and streamline the process for diversion facilities of all types, including organic diversion facilities, while continuing to protect the public's health and safety and the environment. As discussed above, the implementation of the AB 1826 plan for the County Unincorporated Communities will encourage additional organic waste separation and collection, which will facilitate the development of organic diversion facilities.

### **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.
  - ◆ Initiate a unifying slogan such as “Don’t Waste Your Waste” in the outreach campaign, promoting the Four R’s (Reduce, Reuse, Recycle, and Rethink) to effect behavioral change in residents and businesses.

### Background

Since the audiences and affected stakeholders vary from initiative to initiative, it is important to develop unique communications plans for each distinct initiative or program in the Roadmap. At the same time, having a unifying slogan can help stakeholders to view these diverse initiatives as being interconnected, and help to build interest and engagement while amplifying messaging campaigns.

### Accomplishments and Milestones for the Next Annual Reporting Period

The Outreach and Education Subcommittee was effective in facilitating a number of discussions that improved communications related to County Unincorporated Communities initiatives. This included developing specific communications plans for initiatives such as the revision of the C&D Debris Recycling Ordinance. The Subcommittee also led the development of a unifying slogan: ***Sustainable is Attainable: Roadmap to a Waste Free Future***. This slogan and the new logo will be used to connect different initiatives of the Roadmap as stakeholder engagement accelerates.

## 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.

### Background

As directed by the Board, an EPR Pharmaceutical Working Group consisting of many Departments that also participate in the Roadmap Working Group is developing a draft EPR ordinance for pharmaceutical and sharps waste. This ordinance is discussed in more detail under the County Unincorporated Communities, Initiative B of Strategy 1.

### Accomplishments and Milestones for the Next Annual Reporting Period

Since the County Public Health Officer serves as the health officer for 85 of the 88 cities in the County, County Counsel is investigating the most effective ways to implement the ordinance on a Countywide basis to improve its effectiveness. This discussion is ongoing and will be a part of the recommendation submitted to the Board in February 2016.

#### *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 HHW and 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.

### Background

One of the initiatives identified in the Roadmap was to maximize the diversion of HHW and E-Waste at a Regional/Countywide level. The County operates the largest HHW and E-Waste program in the country with participation from over 43,000 households each year. The HHW/E-Waste program works through partnerships with the County Sanitation Districts, the City of Los Angeles, the Sheriff's Department, the County Departments of Public Health and Health Services, the Department of Public Library, and all cities in the County of Los Angeles. Public Works partners with the County Sanitation Districts to conduct approximately 60 mobile events annually and funds the operation of nine permanent collection centers.

### Collection Statistics

- Approximately 11 million pounds of HHW/E-Waste are collected through mobile events annually.
- 523,000 pounds of HHW/E-Waste are collected through the Antelope Valley Environmental Collection Center annually.
- 611,000 pounds of HHW/E-Waste are collected through EDCO Environmental Collection Center annually.
- 6,800,000 pounds of HHW/E-Waste are collected through the City's S.A.F.E. Centers annually.

The cost of the HHW program is substantial at approximately \$10.4 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.

### Mobile Event Costs

- Average operational cost per pound - \$0.80
- Average operational cost per event - \$48,000
- Average number of households participating per event - 800
- Average cost per household per event - \$60

### Permanent Collection Center Costs

- Average operational cost per pound - \$0.42
- Average operational cost per event - \$20,000
- Average number of households participating per event - 800
- Average cost per household per event - \$25

### Accomplishments and Milestones for the Next Annual Reporting Period

Public Works conducted a study to determine whether temporary events or permanent collection centers were more effective as well as cost efficient. The conclusion of the study determined a mixed-model approach consisting of both mobile events and permanent centers was the best approach. Subsequently, Public Works performed a feasibility analysis of a number of County-owned sites as potential locations for new permanent centers. These potential sites will be presented to management in the coming year to decide whether to pursue further design work or to look for other alternatives.

## Strategy 2: Measuring Results

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

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

- ❖ Evaluate and modify, if needed, existing revenue streams to mitigate funding lost from waste reduction efforts, and align incentives with waste reduction goals.
  - If revenues are projected to decline and programs cannot be realigned to mitigate this impact, identify options to augment revenue streams or accomplish the goals of the programs through other mechanisms in order to ensure adequate funding is available to carry out programs and policies.

### Background

Much of the funding that is used to support Countywide programs comes from the Solid Waste Management Fund. This fund receives revenue for each ton of waste disposed that is generated in the County. Increased diversion and less disposal of material are some of the underlying goals and driving forces of the Roadmap; however, as disposal of waste decreases so does funding for programs.

A significant portion of the waste stream is comprised of organic materials. One alternative to landfilling organic waste is processing it at a CT facility. The State of California has several funding mechanisms available to assist with the development of CT facilities. Promising funding mechanisms include the California Pollution Control Financing Authority program, the Greenhouse Gas Reduction grant and loan program, the RMDZ program, California Energy Commission, the Renewable Portfolio Standard, and the Low Carbon Fuel Standard.

### Accomplishments and Milestones for the Next Annual Reporting Period

Some of the Working Group discussions related to sustainable funding included increasing landfill disposal fees, creating a tiered approach for waste processing fees, or creating a waste generation fee. The Working Group will evaluate these options and consider actions at the State and local level to develop a set of recommendations for consideration at a future date.

Public Works continues to seek grants and other funding opportunities such as fees for new solid waste facilities in the County Unincorporated Communities seeking conditional use permits. Public Works staff has provided extensive feedback on legislative actions, regulatory changes, and incentives being proposed by the California's Department of Resources Recycling and Recovery (CalRecycle) through the State budget process. Staff also partnered with the Bioenergy Association of California to advocate for increased waste diversion funding.

## Strategy 3: Facilities and Infrastructure

### Initiative A: Develop Conversion Technologies 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:

- ❖ 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](http://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.

### Background

The County's efforts to achieve waste diversion are guided by the new waste management paradigm, which places a greater emphasis on source reduction, reuse, recycling, and otherwise maximizing the benefits and use of materials over disposal. However, source reduction, reuse and recycling alone will not be enough to achieve the longer-term targets identified in the Roadmap. To address the fraction of the waste stream that cannot be feasibly recycled, the development of CT facilities is a vital aspect of the new paradigm and necessary to achieve a truly sustainable waste management future. As previously discussed in this report, AB 1826 requires businesses to recycle organic material. It is anticipated that much of the organic material can be recycled with CTs such as anaerobic digestion.

### Accomplishments and Milestones for the Next Annual Reporting Period

The County is seen as a leader by the solid waste industry in evaluating and promoting the development of CTs, and continues to encourage the development of commercial scale CT projects within the County. Public Works continues to actively pursue and support the passage of legislation that encourages the siting of CT facilities. Public Works presents at various waste conferences on our CT program and shares knowledge and resources in the goal of promoting CT. Working with various cities in the County, Public Works has developed a list of potential CT sites. CT companies have also consulted with Public Works to discuss permitting of CT sites in the County. A number of CT projects within the County are in various stages of development, including:

- Lancaster Landfill CT Facility: Public Works is currently assisting Waste Management (WM) with environmental review for a full-scale organics digestion CT facility at Lancaster Landfill. Public Works has done extensive research of the Statewide Programmatic Environmental Impact Report for Anaerobic Digestion, as well as other projects' environmental documents such as San Jose's anaerobic digestion facility, and developed recommendations for the environmental documentation for this project.
- Joint Water Pollution Control Plant (JWPCP): The County Sanitation Districts, who serve as active members of the Working Group, are currently operating a CT demonstration project for co-digesting food waste at the District's JWPCP in the City of Carson. As part of this project, WM collects food waste, cleans and processes it into slurry, and delivers it to the JWPCP where it is co-digested with sewage sludge to create biogas which is converted into electricity. The Sanitation Districts determined that it can be technically viable to expand the co-digestion project at JWPCP into a commercial-scale anaerobic digestion facility, if it is determined to be financially viable and after a consistent and clean food waste supply can be secured. As described above, a pilot organics collection program has begun sending additional waste to the Sanitation Districts' facilities to determine the feasibility of expanding the amount of waste the facility processes.

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

- Provide technical assistance to facilitate WM's CT project, including permitting assistance, further environmental review, and support for grant applications. Public Works anticipates coordinating with Regional Planning and County Counsel as the project moves forward.
- Work with the Sanitation Districts to initiate an organic waste collection program, including creating outreach materials, training customers on items that meet the program criteria and proper placement of the food waste containers, and conducting site visits to ensure participation, with the goal of increasing the digestion of food waste in the County through anaerobic digestion.
- Continue to serve as an informational resource and catalyst for CT project development in the County.
- Finalize a CT White Paper that will provide policy makers with information regarding the net environmental benefits of managing residual solid waste using anaerobic digestion and gasification at an integrated CT facility instead of transporting it to a typical solid waste landfill. The White Paper is currently undergoing a final review by Public Works staff before being released. The White Paper will be an important tool in educating elected officials and the public regarding the benefits of CTs.

#### *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/grinding operations.

#### Background

Public Works is also developing a Regional/Countywide section of the organics plan to determine the current processing capacity of existing organics processing facilities, the capacity of planned processing facilities, and determining if this capacity is sufficient to meet the demands over a 15-year period. The organics plan will include a categorized list (based on material type) of existing in and out of the County organics processing facilities which receive waste from Los Angeles County. Facilities capable of expanding their operations will be noted, as well as areas potentially suitable for the locations of organics processing facilities. Regional maps will be prepared to show: (1) food waste processing facilities, (2) green waste processing facilities, and (3) mixed waste processing facilities. Facility operators will be surveyed to determine the existing services offered and the challenges they have or foresee. A GAP analysis will determine if the County's 15-year needs are being met with existing and proposed capacities. If there is a shortage in capacity, plans can be developed to mitigate the shortage. Additionally, markets for compost and other organic residuals will be identified, along with an analysis of options for mechanisms those jurisdictions may implement to ensure that commercial organic waste is collected and recycled in the most efficient and economical way. Lastly, the plan will evaluate barriers to the development or expansion of facilities and options for overcoming those barriers. Some of these barriers will require the assistance of State or Federal agencies.

### Accomplishments and Milestones for the Next Annual Reporting Period

Public Works has begun surveying organics processing facilities. A consultant has been secured and will perform the market and options analysis. A projected completion date for the organics plan is December 2016.

Additionally, Public Works initiated a partnership with the County Sanitation Districts for a commercial organics collection pilot project. Public Works and the Sanitation Districts are working with waste haulers to develop a pilot program for collecting food waste from the County's Firestone GDD. The pilot collection program will deliver food waste to the Puente Hills Materials Recovery Facility and may be used to expand the Sanitation District's co-digestion operation in the City of Carson if commercially viable.

### Initiative C: Local Green Business & 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 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.

### Background

The RMDZ program was designated in 1994 to provide business assistance to companies which manufacturer a product using recycling-content or process materials for recycling. To qualify for assistance, the company must be located within the RMDZ. Currently, the RMDZ consists of the unincorporated County areas and 19-member cities: Azusa, Baldwin Park, Burbank, Carson, Commerce, Compton, Covina, Culver City, El Monte, Glendale, Huntington Park, Inglewood, Monrovia, Palmdale, Santa Fe Springs, South Gate, Torrance, Vernon, and Whittier. The program provides marketing assistance and/or financial assistance to qualifying companies. The financial assistance consists of a low-interest loan program which may provide \$2 million in funding to an eligible business located in the RMDZ for marketing or purchasing of equipment.

### Accomplishments and Milestones for the Next Annual Reporting Period

From October 2014 to October 2015, RMDZ met with six companies to discuss possible business assistance. One of the companies, a manufacturer of cardboard boxes from recycled paper, applied for a loan in order to purchase equipment. The loan in the amount of \$2 million was approved in September 2015. In addition to purchasing new equipment, the company is also hiring additional staff.

In October 2014, RMDZ attended a public outreach event in the City of Vernon. The event was geared towards local businesses and provided RMDZ an opportunity to meet local companies and let them know about the program. Given the need to make businesses aware of the program, marketing will be a primary focus this coming year.

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

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

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

### Background

Public Works is developing a Mass Debris Management Plan (MDMP) to identify roles and mechanisms to collect, stockpile, and recycle debris to the extent feasible following an emergency or disaster. It also ensures that the removal process for the debris is conducted in an efficient, economical, and environmentally beneficial manner while considering the safety of the public and personnel. The MDMP will be consistent with the existing policies and guidance provided by the County, State, and Federal Emergency Management Agencies for removal and management of disaster-related debris.

### Accomplishments and Milestones for the Next Annual Reporting Period

Public Works began preparations of the MDMP, which is currently being developed by a consultant and will serve as a resource guide for the County and its 88 cities to establish a collaborative and coordinated mass debris management structure during a major disaster event that impacts the County.

## **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.

### Background

Extensive research was conducted before a tagline/slogan was selected including examining the various phrases that people identify with throughout the County and what other agencies and jurisdictions throughout the country are calling their version of the Roadmap efforts.

For example, in the County we have few terms/phrases that people identify with:

- CleanLA
- Green LA County
- Roadmap to a Sustainable Waste Management Future
- A trash solution for a green evolution

Examples of what other jurisdictions are using include:

- LA City Sanitation: Counting Down to Zero Waste Plan
- Colorado: Zero Waste - Envisioning a Zero Waste Boulder
- Hawaii: Zero Waste
- Maryland: Zero Waste - Smart, Green, & Growing
- Austin Resource Recovery: Zero Waste by 2040
- City of Leduc: Growing a clean, green, and healthy Leduc
- San Francisco: Sending nothing to landfill is a foreseeable future
- King County, WA: Get in the loop, buy recycled, and it’s easy being green

- Environmental Protection Agency: Waste Wise and Conserving Resources, Preventing Waste
- Waste Management: THINKING GREEN, GO #Greenin15, and Recycle Often. Recycle Right.

#### Accomplishments and Milestones for the Next Annual Reporting Period

During the development of the tagline/slogan, over 50 variations of phrases were crafted. Below is a list of the top four branding/tagline ideas determined during the brainstorming discussion.

- Roadmap to a Sustainable LA County
- Roadmap to a Greener LA (County)
- Sustainable is Attainable
- Roadmap to a Waste Free Future

After further discussions with the Working Group, the final determination for the tagline/slogan was:

#### ***Sustainable is Attainable: Roadmap to a Waste Free Future***

After determining the tagline/slogan, 20-logo design concepts were created and surveyed by the Roadmap Working Group, Implementation Subcommittees, and others outside the County family. In all, 70 people took the survey and based on the narrowed down results, the final logo was developed and is included in the cover of this report.

We will continue to seek partnerships to further build on and promote the message of sustainability. Through the Arts Commission we have been introduced to the Land Art Generator Initiative (LAGI), which focuses on the design and construction of public art installations that have the added benefit of clean energy generation. They present the renewable energy power plant as public artwork that enhances the environment, increases livability, provides a venue for learning and stimulates local economic development. Education and outreach is a core component in promoting and demonstrating the use of renewable energy and innovative design. By working closely with the Arts Commission and LAGI, we will seek to find opportunities to incorporate art installations that uniquely combine aesthetics and clean energy generation in their design and construction in future projects. The artwork will serve to inspire and educate.

## **County Operations**

### **Strategy 1: Quality Programs and Services**

#### **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:

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

#### Background

Since the inception of the County Departmental Recycling program (CDRP) in 1990 the Board of Supervisors has instituted a number of policies related to County purchasing practices. These policies included requirements for purchasing recycled-content and remanufactured products. 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, easy to adopt purchasing categories, (e.g., paper, cleaning supplies), were implemented and a pricing advantage for green products was put in place. The County maintains central purchasing agreements with a catalogue of environmentally friendly and energy efficient products; existing databases were modified for the easy identification of green products.

The expiration of other service contracts provides a similar opportunity for sustainability improvements. The CEO is currently rebidding its cafeteria contract and has added requirements to develop a sustainability plan which includes food waste reduction and recycling programs for the cafeteria. These types of plans can be included in other contracts that involve waste generation or disposal such as landscaping contracts. By including recycling and organics management requirements in these contracts, the County will ensure compliance with State law and establish the measuring and reporting requirements needed to track progress toward achieving the goals of the Roadmap.

- ISD's waste collection contracts service over 600 County facilities.
- The current contracts are serviced by 3 waste haulers.
- The current contracts do not require waste haulers to report on tonnages collected or types and amounts of material recycled.

#### Accomplishments and Milestones for the Next Annual Reporting Period

In addition to managing purchasing contracts for County Departments, ISD also manages the waste collection contracts for County Departments. The initial term for these contracts has expired and the final two-year extension will extend the existing contract from 2016 to 2018. With the contract approaching renewal, it is a good time to re-evaluate the scope of work and incorporate new reporting and recycling requirements which will facilitate compliance with the States mandatory recycling laws and help achieve the diversion targets established in the Roadmap. Public Works is currently working with ISD to evaluate the existing waste hauling contracts and determine the appropriate method for soliciting a new waste hauling contract which will meet the recycling and waste disposal needs of all County Departments.

One of the goals for the new hauling contracts is to require reporting of tonnages disposed and materials recycled from County facilities. This will facilitate the establishment of benchmarks for both disposal and recycling and help to measure the County's progress in achieving the diversion goals established by the Roadmap. It will also allow Departments to make more informed decisions about the level of waste collection service they require and help reduce costs for unnecessary services.

### **Strategy 2: Measuring Results**

#### ***Initiative A: Waste Sector Assessment at County Facilities***

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

- ❖ Develop a methodology to conduct waste generation and disposal surveys at County Operations.

### Background

The State of California has recently passed two mandatory recycling laws which affect County operations. AB 341 and AB 1826 both require commercial entities including government buildings to sign up for recycling services for materials such as paper, cardboard, plastic, metal, and organics. The laws specify which facilities must comply based on the amount and type of waste they generate per week.

### Accomplishments and Milestones for the Next Annual Reporting Period

To determine which County facilities are required to comply with these laws it is necessary to know which County facilities are generating large amounts of solid waste and organic waste. The most accurate way to determine this is through waste assessments at County facilities.

To facilitate this effort, Public Works has developed a Commercial and Institutional Recycling Program (CIRP) contract for performing waste studies of County operations and large venues. The purpose of CIRP is to help County facilities to achieve large-scale waste diversion and generally enhance the sustainability of their activities related to materials management. For example, the program would assist the County in developing source reduction policies, environmentally sustainable practices, and zero waste goals.

### Measurement

The Pitchess Detention Center (PDC) is a 2,600 acre facility that self-hauls its waste due to the type of facility, its size, and various trash disposal sites:

- PDC disposes 2-3 tons of food waste per day or 14-21 tons per week.
- Pitchess Material Reclamation Center (PMRC) collects 2 tons per week to compost which is approximately 9.5% to 14% of the total waste generated at PDC. Staff continues to pursue opportunities to divert additional materials, and to the extent feasible, reclaim them in a way that benefits PDC operations.

### *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.

### Background

The CDRP, established by the Board in 1990 instructed all County Departments to develop and implement recycling programs with specific goals to be met, under the supervision of on-site managers or proprietors. This Board action also required the modification of County procurement policy to emphasize the purchasing of recyclable and recycled-content paper products. As a result Departmental Recycling Coordinators (DRCs) were assigned at each Department to implement recycling programs and Public Works was assigned to oversee the overall program and train the DRCs on recycling and waste reduction policies/initiatives, and their implementation.

Over the years, the program has been expanded to include more than just paper and now deals with a variety of materials including, electronics, toner cartridges, hazardous material,

styrofoam, plastic bags, and beverage containers. From 2013 to 2014, over 2,000 tons of paper and 1,900 lbs. of beverage containers were recovered from County operations.

#### Accomplishments and Milestones for the Next Annual Reporting Period

To determine the effectiveness of these recycling programs and gauge each County Department's participation in recycling efforts, the Working Group is developing a survey to be distributed to each County Department. This survey will provide feedback about current recycling efforts and determine the need for additional education and outreach to County Departments about existing County recycling policies. It will also identify opportunities to achieve additional waste diversion through new policies focused on materials not currently being recycled such as food waste and other materials.

### **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.
  - 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.

#### Background

Pilot projects at County facilities will be an important component of implementing the policies and programs described in the Roadmap. Testing new projects at a few facilities will allow for the development of performance guidelines and best management practices which can then be replicated at other County Departments.

#### Accomplishments and Milestones for the Next Annual Reporting Period

Two pilot projects have been identified so far, one at the Public Works Headquarters facility and the other at PDC. The project at Public Works will be a pilot food waste reduction and recycling program which will be implemented in partnership with the onsite cafeteria. Food waste reduction methods, such as Lean Path or similar software that helps to track excess food purchases and waste, will be implemented in cafeteria operations to reduce the generation of food waste. In conjunction with these methods, Public Works installed vermiposting (worm composting) bins to recycle the cafeteria's pre-consumer food waste onsite.

The second pilot project proposes to create a model for sustainability at the PDC, a jail facility in Castaic, California, which houses over 8,000 inmates. The Sheriff's Department and Public Works have partnered to establish a zero waste program that benefits both the inmates and public, while conserving resources and protecting the environment. A diversion program has been started to recycle cardboard, metals, and plastics. However, leftover food remains the largest waste generated on-site which is hauled off and disposed in landfills. The project proposes to install an anaerobic in-vessel digester to compost the food waste generated onsite.

The PDC is located in a semi-rural area surrounded by farmland both on the premises and outside. Instead of trucking the waste to a landfill, the food waste could be composted to become a rich soil amendment that is beneficial for the growing of crops. If successful, this pilot project

could be expanded to receive food waste from other County Departments and the surrounding unincorporated areas, reducing disposal costs and creating usable energy and products for the facility as well as the County's regional parks. Public Works is working with Alternative Resources, Inc. (ARI) to finalize an economic analysis for the three potential scenarios of this project. The first scenario is based on processing approximately 1,000 tons per year (tpy) of organic waste (which includes food waste and green waste) from PDC. The other two scenarios estimate processing additional feedstock from external sources, in addition to PDC's organic waste.

- PDC Scenarios: In the first scenario, the facility would process 1,000 tpy of on-site organic waste, which includes food waste and green waste.
- The second scenario would have the facility processing a total of 10,000 tpy of feedstock, with 9,000 tpy originating from surrounding County facilities.
- In the third scenario, the facility would operate at a commercial scale, processing a total of 40,000 tpy of feedstock, with 39,000 originating from regional sources. It is likely that further increasing the facility capacity above 40,000 tpy would provide greater economic feasibility.

#### **Strategy 4: Outreach and Education**

##### **Initiative B: Leadership in Sustainability**

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.

##### **Background**

As previously discussed, each County Department is required to have a DRC to help implement sustainability practices at each County Department. Through this program, Public Works educates and provides support to the DRCs on sustainability efforts.

##### **Milestones for the Next Annual Reporting Period**

A waste survey will be conducted. Subsequent to the feedback from the survey, DRC meetings will be scheduled to implement and promote sustainable practices at County Departments including ways to improve recycling and increase diversion at County facilities. Through the new waste hauling contracts that ISD is currently working on, there will be increased reporting requirements which will allow County Departments to better measure the success of these sustainable practices. A recognition and/or incentive program will be initiated based on the newly identified sustainable practices.

In addition, we will continue to work to connect the dots to help reduce waste. A great example of a successful connection is PDC and the Arts Commission. PDC is continuously searching for avenues to recycle as much as possible. Our interdepartmental relationship with the Arts Commission is working toward developing ways to utilize existing County programs, such as its policy driven civic art program, to further train and engage the creative sector as service providers that carry forth the waste free future messaging, behavioral change projects and technology demonstration projects. For example, we were able to connect the Arts Commission and PDC

resulting in diverting waste from going to the landfill by communicating the need and working together. By increasing the creative sector's basic knowledge and raising awareness of waste-free future issues, the Roadmap's efforts will effectively reach more audiences and can be longer lasting than single occurrence projects or programs. After working with our County programs, artists will continue to create new work for their art and public engagement work with other public art programs, social service organizations, school systems, and museums into the future.

## RELEVANT SOLID WASTE MANAGEMENT STATUS REPORTS

The Board 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

On August 20, 2015, Public Works submitted a semi-annual report to the Board that included clear benchmarks for measuring progress towards establishing conversion technology projects within the County. Conversion technologies are critical to reducing our reliance on landfills and recovering energy, fuels, and other products from waste, and the report notes that conversion technology facilities are being successfully developed. The report noted that significant progress has been made in the development of conversion technology projects in the County.

### Elsmere Canyon Landfill Status Report

On September 30, 2003, the Board instructed Public Works to take the necessary steps to remove Elsmere Canyon from the Los Angeles County Countywide Siting Element's list of future landfill sites and to report back every 60 days. Based on our August 23, 2010, status report to the Board, the reporting frequency was changed from every 60 days to semiannually. On October 21, 2014, the Board directed Public Works to consolidate the Status Report on the Removal of Elsmere Canyon Landfill from the Los Angeles County Countywide Siting Element, and submit it with the Roadmap annual report.

The Siting Element is a long-term solid waste planning and policy document that describes how the County and the cities within the County plan to manage the disposal of their solid waste for a 15-year planning period as required by AB 939. AB 939 also requires the Siting Element to establish goals and policies for the proper planning and siting of landfills, inert waste landfills, waste-to-energy facilities, and alternatives to landfill technologies, such as conversion technologies on a Countywide basis.

Since our last report dated August 21, 2014, Public Works has updated the Preliminary Draft Siting Element, which was previously reviewed, and considered by the Los Angeles County Solid Waste Management Committee/Integrated Waste Management Task Force (Task Force) in November 2012. The document is currently being revised to update the base year of 2014, including disposal projections covering the planning period beginning 2014 through 2029, and to include the impacts of current legislations, such as mandatory commercial recycling (AB 341), diversion of organic waste from landfills through organics recycling programs (AB 1826), and prohibition on local disposal limits (AB 845) on the Countywide diversion and disposal quantities.

The next steps entail resubmitting the document to the Facility and Plan Review Subcommittee (FPRS) of the Task Force for their review. After consideration by the FPRS, the revised Preliminary Draft Siting Element will be reviewed and subsequently considered by the Task Force. The revised Siting Element and its environmental documents will then undergo additional reviews by the public in compliance with statutory and regulatory requirements, including approvals by cities, the Board, and CalRecycle.



## Appendix B - List of Abbreviations

AB	Assembly Bill
ARI	Alternative Resources, Inc.
CEO	Chief Executive Office
C&D	Construction and Demolition
CalRecycle	California Department of Resources and Recovery
CDRP	County Department Recycling Program
CIRP	Commercial and Institutional Recycling Program
CT	Conversion Technology
DRCs	Department Recycling Coordinators
E-Waste	Electronic Waste
EPR	Extended Producer Responsibility
FPRS	Facility and Plan Review Subcommittee
GDD	Garbage Disposal District
HHW	Household Hazardous Waste
ISD	Internal Services Department
JWPCP	Joint Water Pollution Control Plant
LACoMAX	Los Angeles County Materials Exchange program
LAGI	Land Art Generator Initiative
MDMP	Mass Debris Management Plan
MRF	Materials Recovery Facility
PDC	Pitchess Detention Center
PMRC	Pitchess Material Reclamation Center
PDD	per resident per day
RFP	Request for Proposals
RMDZ	Recycling Market Development Zone
Roadmap	Roadmap to a Sustainable Waste Management Future
tpd	tons per day
tpy	tons per year
USEPA	United States Environmental Protection Agency
WM	Waste Management