



Five-Year Milestone Report

Recovering

Energy

Natural Resources and

Economic Benefit from

Waste for

Los

Angeles

A Resource Management Blueprint for the
City of Los Angeles

Councilman Greig Smith

June 2011



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***Councilman Greig Smith
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June, 2011

When I introduced the RENEW LA Plan in June of 2005, it was because I felt compelled to shift the way the City of Los Angeles viewed its trash. I decried the “200-year-old, environmentally damaging system of landfilling” and proposed a new paradigm of reuse and Zero Waste.

Six years later the City of Los Angeles has become a world-class leader in creative and innovative programs that beneficially reuse waste resources. We have successfully implemented many of the RENEW LA goals and have embarked upon the most comprehensive citywide outreach effort ever attempted, as we draw all stakeholders together in pursuit of Zero Waste.

The Solid Waste Integrated Resources Plan (SWIRP) is well underway and there is no disputing its success. I would not have imagined when I released this plan that it would have been possible to gather several hundred people at the Convention Center, on a weekend to discuss trash, but it has happened!

The RENEW LA Plan was a 25-Year Roadmap to a 90% or greater landfill diversion rate. It stressed economics and environmentalism; conservation and technological innovation. This 5-Year Milestone Report marks the progress, success and the challenges of the plan. It reiterates its flexibility, and celebrates the creativity and energy with which its objectives have been embraced.

In closing, I want to thank the City Staff of the Public Works Bureau of Sanitation. Without their enthusiasm, dedication and tireless work ethic, RENEW LA would have been yet another plan gathering dust on a shelf in City Hall.

Sincerely,

A handwritten signature in black ink that reads 'Greig Smith'. The signature is written in a cursive, flowing style with a large, sweeping underline.

GREIG SMITH
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RENEW LA Highlights

5-Years After Adoption By the City Council

Introduced in June of 2005 as a 20-year blueprint to eliminate the need for landfills in the City of Los Angeles, the **Recovering Energy, Natural Resources, and Economic Benefit from Waste for Los Angeles (R.E.N.E.W. LA)** Plan was adopted by the City Council on February 17, 2006. The City codified the Plan's Zero Waste Goal:

“The goal of Zero Waste as defined in this plan is to reduce, reuse, recycle, or convert to energy the resources now going to disposal so as to achieve an overall diversion level of 90% or more by 2025; and to leave for disposal only a small inert residual.”

The RENEW LA plan created a bold new paradigm for the City of Los Angeles, shifting the concept of the system from one of waste disposal, to one of solid resources, where materials are reused, remanufactured, and ultimately recovered for beneficial uses like renewable fuels. The Plan had flexibility built in, and was intended to serve as a guide for solid waste and resource management that would enable the City of Los Angeles to reach their goal of obtaining a minimum 90% landfill diversion level by 2025.

A Zero Waste philosophy includes a broad array of programs and policies within an overall framework of sustainability. Some of these goals include promoting the management of materials to their highest and best use, protecting public health and the environment, maximizing waste reduction and recycling, ensuring that products can be reused or recycled, and harnessing the energy potential of the residual to convert it to green fuels, gas or electricity.

In the five years since the passage of the RENEW LA Plan, much has happened in the City of Los Angeles and the world:

- Closing of older landfills
- Increased emphasis on conservation of ever-scarcer natural resources
- Increased State requirements for the generation of renewable energy
- State Climate Change legislation, including AB 32 in 2006
- The Global Economic Crisis





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The City of Los Angeles has made significant strides in advancing the goals of RENEW LA. Over the past five years, the City has instituted over 25 new source-reduction, recycling, and composting programs that contributed to a total City diversion from landfills of nearly five million tons over that period. It is important to note that all of these recycling programs save one (Construction and Demolition – “C & D”) are voluntary and have allowed the City to achieve an AB939 certified diversion level of 69%.

In 2007, the Bureau of Sanitation (BOS) began an intense, stakeholder driven Solid Waste Integrated Resource Process (SWIRP) to develop a 20-year Zero Waste Plan, using the RENEW LA goals as the guide for the process. Through over 250 stakeholder meetings, the City’s Bureau of Sanitation (BOS) has developed the Guiding Principles, a Policy, Program, and Facility Plan, and is in the process of preparing a Programmatic Environmental Impact Report (PEIR) for the SWIRP program.

Policies and Action Items

The City has moved forward aggressively to establish new policies and plans to enhance recycling, encourage the local development of Alternative Technologies (Alt Tech), support the creation and expansion of needed infrastructure, and to stimulate Environmentally Preferred Purchasing as prescribed in the RENEW LA Plan.

The Plan detailed several important and necessary steps for the City to take in order to achieve its goals. They included:

- **Establish a RENEW LA Oversight Committee**

The *RENEW LA Ad Hoc Committee* was established in August of 2005 to further the goals of the action plan and to provide guidance to the Citywide *Solid Waste Integrated Resources (SWIRP) Plan* process, which was initiated to achieve the RENEW LA goal of Zero Waste.

- **Adopt the RENEW LA Blueprint and Zero Waste Policy**

The RENEW LA plan and its Zero Waste Policy was adopted by the City Council on February 17, 2006.

- **Modify City Zoning Codes to Facilitate Project Development**

The *Solid Waste Alternative Technologies (SWAT) ordinance* which was passed in 2010 permits Manufacturing/ Light Industrial (M2) and Public Facility (PF) Zones to be utilized in the

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siting of Alternative Technology (Alt Tech) facilities with a Conditional Use Permit (CUP), thus allowing more areas of the City as potential sites for these crucial facilities. Prior to the SWAT Ordinance, only Manufacturing/Heavy Industrial (M3) Zones were permitted for the establishment of these facilities.

- **Establish a Fund from Sunshine Canyon Host Fees for Development of Facilities That Reduce Landfilling**

On November 28, 2008 The City Council passed an ordinance placing the revenues from their percentage of tip fees at the Sunshine Canyon Landfill into a fund to be used solely for the development of landfill diversion facilities and programs, with a focus on recycling, recovery, and reuse. To date, (June, 2011) over \$7.8 million has been collected for the fund. As of today, nearly \$6.5 million has been appropriated and the remainder will be used to complete the City's Alt Tech Project.

- **Site and Develop the First Two Conversion Technology Plants**

In 2007, the City Bureau of Sanitation (BOS) released a *Request For Proposals (RFP) for Alt Tech* facilities seeking one or more Development Partner(s) for both a commercial facility capable of processing 200 to 1,000 tons per day of post-recycling solid waste, and emerging technology facilities capable of processing up to 200 tons per day of post-recycling solid waste. On June 1, 2009, the Board of Public Works approved the BOS staff recommendation to initiate contract negotiations with the emerging technology vendor California Renewable Technologies utilizing an Anaerobic Digestion technology. Additionally, at its May 25, 2011 meeting, the Board of Public Works approved the BOS staff recommendation to negotiate with Green Conversion Systems (GCS) for a commercial-scale facility that incorporates a pre-processing system to recover recyclables, prior to utilizing advanced Waste-To-Energy (WTE). The Board additionally directed staff to look into the possibility of negotiating with Urbaser-Keppel Seghers for a second, commercial-scale facility that may feature a suite of technologies including a pre-processing system, advanced WTE, Gasification, Anaerobic Digestion and Composting.

- **Mandate a Reduction in City-Collected MSW Going to the Sunshine Canyon Landfill**

The City and County of Los Angeles negotiated a *"time certain" closure of the Sunshine Canyon Landfill* in 2037 which will mark the end of the era of landfilling within the City of Los Angeles.



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The City has successfully reduced landfilling tonnage from 3.65 million in 2006 to 2.96 million in 2009, a reduction of 640,000 tons per year since the adoption of the RENEW LA Plan.

- **Establish a Green Energy Producer Bonus, and Provide Reductions on City Taxes Based on Companies' Recycling Performance**

In order to support new alternative technologies that can process solid waste and produce electricity, the City Council has asked The Los Angeles Department of Water and Power (DWP) to establish a per kWh "*green energy producer bonus*" payment for Alt Tech companies that locate within the City of Los Angeles and use City-generated Municipal Solid Waste (MSW) to create renewable energy. The DWP has been part of the evaluation committee for the City's Alt Tech RFP and it is anticipated that power generated from the Alt Tech facilities will assist the DWP in achieving its Renewable Portfolio Standard (RPS) goal of 35% by 2020, which exceeds the recently expanded State requirement of 33% by 2020.

- **Add Residential Foodwaste to the Greenwaste Bin**

L.A. initiated a *Residential Foodwaste to the Curbside Greenwaste Bin* pilot program to fulfill this RENEW LA mandate. The pilot includes approximately 8,700 homes. Also being explored is the possibility of adding processed residential foodwaste to the digestion process at the Hyperion Wastewater Treatment Plant to increase gas production.

- **Expand Multi-Family Recycling to 50% of the City**

Multi-Family Recycling has been expanded to 430,000 multi-family households citywide beginning in 2007, and is now available to all multi-family units in the City. 75% of all units participate in the City's Blue Bin program; the largest multi-family recycling program in the nation.

- **Implement Recycling in the Commercial Sector**

On December 17, 2010, the City Council approved a *Mandatory Citywide C & D Recycling* ordinance requiring that all mixed materials hauled from construction sites be delivered to a Certified Processor for recycling.

The *Restaurant Food Waste Recycling* program has 1,000 participating restaurants diverting over 33,000 tons of compostable food and paper waste from landfills each year.



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The City is developing a ***Green Business Certification*** Program, for launch later this year. In partnership with the Los Angeles Community College District (LACCD), the Los Angeles Chamber of Commerce, and many other partners, businesses will be certified by the City for their sustainable waste, water, and energy practices. A ***Green Lodging Program***, through Green Seal, has certified six major hotels within the City.

The BOS has established the ***Commercial Business Waste Assessment and Technical Assistance Program*** to assist the commercial sector in their recycling efforts.

AB 32 requires statewide ***Mandatory Commercial Recycling*** and requires municipalities to serve as the enforcement agency. In anticipation of this requirement, in May of 2011, the Board of Public Works approved and forwarded to Council for consideration a Five-Year Notice of Intent to Franchise for haulers servicing all commercial properties.

In January 2003, CalRecycle reauthorized the entire City of Los Angeles as a Citywide ***Recycling Market Development Zone (RMDZ)***. Since designation, the RMDZ Revolving Loan Program has provided over \$11.5 million in loan financing to recycling businesses located in Los Angeles.

In addition, the City has supported the ***Charitable Donation Programs at LA SHARES*** which redirects office supplies, furniture, arts and crafts supplies, office equipment, and personal care products from the business community to hundreds of non-profits and schools in Los Angeles each year.

Residential (Blue Bin and Green Bin) Recycling Programs

Los Angeles became the first big city in the nation to include ***Film Plastics and Polystyrene Recycling*** in its Blue Bin program in July 2007, so that all clean plastics are now accepted. Over the past four years this action has helped to create a market for film plastics and polystyrene by requiring City processors to accept the material and then pairing them with vendors that can re-manufacture it into building materials and decorative accessories.

Carton Recycling has been added to the Blue Bin recycling system. Beginning this year, all refrigerated cartons that contain milk, juice, egg substitutes, etc, as well as juice boxes and similar packaging for soups and other liquids will be accepted for recycling.

L.A. initiated a ***Residential Foodwaste to the Curbside Greenwaste Bin*** pilot program to fulfill the RENEW LA mandate to add foodwaste to the curbside greenwaste bins. The pilot includes approximately 8,700 homes. Also being explored is the possibility of adding processed



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residential foodwaste to the digestion process at the Hyperion Wastewater Treatment Plant to increase gas production.

Los Angeles has made significant strides on several fronts with its curbside recycling programs. **Multi-Family Recycling** has been expanded to 430,000 multi-family households Citywide beginning in 2007, and is now available to all multi-family units in the City, with 75% of all units participating; the largest such recycling program in the nation.

To reduce contamination in the residential Blue Bins and increase the value of the collected commodities, the City successfully launched the **Recycling Ambassadors Program** which sends City staff door-to-door to explain recycling to residents. Efforts were concentrated in areas of the City with high density and large immigrant and non-English-speaking populations. This program has resulted in significant improvement in the quality of the Blue Bin recyclable material, most notably in the South Los Angeles collection district.

In the **Recycle For Dollars** incentive program, the City partnered with Material Recovery Facility (MRF) operators to enhance the quality and quantity of Blue Bin Recycling. Recycling Ambassadors check randomly-chosen resident's Blue Bins to observe how well they are recycling and where they need assistance and improvement. Residents whose bins contained only Blue Bin-acceptable materials without contamination were rewarded with cash prizes. Those with prohibited materials and contamination were tagged with instructions about proper recycling. The following week the contaminated bins were re-examined. Residents that followed the instructions and eliminated contamination and non-recyclable materials were also rewarded with cash prizes. The cash and other rewards were donated by the MRF operators.

Commercial and Institutional Waste Diversion Programs

Over the last seven years, an **LAUSD Blue Bin Recycling** Program has been added and is now servicing 648 schools with Blue Bin recycling, coupled with a recycling education program. 90% of all Los Angeles City elementary schools are now participating in the program.

To enhance the recycling of **Construction and Demolition Debris**, on December 17, 2010, the City Council approved a mandatory citywide recycling ordinance requiring that all mixed materials hauled from construction sites be delivered to a Certified Processor for recycling.

The **Restaurant Food Waste Recycling Program**, initiated in 2004 as a pilot, is now available citywide. To date there are over 1,000 restaurants diverting over 33,000 tons of compostable food and paper waste from landfills each year.



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The City is developing a ***Green Business Certification Program***, for launch later this year. In partnership with the Los Angeles Community College District (LACCD), LA Chamber of Commerce, and many other partners, businesses will be certified by the City for their sustainable waste, water, and energy practices. A ***Green Lodging Program***, through Green Seal, has certified six major hotels within the City.

Although recycling by private companies is high already, to boost it even further, the BOS established the ***Commercial Business Waste Assessment and Technical Assistance Program*** to assist the commercial sector in their recycling efforts. AB 32 requires statewide ***Mandatory Commercial Recycling*** and requires municipalities to serve as the enforcement agency. In anticipation of this requirement, on May 20, 2011 the Board of Public Works approved and forwarded to Council for consideration a Five-Year Notice of Intent to Franchise for haulers servicing all commercial properties.

In January 2003, CalRecycle reauthorized the entire City of Los Angeles as a Citywide ***Recycling Market Development Zone (RMDZ)***. Since designation, the RMDZ Revolving Loan Program has provided over \$11.5 million in loan financing to recycling businesses located in Los Angeles.

In addition, the City has supported the ***Charitable Donation Programs at LA SHARES*** which redirects office supplies, furniture, arts and crafts supplies, office equipment, and personal care products from the business community to hundreds of non-profits and schools in Los Angeles each year.

Residential Special Materials (RSM) Programs

The City's RSM programs, through our ***S.A.F.E. (Solvents, Automotives, Flammables, and Electronics) Centers***, collection points, and periodic events, collect and safely manage over 7.3 million pounds of toxic materials each year that are not accepted in landfills for disposal.

The City has established six S.A.F.E. Centers and construction is beginning on a seventh facility to serve the West San Fernando Valley, giving residents the ability to drop off household toxics.

The BOS also conducts ***Mobile Collection Events*** to make it easy and convenient for residents to bring in their RSM. Both S.A.F.E. Centers and the Mobile Events collect material, free of charge from residents and manage it in an environmentally protective manner.

City staff have placed, and service over 220 battery buckets at City facilities such as public libraries, police and fire stations, and have also established ***"Take It Back" Partnerships*** with



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partners such as Target, Jiffy Lube, and B&B hardware. During fiscal year 2009-10 over 40,000 lbs of batteries were collected.

Los Angeles has agreements with the following businesses for the collection of batteries:

- 28 Jiffy Lube locations
- 12 Target Stores
- B&B Hardware

Additionally, the following City Facilities are collection centers for batteries:

- All Los Angeles Public Libraries
- Most Municipal Buildings
- 18 LAPD Facilities
- 2 Fire Facilities

Through a \$250,000 State grant, the City has developed a ***SHARPS Collection Program***. Staff have purchased 125,000 SHARPS containers, and established 37 new SHARPS drop-off locations at City Recreation & Parks Senior Centers, community health care clinics, and City facilities.

Through its S.A.F.E. Centers, and collection events, the City has also collected and safely managed 19 million pounds of ***Electronic Waste (E-Waste)*** over the last five years. E-Waste is unwanted electronics that have toxic components and therefore cannot be safely landfilled.

100% fully funded through State grants, the City provides technical assistance to 225 ***Used Oil Collection*** centers, has established 14 ***Marina Oil Recovery Centers***, and holds many used oil collection events each year to properly collect and recycle used motor oil.

Zero Waste at City Facilities

The City was at the forefront when the Buy Recycled Program was adopted in the 1990s. In 2009, RENEW LA's ***Environmentally Preferred Purchasing Policy*** was adopted and implemented to reduce the waste, toxicity, natural resource depletion, and environmental impacts of City purchasing. City staff are working with Green Seal to finalize an action plan to use the buying power of the City to develop greener products.

In July 2010, the City of Los Angeles Public Works Building became the first Zero Waste City facility. Plans are underway to expand Zero Waste to other City facilities.

Other actions to move City employees and facilities towards Zero Waste include:

- Expanded Polystyrene Ban – July 2008
- Expanded recycling through Blue Bin Rollout in City Facilities - January 2009
- Custodians Not Emptying Trash Cans That Contain Recyclables Campaign - January 2009
- Bring Your Bag Wednesdays outreach and incentives - May 2010
- Added Pens to the City Facilities Recycling Program - June 2010
- Second Chance Week Used Professional Clothing Collection Drive - October 2010
- Used Linen Collection for Animal Care Centers - April 2011
- Farmers Market Bag Give-Aways - January - June 2011
- Zero Waste Fair and Earth Day Event – April 2011
- Added 24 outdoor recycling bins around the Civic Center, and 10 outdoor recycling/waste bins to the Venice boardwalk area to increase recycling opportunities for the general public.

Pilot Programs

In 2010, the City Council authorized a *“Pay As You Throw”* pilot program. The City has partnered with RecycleBank® to offer a *Recycle Rewards Pilot* incentive program that rewards residents for increased Blue Bin recycling with discount coupons and other special offers. 5,400 West Valley and 8,854 North Central single family households are included in the pilot program. The contractor is compensated only for a significant increase in Blue Bin recycling in the pilot areas. A recommendation will be prepared to move Citywide with the program if the pilot provides an increase in Blue Bin recycling in these areas.

In 2008, the City began a *Mattress Recycling pilot* with a vendor that would inspect and take mattresses to refurbish and/or deconstruct for recycling. Mattresses collected as part of the bulky item service were staged at the collection yards for the vendor. This pilot did not expand Citywide because many of the mattresses were not accepted by the vendor and had to be reloaded into a vehicle for disposal. Another mattress recycling pilot is underway with a vendor that will accept all mattresses, in the San Fernando Valley, West Los Angeles, and North Central areas of the City, with a plan to expand Citywide as a permanent program in 2012.

In July, 2009, the City donated 29 pallets of decommissioned *Traffic Signal Lights* to the City of Tijuana, Mexico. These usable lights were being replaced with LED lights, and City staff coordinated with the State to find a partner in need of these items for reuse.

Other Programs

The City is pursuing other programs which include *Used Tire Recycling* and establishment of an *Outdoor “EcoPark” Classroom* to teach children and residents about composting and other sustainable activities.

Challenges and Opportunities

Even with all this success, there have been challenges along the way, some of which still linger. The worldwide recession hit California and the City of Los Angeles particularly hard and funds that were once available for new resource recovery programs have been “borrowed” by the State in an attempt to deal with their deficit. Attractive financing has dried up for Alt Tech vendors making it difficult to get new facilities off the ground.

Additionally, there has been dispute at the federal and State level about whether or not energy derived from MSW can qualify as renewable. Further, diversion credit for Alt Tech has been taken off the table in most of the relevant bills considered by the State legislature over the past several sessions. There is also opposition from some environmental groups to thermal technologies. These groups advocate for all material to be either recycled or composted, citing concern about perceived impacts of the Alt Tech facilities.

Though two (and potentially a third) Alt Tech projects are currently in development, one in the permitting phase and the others in the award phase, they are not yet operational, thereby missing the ambitious 2010 timeframe established by the RENEW LA Plan.

Still, substantial progress continues to be made toward Zero Waste and significant reductions in greenhouse gases from action items articulated in the RENEW LA Plan have been realized. It is gratifying to see the nation adopting many of the same goals: the President talking about a resurgence in the U.S. economy driven by the renewable energy sector and letting the science decide the value; discussions in the legislature in Sacramento about how waste reduction, recycling, composting and Alt Tech can reduce greenhouse gases by millions of tons per year; and the ongoing support for “reduce, reuse, recycle, compost, and convert” across the country.

Another positive note is that CalRecycle and the California Energy Commission have recently made findings for specific thermal Alt Tech processes, qualifying these projects for full diversion and renewable energy credit. This would provide a clear permitting pathway that has not previously existed, and improve project economics as well.

CLIMATE ACTION

By conserving resources and producing energy, RENEW LA programs and facilities reduce greenhouse gases (GHGs), thus contributing favorably in the battle against Climate Change. The table below provides estimates of the GHG reductions that can and have been achieved through some of the RENEW LA projects and programs instituted by the City over the past five years. **Appendix A** provides back-up calculations and assumptions.

As shown, these programs have the potential to reduce GHGs by over 3.1 million tons of CO₂ every year – the equivalent of taking nearly 595,000 cars off the roads in Los Angeles.

Greenhouse Gas (GHG) Reductions

Program	Pilot Program Diversion (tons per year)	Full Scale Program Diversion (tons per year)	Full Scale Program MTCO ₂ E Reduced/Yr ⁽¹⁾	Passenger Car Equivalent ⁽²⁾
Foodwaste to Green Curbside Can (Pilot Program)	92	7,931	6,028	1,104
Commercial Sector Recycling (by private sector)	NA	440,000	1,471,590	269,532
Multi-Family Recycling	NA	14,000	47,168	8,639
Restaurant Foodwaste Recycling	32,400	284,800	259,640	47,555
Mandatory C&D ⁽³⁾ Recycling (Phase II)	NA	55,000	123,289	22,581
LAUSD Blue Bin Recycling	NA	62,000	198,573	36,370
Alt Tech ⁽⁴⁾	46,500	2,170,000	1,092,000	208,795
TOTAL			3,198,288	594,576

⁽¹⁾ MTCO₂E is Metric Tons of CO₂ Equivalent

⁽²⁾ Number of passenger cars removed from the roadway each year equivalent to the MTCO₂E reduced

⁽³⁾ C&D is Construction and Demolition Debris; Phase II

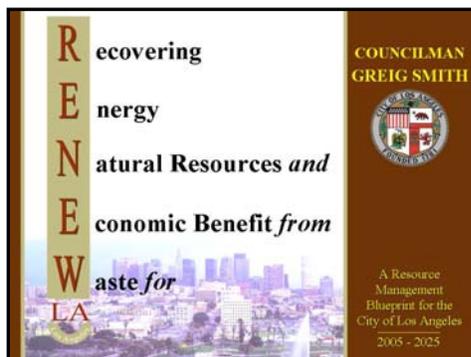
⁽⁴⁾ The Pilot Program column is represented by the 150 TPD CART “Emerging Technology” digester plant; the Full Scale Program is represented by one 1,000 TPD plant in each of the six collection districts, plus one shared with a neighboring jurisdiction. Based on 310 days-per-year operation.

SUMMARY OF PROGRAMS and ACTIONS

Summarized below are the accomplishments and programs that have been put into practice in the City of Los Angeles while implementing the RENEW LA Plan for the past five years.

Policies and Plans

RENEW LA Resource Recovery Blueprint



The RENEW LA Resource Recovery Blueprint was an expansive and extensive document that set forth bold goals for the City of Los Angeles - moving from an outdated paradigm of landfilling for solid waste management, to a new paradigm of maximum resource recovery. This paradigm shift is made possible by a combination of reuse, recycling, composting, and employment of Alternative Technologies (Alt Tech) to take waste resources and return them to beneficial use in

the form of green energy, alternative fuels, or other manufacturing feedstocks and chemicals. The RENEW LA Blueprint was a step by step plan to reduce Los Angeles' dependency on landfilling, thus preventing the associated air and groundwater pollution, while creating new jobs in the environmental sector and preserving virgin resources.

A Zero Waste Plan for Los Angeles: Solid Waste Integrated Resource Plan (SWIRP)

Using the RENEW LA action plan as a guide to reach a Zero Waste goal (defined as 90+% diversion with "nothing wasted"), the Bureau of Sanitation (BOS) began an intense, stakeholder-driven process in April 2007 to develop the 20-year Zero Waste Plan. During the first phase, which was completed in June 2008, a total of 256



public outreach meetings were conducted (109 Key Constituent Meetings, 27 House Meetings, 75 Business Interviews, 42 Regional Workshops in the six waste collection districts that comprise the City, and three Citywide Conferences). The Bureau reached out to residents, business owners, Neighborhood Councils, environmental organizations, environmental justice groups, trash haulers, labor unions, and others. To date, over 2,500 SWIRP stakeholders have engaged in providing feedback and input to the Zero Waste Plan.



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In May 2008, the SWIRP stakeholders identified the road to Zero Waste by developing **Twelve Guiding Principles** that included:

1. Protect public health and the environment
2. Provide City leadership as a model for Zero Waste policies
3. Require Manufacturer Responsibility
4. Provide incentives
5. Provide City leadership to increase recycling
6. Provide convenience to encourage recycling
7. Provide economic efficiency
8. Provide education and outreach to decrease wasteful consumption
9. Provide new, safe technology
10. Provide equity
11. Provide education and outreach to increase recycling
12. Require Consumer Responsibility

In July 2008, the Bureau commenced development of the **Policy, Program and Facility Plan** (Facility Plan) for the City to meet the goal of zero waste by 2025. The Facility Plan was based on the following:

- **Generation, Disposal and Diversion Projections for the 20-year planning period:**
Population projections are based on Southern California Association of Governments (SCAG) data, and per capita or per employee disposal rates through 2030.
- **Policy and Program Options:**
Over 70 potential policy and program options were identified by the SWIRP stakeholders as a path to Zero Waste during Phase I. These options were considered for potential implementation under the Facility Plan.
- **Infrastructure Options:**
Over 20 large scale and community scale facility options were identified based on increased diversion needs, and disposal needs.
- **Disposal Capacity and Needs Assessment:**
Existing disposal and diversion capacity were identified, and a solid waste facility needs assessment was determined based on facility gaps.
- **The Facility Plan Model:**
The model identified the tons generated in each sector of the City (single-family residential, multi-family residential, commercial, and construction and demolition sites), and how these tons are reduced or redirected by various new policies and programs over the next 20-years, to various existing or new facilities (i.e. Material Recovery Facilities,

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composting facilities, C&D processing, alternative technology, etc.), and identified where these tons are diverted to (e.g. various markets, energy recovery, disposal).

The Facility Plan addressed five Policy and Program scenario options:

Scenario 1 – No additional programs are added

Scenario 2 – Add various SWIRP policies and programs during the 20-year period

Scenario 3 – Implement mandatory requirements on policies and programs

Scenario 4 – Add upstream policies to Scenario 2

Scenario 5 – Add upstream policies to Scenario 3

All scenario options identified the various facilities needed to handle increased diversion and/or residual waste management, and the associated costs related to each option. Scenario 5 was deemed to be the preferred option to achieve the goal of zero waste by 2025.

Under Scenario 5, SWIRP recommends the implementation of 15 downstream policies and programs, 6 mandatory participation programs, 3 upstream policies, and the development of up to 4 material recovery facilities (MRFs), 2 - 9 composting facilities, and 7 alternative technology processing facilities to achieve Zero Waste. A phasing schedule was developed with respect to implementation of various policy, program, and facility needs that will achieve the City's goals of 70% diversion by 2013 and 90% diversion by 2025.

In 2010, the Bureau commenced development of the SWIRP Programmatic Environmental Impact Report (PEIR). The PEIR identified the preferred SWIRP project (Scenario 5 - consisting of expansion of existing programs, downstream, mandatory, and upstream policies and programs, and processing facilities) as well as 7 alternatives to the project (including 3 no-project alternatives, and the four SWIRP scenarios discussed above), to be considered for final Council approval.

The Draft PEIR will be made available for public review in the Fall of 2011. After a series of public meetings and response to public comments, the Final PEIR will be submitted to the City Council for approval in the Spring of 2012.

For more information related to SWIRP please refer to www.zerowaste.lacity.org

Time-Certain Closure of Sunshine Canyon Landfill

In 2010, the City negotiated a long-term disposal agreement with Republic/Allied Waste and their Sunshine Canyon Landfill. Prior to this and as part of the R-CUP process for the Joint-City County landfill, the County Board of Supervisors mandated





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the closure of the landfill in 2037. This date-certain closure will mark a historic moment, as it will bring to an end the era of landfilling within the City of Los Angeles. However, this closure stresses the need for the City to continue to move forward on the development of its Zero Waste plans, policies, programs, and facilities. This includes the Alt Tech facilities that provide a process for diversion and energy recovery.

This is especially urgent given the high cost of the rail haul system in development by the Los Angeles County Sanitation Districts (LACSD). This rail haul plan has been hard hit by severe drops in tonnages at the LACSD Puente Hills and Calabasas Landfills due to the recession and competition from other more distant landfills, resulting in lost gate fee revenue that was going to be used to subsidize the cost of rail haul in the early years. It may end up that rail haul will only be a small part of the overall waste management system, not the major feature it was once expected to be. The only other option would be long haul by truck to remote landfills at great expenses, expected to exceed \$100 per ton.

Funds from Sunshine Canyon Host Fees

In 2008, the City created an ordinance placing the revenues from their percentage of tip fees at the Sunshine Canyon Landfill into a fund to be used solely for the development of landfill diversion facilities and programs, with a focus on recycling, recovery, and reuse.

The revenue received by the BOS for the development of landfill diversion facilities and programs to date (June 2011) has resulted in the collection of over \$7.8 million for the fund. As of today, nearly \$6.5 million has been appropriated and the remainder will be used to complete the City's Alt Tech Projects.

Solid Waste Alternative Technologies Ordinance (SWAT)

In 2010, the City Council approved an amendment to the City Zoning Code which opened up the Manufacturing/ Light Industrial (M-2) and Public Facility (PF) Zones to permit the development of Alt Tech facilities with a Conditional Use Permit. This allows the City greater options for the future siting of Alt Tech facilities, than those available prior to this zoning amendment. Alt Tech facilities could previously only have been permitted in the Heavy Industrial (M-3) Zone. There are limited M-3 zoned parcels available in the City and they are concentrated in only a few areas. The limited nature of the M-3 Zone would have made the environmental justice features of the RENEW LA Plan impossible, as the plan calls for each watershed in the City to be responsible for the management of its own waste stream. Now, Alt Tech can be sited in many industrial areas of the City with full Land Use permitting and CEQA approval.



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Developing Alternative Technology (Alt Tech) Facilities

One of the key elements in RENEW LA is the development of Alt Tech facilities to convert post-recycling residual waste to renewable energy or fuels. The City has been very active over the past four years in pursuing the development of the first two of these facilities, although the technical review, evaluation and global financial crisis has delayed the process.

In February 2007, the RENEW LA Committee and the Board of Public Works released a Request for Proposals (RFP) for both “emerging” (up to 200 TPD) and “commercial” scale (up to 1,000 TPD) Alt Tech facilities. Thirteen proposals from around the world were received and interviews were then conducted in February 2008. From the summer 2008 to fall 2008, City staff and its consultants visited reference facilities in Spain, Belgium, Germany, France, Japan, Israel, Canada, and the United States.

In the summer of 2009, a short list of recommended vendors was presented to the City Council who selected CART as the successful “emerging” technology bidder. The CART facility will include a pre-processing facility and an anaerobic digester, to be located at CR&R’s facility in Perris, CA. This facility is currently in the permitting phase. During 2010, vetting continued for three vendors of commercial scale technologies. On May 25, 2011, the Board of Public Works authorized the Bureau of Sanitation to negotiate with Green Conversion Systems for a commercial scale facility which combines a pre-processing system to recover recyclables, and an advanced WTE facility for the remaining residual materials. The Board also requested staff to report back on the feasibility of negotiating with Urbaser-Keppel Seghers for a second, commercial scale plant that may feature a suite of technologies including a pre-processing system, advanced WTE, Gasification, Anaerobic Digestion and Composting.

DWP Green Energy Producer Bonus

The City of Los Angeles mandated compliance by its own Department of Water & Power (DWP) with State law that requires non-municipally-owned utilities to attain 20% of their energy from renewable sources by 2010. DWP achieved this goal and has since revised their goal to 35% by 2020. Additionally, Governor Brown recently signed a bill that will increase the statewide mandate to 33% by 2020. The Los Angeles City Council asked the DWP to establish a per kWh “green energy producer bonus” for Alt Tech companies that locate within the City of Los Angeles and use City generated MSW to create renewable energy. Although, no such royalty payment has yet been negotiated, one is expected to be in the near future. A key benefit of the power from Alt Tech facilities is that it would be locally generated within the existing DWP grid (distributed generation) and thus would not require new transmission lines to be constructed as would some of the remote wind and solar projects. The DWP has been an active participant with the BOS on the selection of emerging and commercial Alt Tech facilities.

Plastic Bags and Expanded Polystyrene

An estimated 2.3 billion single-use plastic carryout bags are used annually in the City. Statewide, over 386,000 tons of paper bags are disposed annually. It is estimated that only 5 percent of plastic bags and 21 percent of paper bags are recycled. The City cannot impose a point of sale fee on single-use plastic bags per SB2449, but can place a fee on paper or other single-use bags, and has the ability to ban single-use plastic bags.

On July 22, 2008, the City Council adopted a policy to ban the use of plastic carryout bags at all supermarkets and retail establishments beginning January 1, 2010, if a statewide fee had not been established by that time. It also imposed a point of sale fee on all other single-use bags, such as paper or compostable bags, if a fee or tax for their use at the State level has not been adopted by that date. The City is currently evaluating the Statewide Master Environmental Assessment (MEA) prepared by The Green Cities Initiative of California and the County's EIR as it proceeds with its own policy.

In that same action, the City Council also banned the use of Expanded Polystyrene (EPS) in City facilities and operations wherever possible. Los Angeles is not alone in this action, as the California League of Cities is pursuing an MEA in this regard. Currently, the City accepts plastic bags and polystyrene in its Blue Bin Program.

Since 2005, the BOS has purchased and distributed over **250,000 reusable bags** to encourage shoppers to stop using single-use plastic bags when they shop.

As a way to encourage residents to decrease their use of disposable plastic bags, the BOS, through several of its programs, designed and ordered reusable bags to distribute for free at various events through retailers, nonprofits and community groups, Neighborhood Councils, and Council offices throughout the City.

State Assembly Bill 1473

The City sought and supported the passage of AB1473 (Feuer) that provided a key permitting pathway for Material Recovery Facilities (MRFs) that process curbside recyclable materials. Many of these facilities throughout the State (including several in the City of Los Angeles) were exceeding the State-mandated 10% residue limit for recycling facilities due to excessive contamination of the Blue Bin material. As a result, they were subject to costly shutdowns that interrupted service, often leaving the City and other jurisdictions without viable alternatives and threatening to reduce diversion rates. AB1473 provided a "Temporary Solid Waste Facility Permit" for these plants while they could go through the process of obtaining permanent permits. This enabled the processing of curbside material for the City of LA and other jurisdictions to continue uninterrupted.

Blue Bin Recycling

Over the past five years, the City has made several improvements to the Blue Bin program as discussed below.

Plastic Bag and Polystyrene Recycling in Blue Bin

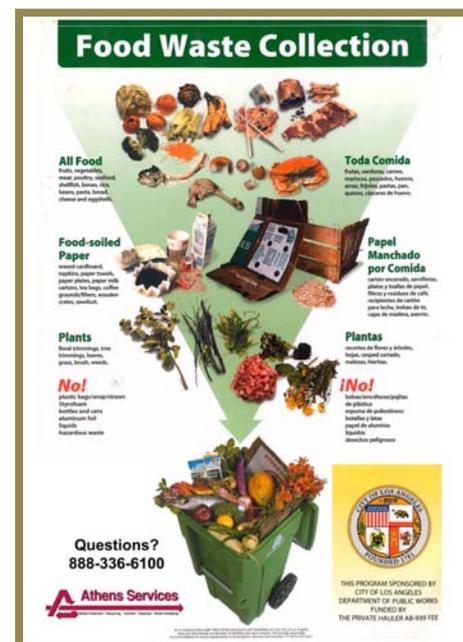
Los Angeles was the first major cities in the U.S. to add film plastic and Styrofoam to the acceptable materials for the blue bin curbside recycling program in July 2007. In addition, the City has been working with DART Industries, the leaders of the Plastic Food Service Packaging Group, to enhance their program. Finding vendors for the polystyrene, such as Timbron, a green building material company, and Nepco, a company who makes picture frames out of recyclable materials, has been key to making this program more effective. As of now there are seven or eight different potential markets to recycle these materials.



Residential Foodwaste Collection

The Residential Food Scrap Collection Pilot Program was initiated by the RENEW LA Committee. Following full Council approval, the program began the curbside collection of food scraps commingled with yard trimmings in the Green-Bin from five neighborhoods (8,700 households).

The results of the one-year study showed that an estimated 68 tons of food scraps and 24 tons of soiled paper products were diverted from the landfill during the pilot program (based on total green bin collection and a weight-based waste characterization study). Based on these results, a citywide program implemented in 750,000 households could amount to 7,931 tons of material diverted from the landfill, or the CO₂ equivalent of taking 1,104 cars off the road.



City Staff is in the process of expanding the program to other neighborhoods in the City, and plans to improve the program based on feedback received from surveys conducted at the end of the first year of the pilot.

Multi-Family Recycling



The Multi-Family Blue Bin Recycling Program is currently a free program that provides blue recycling bins, weekly service and educational materials to multi-family residential properties. These properties must be within the City of LA, have five or more units, and must not currently receive City trash and recycling services. Eligible properties include apartments, condominiums, town-homes, mixed-use properties, and other multi-family type dwellings.

Prior to launching the full-scale program in 2007, the City conducted comprehensive pilot programs testing multiple techniques, including bag separation programs, and processing unsorted mixed waste at a recycling plant (“Dirty MRFing”). The Blue Bin pilot proved most effective and since its inception has provided weekly recycling service to 430,000 households, which represents 75% of the multi-family units in the City. The BOS is working toward registering the remaining 140,000 units.

The City has also received a \$2.3 million grant to expand the multi-family recycling program to another 88,000 units in low-income, residential neighborhoods. The BOS is currently engaging stakeholders as they move toward a franchise system for multi-family collections.

Recycling Ambassadors

In 2007, the City established the Recycling Ambassadors Program in which trained employees go door-to-door in areas of the City with the poorest participation in the Blue Bin program. Their mission is not only to encourage participation, but to educate the residents on the proper materials to put in the blue, green and black bins. As a result of this program, contamination levels in the Blue Bins in the South LA collection district dropped markedly, making the sorting of this material much more productive while increasing the levels of diversion and the value of the material in the market place.

“Pay-As-You-Throw”

In the 2007 Budget, the Los Angeles City Council passed a “Pay-As-You-Throw” program to incentivize waste minimization. The City has partnered with RecycleBank® to offer a Recycle Rewards Pilot incentive program that rewards residents for proper Blue Bin recycling. The pilot, which is available without charge to 15,000 single-family homes along selected routes in the West Valley and North Central collection areas of the City. Neighborhoods in the pilot areas include Chatsworth/Northridge; East Hollywood/Los Feliz; Highland Park; Lincoln Heights;

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North Hills West; Pico Union/Westlake; Tarzana; Windsor Square; and Woodland Hills. It is designed to increase recycling rates and provides rewards and special offers for participating residents. The contractor is only compensated for a significant increase in Blue Bin recycling in the pilot areas, therefore they solicit participation, provide technical support to the City and the residents, and monitor success of the program.

Because success is measured on a neighborhood basis by additional tonnage recycled, enforcement is needed to make sure the residents are placing only recyclable material in their Blue Bins.

The goal of the pilot program, which is expected to run for 12 to 24 months, is to elevate environmental stewardship, personal responsibility, and voluntary action in recycling, community-wide. The more a community recycles, the more points they can earn, with the points redeemable for coupons and rewards at local retailers.

Carton Recycling

Beginning this year, refrigerated cartons such as milk, juice, cream, and egg substitutes that are found in the chilled sections of grocery stores, and non-refrigerated cartons such as juice boxes, soup and broth, soy milk and milk cartons found on the shelves in grocery stores, will be accepted in Blue Bins for recycling. These cartons are comprised mainly of paper, as well as thin layers of materials which help preserve the contents. The addition of these materials will give City residents more options for recycling, save resources, and decrease the cost of landfilling.

Textile Recycling

Textiles comprise about four to six percent of the residential waste stream. Materials include clothing, drapes, towels, sheets, blankets, tablecloths, belts, handbags, paired shoes, socks, and clean rags. The MRF operators who process the Blue Bin recyclables for the City have actively worked to develop markets for the textiles they recover. In addition, the City is working with the Salvation Army in select neighborhoods to collect textiles.

Commercial Sector Recycling

The California Air Resources Board (CARB) Scoping Plan for the California Global Warming Solutions Act of 2006 (AB32) was adopted with a Mandatory Commercial Recycling measure designed to achieve an annual reduction in





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greenhouse gas emissions of five million MTCO₂E. CalRecycle, is currently engaged in a formal rulemaking process for the imposition of mandatory commercial recycling statewide. The rule is expected to be finalized in 2011. In May 2011, the Board of Public Works authorized the issuance of a “Five-Year Notice of Intent to Franchise” in anticipation of this mandate.

The City of Los Angeles is fortunate to have a commercial sector that is already aggressively recycling. In fact, 70% of the total diversion occurring in the City is attributable to the commercial sector. To boost diversion in the commercial sector even further, the BOS has established the Commercial Business Waste Assessment and Technical Assistance Program. The City provides free business waste assessments and technical assistance in starting and/or expanding recycling programs. The City has conducted over 800 site visits to help businesses get started with recycling, including identifying recyclable materials, providing help with collection services, and peer mentoring so that they can take advantage of the best practices of successful recyclers.

The City is currently considering awarding franchises for multi-family sector waste collection, greenwaste recycling, and Blue Bin recycling in each of the six collection districts. Currently multi-family recycling is heavily subsidized by the City and is voluntary. The franchise system would be privately funded and mandatory.

Blue Bin Recycling at LAUSD Schools

The City of Los Angeles provides free Blue Bin recycling services to all Los Angeles Unified grammar and middle schools and their affiliated charter schools. There are currently 648 participating schools, up from 10 pilot schools in 2006. Schools participating in the program receive the following:

- Free recycling collection once a week
- Free classroom bins, 90 Gallon Blue Bins and 4 to 6-cubic yard bins for collections and storage
- Free educational presentations and materials for all LAUSD teachers and 3rd through 5th grade students
- Enrollment in the annual Recycling Excellence Awards that gives participating LAUSD schools the opportunity to win up to two thousand dollars in grant money for expanding their environmental programs



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LAUSD Blue Bin Recycling Program Statistics

School Breakdown

	Total	Receiving Service	Percentage
Adult School	17	5	29.41%
Early Education Center	87	57	65.52%
Primary Center	24	19	79.17%
Special Education	10	7	70.00%
High School	152	103	67.76%
Middle School	89	65	73.03%
Elementary School	438	392	89.50%
Totals	817	648	79.31%

Students Educated from 2009/2010 Fiscal Year: 23,211

Student Educated thus far in the 2010/2011 Fiscal Year: 17,356 (Projected 24,000 by end of Fiscal Year)

Estimated number of gallons collected per week: 718, 770, or an estimated 460 tons per week of recyclables collected and delivered to recycling facilities.

LAUSD Recycling by Council District

Council District	Enrolled	Total	Percentage
1	50	67	74.63%
2	35	42	83.33%
3	44	58	75.86%
4	28	31	90.32%
5	27	30	90.00%
6	39	41	95.12%
7	40	49	81.63%
8	48	63	76.19%
9	56	78	71.79%
10	41	50	82.00%
11	51	57	89.47%
12	53	63	84.13%
13	40	48	83.33%
14	47	66	71.21%
15	49	74	66.21%
	648	817	

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The program reaches a great diversity of cultures through the schools and the school children then educate their parents and grandparents about recycling. The idea is to create “committed recyclers” from early childhood onward.

Citywide Construction and Demolition (C&D) Debris Recycling Ordinance

On December 17, 2010, the City Council approved an ordinance to require Citywide recycling of C&D Waste. This replaces the former rebate program that was started in 2003 in which haulers were awarded a rebate of \$10 per ton of material diverted to a certified processing facility. Each application for a City building permit must now identify the permitted hauler handling the C & D debris. The material must be taken to one of 11 certified facilities and there are fines of up to \$5,000 for noncompliance. This new mandated program is expected to result in additional GHG reductions of over 123,000 MTCO₂E per year.

Restaurant Organics Recycling

There are more than 8,000 restaurants in the City of LA. Approximately 70% of the waste generated at restaurants is organic and can be recycled for beneficial use. The BOS implemented a pilot Commercial Food waste recycling program in April 2004, which was expanded into a full-scale citywide program in April 2007. To date over 1,000 restaurants participate in the program, and staff estimates that 33,000 tons of compostable organics, including food and non-recyclable paper products, is being diverted annually. The City’s goal is to divert 100,000 tons per year of separated organics by 2013. The City is talking to participating restaurants about initiating recycling programs for their paper, glass, metal, and other recyclable commodities as well.



The City’s permitted private waste haulers are given an incentive to recruit restaurants for participation in the program. In the program, the waste haulers offer training to restaurant staff on how to properly separate organic foodwastes from regular trash. The hauler then collects the food material and transports it to a processing facility for composting. The compost is a high quality soil amendment that is sold to local growers, given away to the public, or otherwise beneficially used.



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City Tax Breaks for “Zero Waste” and Re-Manufacturing Companies

In January 2003, CalRecycle reauthorized the entire City of Los Angeles as a Citywide Recycling Market Development Zone (RMDZ). The RMDZ program was established by the State to stimulate recycling based manufacturing businesses and create jobs.

The RMDZ Revolving Loan Program provides direct loans to businesses that use post-consumer or secondary waste materials to manufacture new products.

Possible uses of funds include:

- Machinery & Equipment
- Real Property Purchases (up to \$1,000,000 maximum)
- Working Capital
- Leasehold Improvements
- Refinance of Debt (if related to the project)

Since designation, the RMDZ Revolving Loan Program has provided over \$11.5 million in loan financing to businesses located in the Los Angeles RMDZ.

In addition to the Revolving Loan program, the City of Los Angeles RMDZ program offers a wide range of support mechanisms applicable to manufacturers that use secondary materials including tax incentives, low interest financing, 35% Department of Water and Power electric rate reduction, and other resources including employment training and business assistance. Additional financial incentives may include Industrial Development Bond Financing, Small Business Financing, State Enterprise Zone, Federal Empowerment Zone, and Renewal Community tax incentives.

There are also unique possibilities to “layer” the RMDZs with the City’s Enterprise Zones, thus potentially offering benefits of both programs to prospective recycling companies.

RESIDENTIAL SPECIAL MATERIALS (RSM) aka HOUSEHOLD HAZARDOUS WASTE (HHW) PROGRAM

Almost every garage or kitchen contains residential special materials, such as paints, batteries, insecticides, solvents and other common household chemicals that are labeled “corrosive,” “explosive,” “reactive,” “flammable,” “poisonous” or “toxic.” When disposed of improperly, such as in the regular trash, these items eventually make their way to landfills where they can seep into the groundwater, harming the environment.

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Examples of material collected are: paint and solvents; used motor oil and oil filters, antifreeze and other automotive fluids; cleaning products; pool and garden chemicals; aerosol cans; unused household medications; sharps; auto batteries; household batteries (D, C, AA, AAA, 9V etc.); fluorescent tubes and bulbs; mercury containing gadgets and others.

Since 1988, the City of Los Angeles has operated a Residential Special Materials (RSM) Program to protect residents and the environment against the damaging effects of improper disposal of household chemicals.

From the inception of the program, the amount of RSM waste collected and the level of resident participation has steadily increased. In the nine year period from fiscal year 2001-02 to 2009-10 a total of 48,003,000 pounds (24,000 tons) of RSM has been collected. The annual tonnage of RSM collected has increased over 270% since the program began in 2002. In the same nine year period 458,900 residents have participated in the RSM program. The number of residents served annually has also increased by 270%.

S.A.F.E. Permanent Collection Centers

In December 2002, the Bureau of Sanitation opened the first permanent collection facility, known as the Solvents, Automotive, Flammables and Electronics (S.A.F.E.) Collection Center. The S.A.F.E. Center collects RSM wastes from City and County residents and small businesses on a regular basis, typically operating three days per week, Saturday, Sunday and one weekday. S.A.F.E. Centers have responded to continued increased demand by offering residents more convenient and consistent opportunities to dispose of and recycle their RSM wastes.

The Centers do not accept items such as explosives, ammunition, bio-medical and pathological wastes, radioactive materials, tires, yard waste, and ordinary household garbage.

The City's S.A.F.E. Center Locations are:

Gaffey Street 1400 N. Gaffey St. San Pedro, CA 90021	LAG 4600 Colorado Blvd. Los Angeles, CA 90039	HTP 7660 W. Imperial Highway, Gate B Playa Del Rey, CA 90293	Randall Street 11025 Randall St. Sun Valley, CA 91352	UCLA 550 Charles E. Young Dr. West Los Angeles, CA 90095	Washington Blvd. 2649 E. Washington Blvd Los Angeles, CA 90021	Balboa Blvd Granada Hills New Facility In Construction
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The Bureau has six S.A.F.E. Centers and construction is beginning on a seventh in Council District 12, at the site of the old Fire Station 87 on Balboa Blvd. S.A.F.E. Centers provide an easy and convenient way to dispose of unwanted residential hazardous waste. Proper



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disposal of these materials ensures the safety and cleanliness of our environment, water resources and neighborhoods. In addition, it provides a convenient way to our residents to comply with the law.

Mobile Collection Events

The Bureau, in addition to the S.A.F.E. centers, also continues to operate mobile collection events in areas that are not in close proximity to existing S.A.F.E. Centers. For fiscal year 2011-12, there are three mobile events scheduled.

Universal Waste

On February 9, 2006, it became illegal to dispose in the trash any U-Waste such as household batteries (A, AA, AAA, etc.); fluorescent tubes and bulbs; and mercury containing gadgets (light switches, thermostat, etc.) and E-Waste such as computers, monitors, televisions, etc.

On September 1, 2008, it became illegal to dispose of home generated Sharps (such as needles, lancets, etc.) in the trash.

As these items are very common household items, which can be used up fairly quickly, it is imperative that proper disposal/recycling opportunities be as convenient as possible for the public. While the S.A.F.E. Centers are a very significant asset in collection and recycling HHW and E-Waste, having additional, even more convenient locations throughout the City will be of great value to the public and the protection of our environment.

Batteries and CFL Collection – City Facilities and Retail Partnerships

In anticipation of the State banning of U-Waste and E-Waste from the trash, the Board of Public Works, on October 25, 2006, instructed BOS to offer all Bureaus and Offices in the Departments of Public Works a used battery collection program at the various offices and yards. On September 29, 2006 the City Council adopted a board report from the Board of Public Works to instruct the BOS in cooperation with the General Services Department, to offer Departments in the City of Los Angeles a used battery collection program for their offices and facilities.

Through March 2011, approximately **220 collection buckets have been distributed**. The BOS collects batteries from many City facilities including public libraries, police facilities and fire facilities. In addition to public facilities, the BOS has created partnerships with Target Stores, Jiffy Lube and B & B Hardware to collect fluorescent tubes and bulbs and household batteries from City of Los Angeles residents.

BOS collects batteries at the following locations:

- 6 S.A.F.E. Centers
- 28 Jiffy Lube locations
- 12 Target Stores
- B&B Hardware (batteries and CFL's)
- All Public Libraries
- Most City Facilities
- 18 LAPD Facilities
- 2 Fire Facilities

During fiscal year 2009-10 over 40,000 lbs. of batteries were collected, of which over 21,000 lbs were collected from the City's Public Libraries.

SHARPS Collection

BOS accepts SHARPs at all six S.A.F.E. Centers as well as mobile HHW collection events. To further expand the program BOS has partnered with Department of Recreation and Parks, independent pharmacies and community health clinics to collect SHARPS.

The City received a \$250,000 State Household Hazardous Waste Grant to help establish the SHARP's program. The grant allows for the purchase drop boxes and containers for Sharps collection, collection services and outreach.

The BOS has established 37 new SHARP's drop off locations at Recreation & Parks Senior Citizen Centers, independently owned and operated pharmacies, community health care clinics, and at City facilities. Staff holds information sessions at senior centers and outreach events to raise awareness about proper SHARP's disposal. The BOS has also purchased 125,000 SHARPS containers, through the Grant, that have been distributed at S.A.F.E Centers, public outreach events and Senior Centers.

E-Waste Recycling

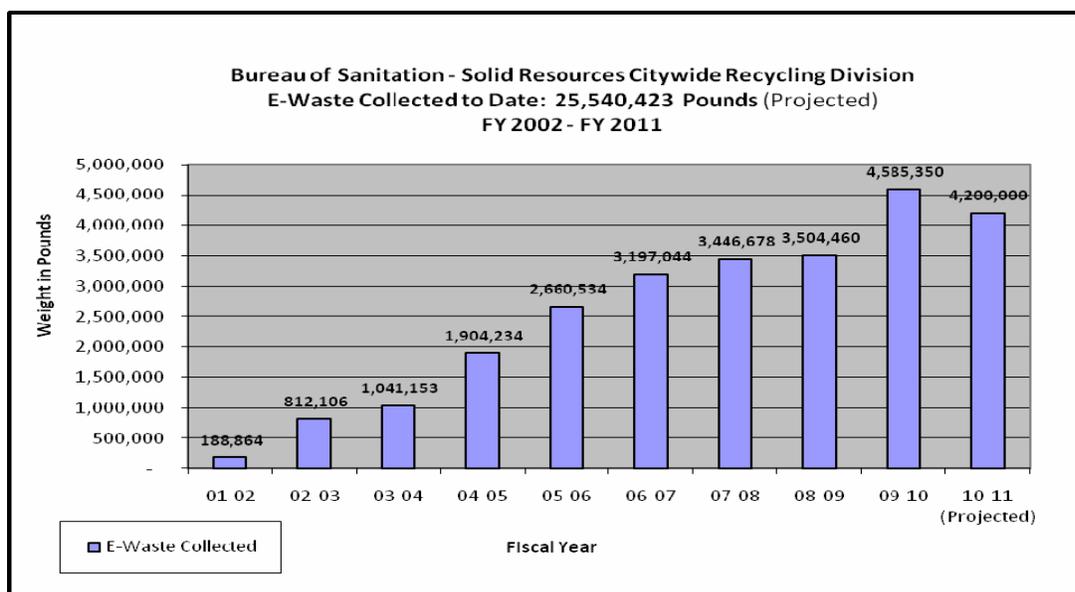
Electronic Waste (E-Waste) is unwanted electronic products such as computers, TVs, VCRs, stereos, copiers, fax machines and telephones. These unwanted products can be dismantled and recycled to their commodity level of plastic, metal, and glass. These commodities can then be used in new products. E-Waste is collected through:

- S.A.F.E. Centers.
- Mobile RSM collection events

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- E-Waste only collection events
- E-Waste and Used Oil collection events.

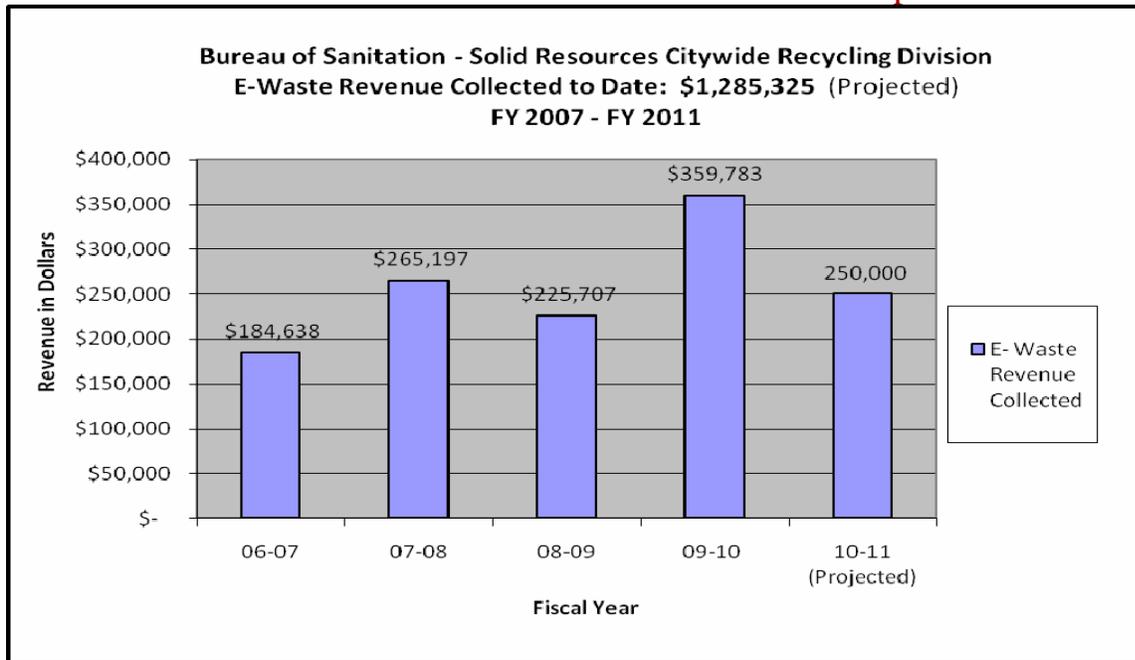
Starting in fiscal year 2001-02, the E-Waste program is projected to collect **a total of 25.5 million pounds of E-Waste** by the close of fiscal year 2010-11. The demand for services to safely collect and recycle accumulated E-Waste increases each year. In 2009, City E-Waste collections spiked, probably due to the national television conversion from analog to digital.



The Electronics Recycling Act of 2003 (SB 20) requires a front-end fee, collected from consumers by retailers for each computer monitor, TV, or other CRT-related device sold by the retailer. Monies collected by retailers are remitted to the State for disbursement and the City has negotiated with the contractors a reimbursement rate of \$0.22/lb. for CRT-related devices.

As of February 8, 2006, it became illegal to dispose of E-Waste such as televisions and computer monitors, computers, printers, VCRs, cell phones, telephones, radios, and microwave ovens; electrical switches; chest freezers; pre-1972 washing machines; and other items in the trash.

Since its inception in fiscal year 2006-07, the E-Waste program is projected to have received a total of \$1,285,325 in reimbursements by the close of fiscal year 2010-11.



Used Oil Recycling Program

The City of Los Angeles currently provides and serves its resident as well as County of Los Angeles residents with used oil and filter collection through the following:

- Six Permanent HHW Facilities (S.A.F.E. Centers)
- Special Community Used Oil Mobile Collection Events
- Used Oil Filter Exchange/Promotional Events
- Over 225 Certified Collection Centers including most AutoZone and Kragens stores
- Fourteen Marina Oil Recovery Centers located in San Pedro and Wilmington

The City has been optimizing outreach and improving the collection and recycling of used oil and filters through monitoring the operation of certified collection centers for quality assurance, recruiting new certified centers within underserved areas, providing outreach to residents of multi-family complexes, implementing a filter exchange promotional program, and special community used oil collection events.

The Used Oil and Oil Filters Program is fully financed through CalRecycle. Since the inception of the program, the Bureau has been awarded over \$16,000,000 in grants. The Bureau's Used Oil and Oil Filters Program is one of the leading programs in the nation.

Zero Waste in City Facilities

Environmentally Preferred Purchasing Policy (EPP)

RENEW LA's Environmentally Preferred Purchasing Policy (EPP) was unanimously approved by the Los Angeles City Council on February 19, 2009. This policy directs City Departments to purchase products that are "environmentally friendly" in order to minimize the negative environmental impacts of City activities. The policy gives priority to products that reduce toxicity; conserve natural resources, materials, and energy; and are made of recycled material. The policy calls for "purchasing and using recycled and other environmentally preferable products whenever possible, while recognizing that their principal requirements are product performance and fiscal responsibility".

The City is currently working with Green Seal to become a certified partner. Green Seal will provide the City with an action plan to better implement their EPP program. An EPP Task Force has been established to carry out this plan, educate the various City departments and to track the pollution reduction benefits of the program.

The City Council also voted to request that the Boards of the Harbor, Water and Power, and Airport Commissioners adopt similar green purchasing program policies.

Other activities to reduce disposal from City facilities include the following:

Custodians Not Emptying Trash Cans Campaign

To increase recycling in City offices, the City Facilities Recycling Program (CFRP) worked with the custodial staff of the General Services Department and with building management in the Public Works Building to ensure that recyclables were not being placed in the trash. Custodial staff were instructed not to empty cubicle trash cans that held a significant amount of recyclables in them. Employees received a notice asking them to recycle the material from their individual trash can before their trash can would be emptied.

Blue Bin Rollout in City Facilities

In January of 2009, the CFRP transitioned about 300 City office sites from a source-separated recycling program to a commingled recycling program to encourage City employees to recycle more. Multi-color recycling bins were replaced with smaller versions of the blue recycling bins used by City of LA residents. The transition streamlined the recycling program to match the existing citywide program.



Five-Year Milestone Report

Zero Waste in the Public Works Building

The Zero Waste Plan focused on changing employees' behavior for one month per reduction strategy. The programs included education on reducing waste by recycling as much as possible, using reusable bags and mugs, and sending the trash generated to a Waste-To-Energy facility. A variety of outreach methods helped spread the word, including: e-newsletters/e-mail blasts, flyers/signs, bin labeling, a lobby display, recycled-content giveaways, and raffles for recycled-content prize baskets.

Pen Recycling

The City collects empty, dried-up, and otherwise non-functional pens and markers for recycling by Terracycle.net. Since June of 2010, the City has sent in 11 shipments totaling over 300 pens.

Second Chance Week Used Professional Clothing Collection Drive

The BOS collaborated with Downtown People Reaching Out (P.R.O.), a non-profit organization that collects, for reuse, donated pre-owned men's and women's business attire. Clothing was collected and then distributed to homeless men and women seeking and/or maintaining employment in the Los Angeles area through the area's homeless assistance providers Chrysalis and the Weingart Center. Through this October 2010 campaign, *half a ton of clothing was donated* by City employees to the City's homeless population, as they learned about reuse through active participation.

Farmers Market "Caught in the Act" Bag Give Aways:

The campaign began in October 2010 with the distribution of 1,600 bags to the City Hall Farmers Market patrons. Additional reusable bags were given away at other events. CFRP staff attended the Farmers Market every Thursday to "catch" customers using their reusable bags. These customers were then rewarded by being entered into a raffle for a beautiful Farmers Market Basket made up of items from the Market vendors.

Used Linen Collection for Animal Care Centers

The Linens Reuse Collection Event was created to continue to educate City employees about reuse, as well as benefit the Los Angeles Animal Services Department (LAAS). The campaign successfully collected 20 large bags of used linens that were donated to the LAAS Care Centers in April of 2011.

Zero Waste Educational Event

CFRP staff coordinated a Zero Waste Event in conjunction with the City Hall Farmers Market, on Thursday, April 21, 2011. Staff distributed information regarding all of the division's recycling programs, spoke with event attendees, and distributed 2,200 reusable bags.

Pilot Programs

The City continues to evaluate the feasibility of new diversion programs, plans, and policies. The sections below summarize the latest of these innovative pilots.

Food Digester Pilot Program at the Hyperion Wastewater Treatment Plant

The BOS has completed a preliminary Foodwaste/Fats, Oils, and Grease (FOG) digestion pilot plan design to test injection of FOG material and Foodwaste into two Anaerobic Digesters for a six-month pilot study. The equipment has been purchased and a protocol for conducting the testing has been developed. The project will take advantage of excess digester capacity at Hyperion, thus enhancing the efficiency of the overall treatment plant and producing additional biogas that can be used to generate heat and electricity.

The North Central Collection Fleet Corporate Yard will serve the City's growing fleet of Liquefied Natural Gas (LNG)-powered refuse collection trucks, as well as a variety of Compressed Natural Gas (CNG)-powered medium and heavy-duty municipal vehicles and street sweepers. This CNG could also be produced in the future by Alt Tech facilities, which would produce not only a clean burning fuel, but a renewable fuel as well. Utilizing this fuel for City heavy-duty vehicles, including City collection vehicles, would create a closed loop system.

Tire Collection and Recycling

The City of Los Angeles hosted six used tire collection events in 2010 that allowed city residents to cleanup and eliminate used tires from their homes. The used tire collection events were funded by a CalRecycle grant generated from the tire fee on each new tire sold in California. The events promote the residential recycling of waste tires, conserve valuable resources, and reduce the number of waste tires going to landfill. The grant enhances the City's ongoing collection program that allows city residents to recycle four tires per year free at any of the six district Solid Resources Collection yards. Shredded tires are also used in the City's street repaving "slurry seal" program conducted by the Bureau of Street Services.

Roscoe Resource Center "Outdoor Classroom"

The City has designed an "outdoor classroom" to be called the "Roscoe Resource Center" on a parcel of City-owned land at the corner of Roscoe Place and Hayvenhurst Avenue, just north of the Van Nuys Airport. This center will be used to demonstrate composting technologies and other sustainable activities for school children and the public at large.

CONCLUSION

Since the introduction of the RENEW LA Plan six years ago, the City has been extremely focused on carrying out not only the action items from the plan, but numerous other policies and programs as discussed in this status update with 100% support from the Board of Public Works and the Bureau of Sanitation.

These actions have had a significant impact on:

- Increasing landfill diversion levels
- Reducing the amount of organics, HHW, and other materials that are going into area landfills
- Benefiting the City's Climate Change efforts by reducing greenhouse gases
- Providing access to recycling programs for ever increasing numbers of residents
- Using the purchasing power of the City to reduce disposal and environmental harm while stimulating green manufacturing
- Furthering the exploration of clean technology as a solution to reduce landfilling, create energy and other useful products from waste resources, and eliminating the need for rail haul or long truck haul to remote landfills over ever increasing distances

The next five years will see increased diversion from all of these existing programs and the launch of the first Alt Tech facilities that will create the local generation of renewable electricity and transportation fuels. In addition, the BOS is focusing its recycling sights on the last remaining, and largest, segment of the City's wastestream – the commercial sector. It is anticipated that new programs will be implemented to boost diversion in this sector including source-separated recycling at businesses and perhaps mandatory processing of the mixed commercial wastestream at MRFs.

Los Angeles has achieved the distinction of having the highest diversion rate (69%) of all the large cities in the U.S. The City is well on its way to RENEW LA's Zero Waste goal of 90+% diversion from landfill disposal. The next five years will bring us that much closer to this goal, creating a healthier and cleaner environment for Los Angeles and its residents.

APPENDIX A

Greenhouse Gas Assumptions

1. Foodwaste to Green Bin Program

Extrapolated to Entire City of Los Angeles

750,000 households in the City

7,931 tons diverted

Food Scraps approx. 5,420

Soiled Paper approx. 2,511

***Total Reduction in GHG Emissions:** 6,028 MTCO₂E

*Using the EPA WARM Model

2. Commercial Sector

1,747,000 tons disposed (2007)

Assuming 25% diversion of this wastestream = 436,750

Rounded up to 440,000

Paper 30% 132,000

Plastics 15% 66,000

Metals 20% 88,000

Glass 5% 22,000

Cardboard 10% 44,000

Lumber 10% 44,000

Mixed Recyclables 10% 44,000

***Total Reduction in GHG Emissions:** 1,471,590 MTCO₂E

*Using the EPA WARM Model

3. Multi-Family Recycling

13,983.64 tons recycled (most recent 12 months analyzed)

Rounded up to 14,000 tons

Paper 25% 3,500

Plastics 15% 2,100

Metals 25% 3,500

Glass 10% 1,400

Cardboard 10% 1,400

Mixed Recyclable 15% 2,100

***Total Reduction in GHG Emissions:** 47,168 MTCO₂E

*Using the EPA WARM Model

4. Restaurant Foodwaste Program

956 restaurants in pilot = 32,400 tons

Extrapolated to Entire City of Los Angeles

Approximately 8,000 restaurants in the City = 284,800 tons of Food Scraps composted

***Total Reduction in GHG Emissions:** 259,640 MTCO₂E

*Using the EPA WARM Model

5. Construction and Demolition Debris Recycling Phase II Ordinance

110,000 tons disposed

Assuming ½ C&D Recycled under new ordinance = 55,000 tons recycled

Dimensional Lumber 44% 24,200

Concrete 14% 7,700

Cardboard 11% 6,050

Dry wall 8% 4,400

Metals 8% 4,400

Clay Bricks 10% 5,500

Carpet 5% 2,750

***Total Reduction in GHG Emissions:** 123,289 MTCO₂E

*Using the EPA WARM Model

6. LAUSD Recycling Program

Approximately 600 schools participating

Estimated at 15,500,000 gallons/year

Approx. 250 gallons/ton = 62,000 tons/year

Paper 25% 15,500

Plastic 20% 12,400

Cardboard 10% 6,200

Metals 20% 12,400

Glass 10% 6,200

Mixed Recyclable 15% 9,300

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***Total Reduction in GHG Emissions:** 198,573 MTCO₂E

*Using the EPA WARM Model

7. Alternative Technology

Pilot Program represented by a 150 TPD Anaerobic Digestion “emerging technology” plant

Full Scale Program represented by seven 1,000 TPD plants

Based on a 310 days/year operation

***Total Reduction in GHG Emissions:** 1,092,000 MTCO₂E

*Using the EPA Greenhouse Gas Equivalencies Calculator

APPENDIX B

BATTERY COLLECTION DROP-OFF LOCATIONS

JIFFY LUBE SERVICE CENTER LOCATIONS (within City boundaries)

<u>#</u>	<u>ADDRESS, CITY, ZIP</u>	<u>TELEPHONE</u>
1	4020 W. Sunset Blvd. Los Angeles 90029-2106	323-664-7974
2	4777 W. Pico Blvd. Los Angeles 90019-4240	323-932-0918
3	700 N. La Brea Ave. Los Angeles 90038-3339	323-937-7179
4	2157 W. Manchester Ave. Los Angeles 90047-2929	323-752-3232
5	3061 Overland Ave. Los Angeles 90034-3417	310-558-8259
6	20860 Roscoe Blvd. Canoga Park 91306-2002	818-886-8218
7	18503 Devonshire St. Northridge 91324-1308	818-831-1091
8	9500 Reseda Blvd. Northridge 91324-2305	818-734-9121
9	9325 Reseda Blvd. Northridge 91324-2927	818-886-1639
10	7558 N. Reseda Blvd. Reseda 91335-2820	818-996-2471
11	19360 Ventura Blvd. Tarzana 91356-3034	818-344-2282
12	17717 Ventura Blvd. Encino 91316-3717	818-705-1226
13	15300 Victory Blvd. Van Nuys 91406-6235	818-442-0199
14	15000 Olive View Dr. Sylmar 91342	818-362-0168
15	14103 Ventura Blvd. Sherman Oaks 91423-2712	818-986-4005
16	10867 Penrose St. Sun Valley 91352-2071	818-768-9104
17	11001 Santa Monica Blvd. Los Angeles 90025-3503	310-914-5301
18	8525 S. Sepulveda Blvd Westchester 90045	

JIFFY LUBE SERVICE CENTER LOCATIONS (outside City boundaries)

<u>#</u>	<u>ADDRESS, CITY, ZIP</u>	<u>TELEPHONE</u>
1	1332 S. Fremont Ave. Alhambra 91803-1902	626-570-0280
2	202 S. Glendale Ave. Glendale 91205-1714	818-547-4542
3	11541 Laurel Canyon Blvd. San Fernando 91340-4115	818-361-8778
4	5829 Adams Blvd. Culver City 90232-7301	323-934-5058
5	9901 State St. Lynwood 90262-1512	323-566-3797



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6	107 S. Victory Blvd. Burbank 91502-2347	818-954-0024
7	1603 E. Colorado Blvd. Pasadena 91106-2105	626-449-4396
8	1420 E. Walnut St. Pasadena 91106-1521	626-793-9896
9	24842 W. Pico Canyon Rd. Stevenson Ranch 91381-1700	661-222-9367
10	2344 Pico Blvd. Santa Monica 90405-1755	310-392-1994

TARGET STORE LOCATIONS

#	<u>ADDRESS, CITY, ZIP</u>	<u>TELEPHONE</u>
1	3535 S. La Cienega Blvd. Los Angeles, CA 90016	310-895-1131
2	2626 Colorado Blvd. Los Angeles, CA 90041	323-258-1355
3	6700 Topanga Canyon Blvd. Canoga Park, CA 91303	818-746-9922
4	11051 Victory Blvd. North Hollywood, CA 91606	818-761-3083
5	8840 Corbin Ave. Northridge, CA 91324	818-772-0494
6	8999 Balboa Blvd. Northridge, CA 91325	818-924-9001
7	9725 Laurel Canyon Blvd. Pacoima, CA 91331	818-896-8214
8	5711 Sepulveda Blvd. Van Nuys, 91411	818-779-0163
9	14920 Raymer St. Van Nuys, CA 91405	818-922-1001
10	6635 Fallbrook Ave. West Hills, CA 91307	818-999-2390
11	20801 Ventura Blvd. Woodland Hills, CA 91364	818-713-2707

B&B HARDWARE LOCATION

#	<u>ADDRESS, CITY, ZIP</u>	<u>TELEPHONE</u>
1	12450 West Washington Blvd., Los Angeles, CA 90066	310-390-9413

LOS ANGELES POLICE DEPARTMENT (LAPD) LOCATIONS

#	<u>DIVISION</u>	<u>ADDRESS, CITY, ZIP</u>
1	Scientific Investigation Division	1800 Paseo Rancho Castilla, LA, CA 90032
2	Risk Management	201 N. Los Angeles St., Space 301, LA, CA 90012
3	Central Traffic Detectives	251 E. 6 th Street, LA, CA 90014
4	IT Division	1149 S. Broadway, Room B-204, LA, CA 90015
5	Supply & Maintenance	140 N Hill St 19, LA, CA 90012
6	Info/Comm. Services Bureau	250 E. First Street, Suite 1500, LA, CA 90012
7	Record Room – N. Hollywood	11640 Burbank Blvd. North Hollywood, CA 91601



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8	LAPD	519 Wall St, LA, CA 90013
9	LAPD	19020 Vanowen Street, Reseda, CA 91335
10	LAPD	100 West 1st Street Room, LA, CA 90012
11	LAPD	100 Main Street, LA, CA 90012
12	LAPD	573 S. Boyle Ave, LA, CA 90033

LOS ANGELES FIRE DEPARTMENT LOCATIONS

#	<u>DIVISION</u>	<u>ADDRESS, CITY, ZIP</u>
1	Training Center	1700 Stadium Way, Room 112, LA, CA 90012
2	Supply & Maintenance	10 N. Avenue 19, LA, CA, 90031