

there is some developing regional infrastructure. The approach will be to identify processors within the Pasadena vicinity, work out the collection logistics and identify and remove barriers to diverting this waste material. Investing in local infrastructure will reduce transportation and collection costs, increase the efficiency of City operations and reduce environmental impacts.

Pasadena receives diversion credit for sending yard waste to Scholl Canyon Landfill to be utilized as alternative daily cover (ADC). Diversion credit for ADC is likely to be discontinued based on legislative trends. Consequently, the City's diversion rate would be reduced by 3 percent (or daily per capita disposal would be increased by 0.65 pounds per person per day) if this material is not diverted by other means such as composting. The City will seek alternative diversion options for residential yard waste in order to continue receiving diversion credit.

Next Steps:

- To encourage innovative food waste diversion efforts, open the franchise system to composting haulers
- Investigate best practices for organics diversion and facilitate options for the collection and processing of food scraps and other organic and compostable materials generated by businesses and multifamily properties with five or more units
- Keep City staff, elected officials and the community abreast of legislation concerning food waste diversion and support as appropriate
- In anticipation that there will be State mandates for commercial food waste diversion in the near future, assess the feasibility of creating an exclusive restaurant and grocery store franchise zone.
- Provide technical assistance to the business community to optimize participation in commercial food waste diversion programs

- Investigate alternatives to sending residential yard waste to the landfill to be used as ADC
- Haul a limited number of residential yard waste loads over a three to six month timeframe to an organics processing facility in the region to assess feasibility and logistics
- Assess the feasibility of commingling residential yard waste with food waste for transport to an organics processing facility in the region and potentially design a six month residential organics collection pilot
- Promote grass-cycling and backyard composting

Timeframe: 2014 – 2020

**11. Review Pay-As-You-Throw (PAYT) fee structure**

Objective: Ensure the viability and effectiveness of the PAYT system

Approach: Evaluate the current PAYT system and identify opportunities to improve diversion incentives while maintaining a rate structure that is fair and equitable to rate payers. Over time, if more customers reduce waste and migrate to lower levels of service, these rates may not be adequate to cover the costs of the collection system and pay for the programs needed. Additionally, staff needs to consider whether the cost differential between the three cart sizes is adequate to incentivize residents to recycle more and move toward a smaller, less expensive mixed waste cart. City staff will carefully monitor program costs and needs as well as rate revenues. Future implementation will include an analysis of potential "Zero Waste rate structures" where residents pay a rate based on all services (recycling, compostable materials, and mixed waste) to reflect a true cost of service.

Next Steps:

- Compare rates and included services from other PAYT cities in California and across the country, particularly those cities providing residential food waste programs

- Develop a Request for Proposals (RFP) for a consultant/third party expert to perform a rate study and review of Pasadena's PAYT system, evaluate the cost differential between the mixed waste cart sizes and determine if changes will be needed to maintain incentives for the future
- Hire consultant to perform rate study and PAYT review

Timeframe: 2014 – 2020

**12. Expand commercial and multifamily recycling**

Objective: Increase the diversion rate within the commercial and multifamily sector

Approach: Pasadena has a robust commercial/multifamily recycling infrastructure as well as a competitive environment. Encourage expansion of commercial and multifamily recycling for generators to increase participation and diversion. Some commercial generators in Pasadena fall below the State's mandatory recycling threshold of four cubic yards of waste generation per week. This initiative may extend recycling requirements to all commercial and multifamily generators.

Multifamily residents express confusion and dissatisfaction concerning the current apartment recycling system. The majority of the multifamily complexes have a system in place where trash and recycling are commingled in the same container. Recyclables are removed at material recovery facilities. The City will investigate encouraging or requiring source separated recycling at apartment complexes by adding more requirements to franchise agreements or by implementing a commercial/multifamily recycling ordinance. Source separated programs are more visible to participants and they can potentially recover a higher percentage of recyclables if participation is high and contamination is kept low. Outreach would also be conducted to property managers, industry groups, apartment residents, and employees so that they understand requirements and

implementation timeframes, thus ensuring a smooth transition. Any mandatory recycling policy adopted would be accompanied with an aggressive education and outreach component (as described below) to ensure that generators understand how to "right-size" their mixed waste collection services to reduce costs of collection and increase recycling capacity for additional commodities. Based on the franchised haulers' compliance with the commercial recycling reporting requirement, the City has an understanding of the existing commercial recycling programs, service opportunities and service voids. The City can work with its franchised haulers to prioritize commercial generators for technical assistance. For this initiative, the City will conduct stakeholder meetings to identify barriers to implementation of source separated recycling programs, develop a draft commercial/multifamily recycling ordinance for City Council consideration and, as appropriate, implement the new requirements in a phased manner over time. The performance standards which currently require franchise haulers to divert 60 percent of mixed waste and 75 percent of Construction and Demolition Materials from the landfill will be reviewed and raised as diversion technology improves over time.

Next Steps:

- Work through the franchise hauler system to identify the commercial and multifamily properties that generate less than four cubic yards of waste per week
- Determine the amount of waste generated by Pasadena businesses that do not fall under the current commercial recycling mandate and the disposition of this waste stream
- Investigate barriers to requiring source separated recycling at multifamily properties
- Investigate the appropriateness of implementing mandatory measures such as modifications to the franchise hauler system or a commercial/multifamily recycling ordinance

- Research existing commercial/multifamily recycling ordinances throughout the state and across the country to determine best practices

**Timeframe:** 2014 – 2020

**13. Optimize C&D waste diversion**

**Objective:** Review and optimize the C&D diversion requirements in order to divert the maximum amount of C&D debris generated in Pasadena

**Approach:** Revise/amend the C&D ordinance and the hauler C&D reporting and diversion requirements. In 2014, the C&D Ordinance was amended to comply with the State's updated California Green Building Standards Code (CALGreen) requirements. Square footage thresholds of covered projects were lowered and the diversion requirements were increased to 75 percent in support of the City of Pasadena's Zero Waste goal. The City will continue to reevaluate administrative procedures and determine the optimum level of diversion that is achievable.

**Next Steps:**

- Evaluate future measures such as prohibiting direct disposal of C&D debris or mandatory processing of all C&D materials
- Stay current with C&D recycling ordinances throughout the state and evaluate the applicability to Pasadena's conditions

**Timeframe:** 2014 – 2020

**14. Optimize waste diversion at City facilities**

**Objective:** Expand waste reduction, reuse, and recycling at City facilities, establishing the City's leadership and commitment to meeting its Zero Waste goals

**Approach:** Assess programs and policies currently in place at City facilities and parks and identify opportunities to expand

waste reduction, reuse, recycling and composting. Establish consistent waste reduction, recycling and composting programs for City facilities to implement, with provisions for monitoring and accountability. The City will model the behavior it seeks in its residents and businesses by maximizing recycling and composting at all City facilities. Public Works staff will partner with other City departments to recruit Recycling Coordinators within each department to assist with implementing and monitoring recycling and composting systems. As with commercial and school recycling programs, collection systems at City facilities can be optimized through waste assessments, sharing of "best practices," and "right-sizing" recycling and mixed waste containers and services. For this initiative, Public Works staff will convene quarterly meetings of the City's Recycling Coordinators to identify service voids and opportunities and to provide technical assistance and training. A phased-in approach will be utilized to facilitate implementation within the City's available budget and resource allocations.

**Next Steps:**

- Perform an audit of existing in-house recycling at all City facilities and parks
- Recruit and train recycling coordinator for each City facility
- Establish recycling programs at facilities lacking existing programs
- Establish guidelines for hosting Zero Waste events

**Timeframe:** 2017 – 2020

**15. Implement diversion of food scraps and other organic and compostable materials at stadiums and other public venues and events**

**Objective:** Divert food scraps and other compostable materials for beneficial use

**Approach:** Require the implementation of diversion programs for food scraps and other compostable materials at large

events (greater than 2,000 persons per day or event) such as Rose Bowl Stadium football games and concerts. The City will conduct a feasibility study and explore grant opportunities for organics diversion programs. Conduct meetings with venue operators and franchised haulers to identify opportunities and barriers to implementation of organics diversion programs. Prepare program materials, identify costs and implementation tasks, and develop a draft ordinance requiring composting at large events for consideration by the City Council. Require venue operators to collect the materials and arrange for transportation and processing of the materials. Require affected facility managers and event organizers to report to the City on the types and quantities of materials diverted and the final use of the materials.

Next Steps:

- Continue to work with the Rose Bowl Operating Company toward transitioning from conventional food packaging to use of compostable products
- Promote use of compostable food packaging at all large venue events such as the Tournament of Roses Parade, runs, marathons, festivals and flea markets
- Develop Green Events guidelines for events requiring City permits

**Timeframe: 2017 – 2020**

**16. Develop Zero Waste business partnership program**

Objective: Expand the visibility of local businesses making significant strides toward eliminating waste to model and raise awareness of best waste reduction practices within the commercial sector

Approach: The City will develop incentive programs to recognize businesses with exemplary waste diversion achievements

Next Steps:

- Review green business programs being implemented locally, throughout the state and across the country and determine best practices
- Develop a Zero Waste business partnership program
- Collaborate with business owners and industry associations to identify businesses interested in participating in the Zero Waste business partnership program
- Recognize business partners through methods such as publishing the names of partnering businesses on the City's website and running list ads in local publications
- Enhance existing Green City Award program to recognize businesses that have made substantial progress toward achieving Zero Waste
- Explore implementing a "Go Zero" challenge for businesses and institutions

**Timeframe: 2017 – 2020**

**17. Expand recycling in public areas**

Objective: Increase recovery of recyclables from high traffic public areas

Approach: Provide collection receptacles for beverage containers and recyclable paper in public areas throughout Pasadena. Containers would be stationed in high traffic areas such as parks, shopping districts, libraries, museums, the Playhouse District, etc.

Next Steps:

- Identify recycling containers appropriate for Pasadena (preferably high-tech, environmentally friendly compactors), estimate the number of recycling containers needed and the cost to purchase the containers
- Develop a budget line item for purchasing new containers over a five-year period

- Pursue grant programs and other funding opportunities for purchasing recycling containers
- Develop routes for servicing recycling containers
- Procure and install recycling containers

**Timeframe: 2017 – 2020**

**18. Optimize self-haul reporting and waste diversion**

**Objective:** Increase accuracy of disposal reporting by self-haulers

**Approach:** In order to reach diversion goals it is important to accurately account for the point of origin of waste. Based on the waste characterization study, an unrealistic amount of self-hauled waste is being reported as originating from Pasadena. The City of Pasadena will partner with local jurisdictions to develop more accurate accounting of self-haul waste origin, involving transfer stations, MRFs, and landfill operators.

**Next Steps:**

- Conduct survey of local landfills to determine the current practices for documenting waste origin (driver's license, commercial accounts)
- Obtain the records of the landfills and review the list of self-haulers (contractors, clean-up companies, commercial generators)
- Work with the Sanitation District to develop more stringent reporting requirements for self-haulers
- Support regional development of resource recovery parks at landfills and transfer stations for self-haulers to segregate their loads for recycling

**Timeframe: 2017 – 2020**

**19. Foster development of local and regional infrastructure for processing residual mixed waste (i.e., no market materials)**

**Objective:** Develop appropriate options for diverting waste materials for which there are currently no markets

**Approach:** Using information from the waste characterization study on the components and quantities of mixed waste, the City will research opportunities for beneficial use. Several nearby communities are investigating future development of mixed waste processing and are evaluating emerging technologies including anaerobic digestion, gasification and advanced thermal recycling (waste-to-energy). As landfill capacity in the region decreases, these alternative treatment methods will become more economically viable. It may be beneficial to evaluate the initiatives being pursued by Pasadena Water and Power as well as other communities and the private sector before actively engaging in the development of alternative technologies. The City will look for appropriate opportunities for partnerships and continue to monitor the technical and economic viability of emerging residual mixed waste processing technologies.

**Next Steps:**

- As opportunities arise, partner with Pasadena Water and Power and neighboring jurisdictions that are pursuing facilities for residual mixed waste processing, such as the City of Los Angeles, Los Angeles County and the City of Glendale

**Timeframe: 2020 – 2040**

**Division Potential**

Diversion estimates were prepared to identify the waste reduction potential of each policy and program. The diversion estimates are based on comparable policies and programs implemented in other jurisdictions, research, and educated estimates. **Table 5** shows the 2010 generation and diversion rate and summarizes the diversion potential by generator sector for the proposed Zero Waste policies and programs. Based on this analysis, it is estimated that Pasadena can achieve 87 percent diversion, a very high rate of diversion, by implementing the policies and programs identified. **Appendix C** includes the calculations used for estimating the diversion potential of each of the policies and programs considered by the City.

The diversion rates are presented as a snapshot in time assuming full implementation of all programs. In reality, policies and programs will be developed over time through additional research, testing, and pilot programs before the programs are fully implemented. Some initiatives will require new ordinances and regulations, which will require City Council action and time to implement.

Zero Waste is a design framework for reducing generation of waste and maximizing diversion, not a strict tonnage goal. By implementing the proposed policies and programs, the City will be striving towards Zero Waste, even though there will still be some residual waste that will be disposed.

**Table 5  
Existing Generation and Potential Diversion**

<b>Zero Waste Plan Estimated Diversion</b>			
Source	2010 Residual Waste Generation (Tons) <sup>1</sup>	Projected Diversion (Tons)	Projected Diversion Percentage (%)
Construction and Demolition	65,674	8,788	3.4%
Municipal Solid Waste	12,934	1,047	0.4%
Household	116,464	16,785	6.6%
Other	59,945	9,390	3.7%
<b>TOTAL</b>	<b>255,017</b>	<b>36,010</b>	<b>14.1%</b>
<b>Pasadena's 2010 overall diversion</b>			<b>73 %</b>
<b>TOTAL PROJECTED DIVERSION WITH ZERO WASTE INITIATIVES</b>			<b>87.1%</b>

<sup>1</sup>The data reflects tonnages tracked by the City including the Pay-As-You-Throw Curbside Services, the Franchise Hauler System, Waste to Energy and Other Waste disposed at the landfill.

*Greenhouse Gas Reduction Potential*

The City of Pasadena is committed to reducing greenhouse gas (GHG) emissions in order to comply with legislation such as Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006, and achieve goals outlined in the City's various policies such as the Climate Action Plan. The Zero Waste initiatives recommended in this plan can significantly reduce the City of Pasadena's greenhouse gas emissions. Based on the estimated diversion rates previously discussed, Table 6 presents the GHG reduction potential of the scenarios using the U.S. Environmental Protection Agency's (EPA) Waste Reduction Model (WARM) to estimate GHG reduction based on material types and amounts diverted.

The U.S. EPA created WARM to help solid waste planners and organizations track and voluntarily report greenhouse gas emissions reductions from several different waste management practices. WARM calculates and totals GHG emissions of baseline and alternative waste management practices—source reduction, recycling, composting, and landfilling. The model calculates emissions in metric tons of carbon equivalent (MTCE), metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>E), and energy units (million British thermal units, or Btu) across a wide range of material types commonly found in municipal solid waste. Calculation of carbon equivalency allows for a comparison of sectors contributing to the reduction of greenhouse gases. Appendix D includes the detailed results of the WARM calculations.

**Table 6  
Greenhouse Gas Emissions Reduction Potential**

Zero Waste Emissions Reduction	
Material Type	Estimated Reduction (MTCO <sub>2</sub> E)
Recycling	2,428
Composting	468
Landfilling	6,870
Total	1,925



*Wood pile at a local construction site*

**Implementation Schedule**

In determining the implementation schedule of the plan, the City grouped programs and initiatives into short-term, medium-term and long-term categories. Short-term is defined as being from the present to 2017, medium-term is defined as 2017 to 2020, and long-term as 2020 to 2040. The following factors were considered in categorizing the programs: available resources and technology, feasibility of implementation, performance of current programs and existing infrastructure.



Lasadena residents dropping off recyclables at a redemption center

The implementation schedule for the recommended Zero Waste initiatives is indicated in Table 7 and Exhibit 8.

**Table 7  
Zero Waste Strategic Plan Implementation Schedule**

Term	Initiative
Short-term (2014 - 2017)	Adopt Zero Waste Plan/resolution
	Implement product & disposal bans (e.g., polystyrene food packaging)
	Enhance educational outreach
	Promote junk mail blocking, catalog & phone book opt-out
	Expand product stewardship efforts & EPR policies
	Enhance enforcement of anti-scavenging ordinance
	Foster infrastructure development for processing food scraps & other organics & compostables
	Provide business technical assistance
	Expand school programs
Medium-term (2017 - 2020)	Implement diversion programs for food scraps & other organics & compostables
	Review Pay-As-You-Throw fee structure
	Expand commercial & multifamily recycling
	Optimize C&D waste diversion
Long-term (2020 - 2040)	Optimize waste diversion at City facilities
	Implement composting at stadiums & other large events
	Develop Zero Waste business partnership program
	Expand recycling in public areas
Long-term (2020 - 2040)	Optimize self-haul reporting & waste diversion
Long-term (2020 - 2040)	Foster infrastructure development for processing residual mixed waste (i.e., no market materials)

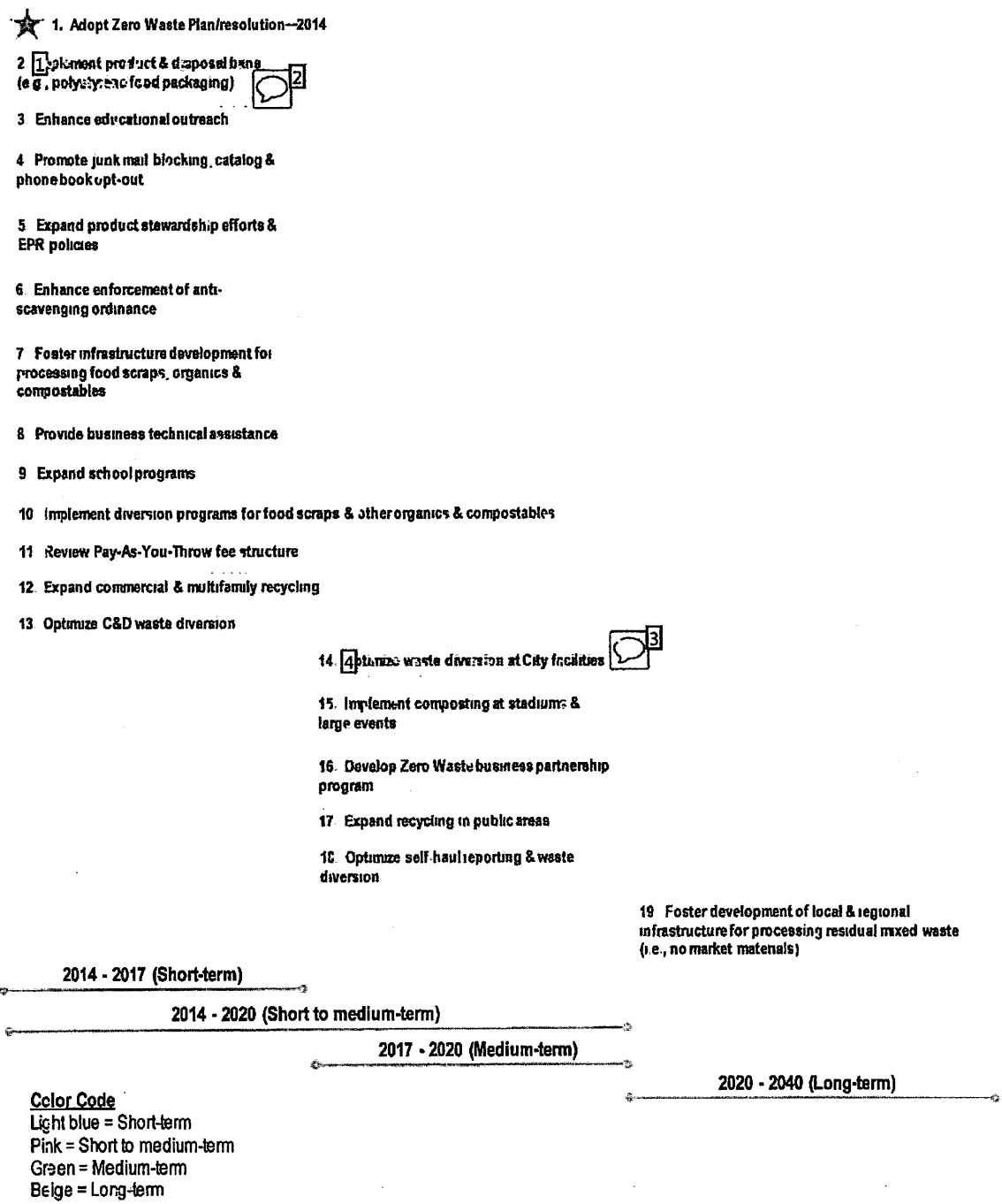


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Number: 2	Author: Administrator	Subject: Sticky Note	Date: 9/25/2014 1:12:18 PM
Number: 3	Author: Administrator	Subject: Sticky Note	Date: 9/25/2014 1:12:52 PM
What does 2017 mean as it relates to a PFFBC ban?			
Number: 4	Author: Administrator	Subject: Highlight	Date: 9/25/2014 1:12:24 PM
Number: 5	Author: Administrator	Subject: Highlight	Date: 9/25/2014 1:12:59 PM

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**FIGURE D  
Zero Waste Plan Timeline**





1. Grassroots Recycling Network, What is Zero Waste? [http://www.grn.org/zerowaste/zerowaste\\_faq.html](http://www.grn.org/zerowaste/zerowaste_faq.html)
2. The internationally peer-reviewed definition of "Zero Waste" was developed by the Zero Waste International Alliance, <http://zwia.org/standards/zw-definition/>
3. U.S. Census Bureau, 2010 Census, State and Cities Quick Facts.
4. The City may conduct a future audit of the local landfills and transfer stations to determine the accuracy of the self-haul reporting.
5. California Department of Finance, Population and Housing Estimates for Cities, Counties, and the State, 2011-2013 with 2010 Census Benchmark, January 2013. <http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/view.php> According to the 2010 Census, Pasadena has 59,551 total housing units comprised of 30,310 Single-Family units, 5,248 Multiplex (2-4) units, 23,863 Multifamily (5 or more) units and 130 mobile homes.
6. CalRecycle, "Diversion/Disposal Rate Report."
7. Cascadia Consulting Group, for the California Integrated Waste Management Board (now "CalRecycle").
8. The amount of disposed materials from self-haul generators attributed to Pasadena was 39 percent in fiscal year 2010. This is significantly higher than the statewide average of 20 percent for self-haul (source: CalRecycle 2008 Waste Characterization Study). There are several potential reasons for this: 1) self-haulers from adjacent unincorporated areas of Pasadena could be misreporting loads as being from Pasadena; 2) building contractors in Pasadena under certain circumstances may self-haul C&D materials to the landfill instead of subscribing to C&D collection from the franchised haulers.

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I recommend the following footnote:

A list of the 88 California cities and counties that have shown leadership on PFFBCs prior to Pasadena:  
<http://www.cleanwateraction.org/feature/phase-out-foam-additional-information-foam>

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**APPENDIX A WASTE CHARACTERIZATION DATA**

Appendix A Waste Characterization Data

Composition of Waste Disposed (2010/11)

City of Pasadena

Methodology: % composition was obtained from the California 2008 Statewide Waste Characterization Study (Southern Region data) prepared by Cascadia Consulting Group for CIWMB (CalRecycle).

		Tons Disposed by Sector and Materials Type (2010/11)					Waste Composition (2008) - Southern Region			
		Total	Single Family Residential	Multi-Family Residential	Commercial	Govt/Inst	Single Family Residential	Multi-Family Residential	Commercial	Govt/Inst
Category	Type	152,881	28,272	5,595	59,069	59,945				
Paper		21,300	3,158	1,241	11,844	3,056	18.2459%	22.1830%	20.0514%	5.0978%
	1 Uncoated Corrugated Cardboard	6,207	566	250	4,410	981	7.0255%	6.7681%	7.4611%	1.6614%
	2 Paper Bags	460	116	28	146	171	0.4092%	0.4836%	0.7141%	0.1214%
	3 Newspaper	1,596	812	170	547	67	1.5710%	1.0131%	0.9258%	0.1114%
	4 White Ledger Paper	901	99	21	647	133	0.2503%	0.2617%	1.0658%	0.2216%
	5 Other Office Paper	1,403	307	159	783	154	1.0614%	1.6216%	1.3767%	0.7374%
	6 Magazines and Catalogs	802	339	64	330	69	0.1396%	0.1501%	0.5533%	0.1117%
	7 Phone Books and Directories	57	32	1	24	0	0.1145%	0.0102%	0.0414%	0.0000%
	8 Other Miscellaneous Paper	3,479	1,262	289	1,343	585	1.4651%	5.1602%	2.7739%	0.2701%
9 Remainder/Composite Paper	6,395	1,624	260	3,614	897	5.7101%	2.6411%	1.1111%	1.4561%	
Glass		1,699	608	161	706	225	2.1493%	2.8804%	1.2946%	0.3751%
	10 Clear Glass Bottles and Containers	566	222	65	275	3	0.7562%	1.1701%	0.7961%	0.0014%
	11 Green Glass Bottles and Containers	225	117	34	70	4	0.4559%	0.6025%	0.1163%	0.0010%
	12 Brown Glass Bottles and Containers	313	101	29	170	13	0.3524%	0.5140%	0.2185%	0.0115%
	13 Other Glass Colored Bottles and Containers	108	32	26	18	31	0.1215%	0.1773%	0.0503%	0.0513%
	14 Flat Glass	149	3	0	11	136	0.0938%	0.0000%	0.0212%	0.2654%
15 Remainder/Composite Glass	338	132	7	161	38	0.4676%	0.1411%	0.2725%	0.0619%	

Appendix A Waste Characterization Data

Tons Disposed by Sector and Materials Type (2010/11)

Waste Composition (2008) - Southern Region

Category	Type	Single Family Residences	Multifamily Buildings	Commercial	Self-Gen	Single Family Residences	Multifamily Buildings	Commercial	Self-Gen
<b>Metals</b>		<b>6,410</b>	<b>1,037</b>	<b>187</b>	<b>2,559</b>	<b>2,626</b>			
	16 Tin/Steel Cans	696	251	54	372	19			
	17 Major Appliances	76	0	0	76	0			
	18 Used Oil Filters	17	17	0	0	0			
	19 Other Ferrous	2,814	350	47	889	1,528			
	20 Aluminum Cans	138	69	6	59	4			
	21 Other Non-Ferrous	326	103	9	148	65			
	22 Remainder/Composite Metal	2,344	248	71	1,015	1,010			
<b>Electronics</b>		<b>361</b>	<b>104</b>	<b>2</b>	<b>62</b>	<b>193</b>			
	23 Brown Goods	99	55	0	44	0			
	24 Computer-related Electronics	219	26	0	0	193			
	25 Other Small Consumer Electronics	42	23	2	18	0			
	26 Video Display Devices	0	0	0	0	0			
		<b>12,793</b>	<b>2,799</b>	<b>390</b>	<b>6,209</b>	<b>3,394</b>			
	27 PETE Containers	612	235	60	293	24			
	28 HDPE Containers	445	144	57	228	15			
	29 Miscellaneous Plastic Containers	493	168	32	286	8			
	30 Plastic Trash Bags	1,192	251	42	747	152			
	31 Plastic Grocery and Other Merchandise Bags	385	192	29	150	14			
	32 Non-Bag Commercial and Industrial Packaging Film	652	12	1	508	131			
	33 Film Products	865	3	11	138	713			
	34 Other Film	1,506	409	67	949	80			
	35 Durable Plastic Items	3,260	949	29	985	1,298			
	36 Remainder/Composite Plastic	3,384	437	63	1,925	958			

Single Family Residences	Multifamily Buildings	Commercial	Self-Gen
0.6837%	0.9720%	0.5291%	0.7717%
0.0000%	0.0000%	0.1225%	0.0000%
0.0011%	0.0000%	0.0000%	0.0000%
1.7371%	0.2577%	1.3045%	2.5494%
0.2156%	0.0037%	0.0095%	0.0077%
0.3617%	0.1723%	0.1214%	0.4054%
0.0166%	1.7723%	1.7191%	1.6545%
0.3665%	0.0305%	0.1056%	0.3220%
0.1527%	0.0000%	0.0752%	0.0000%
1.0977%	0.0000%	0.0000%	0.7730%
0.0605%	0.0102%	0.0003%	0.0000%
0.0000%	0.0000%	0.0000%	0.0000%
9.8998%	6.9719%	10.5119%	5.6626%
0.3501%	1.0367%	0.4357%	0.0000%
3.5092%	1.0225%	0.5857%	0.0274%
0.3925%	0.5849%	0.2819%	0.0122%
0.8862%	0.7752%	1.2640%	0.2537%
0.6774%	0.5542%	0.7571%	0.0273%
0.0427%	0.0057%	0.5807%	0.0152%
0.0115%	0.0087%	0.2233%	1.1891%
1.1771%	1.1957%	1.6071%	0.0376%
2.3554%	0.5140%	1.6675%	1.1250%
1.5776%	1.1277%	1.2555%	1.5715%

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Why isn't polystyrene mentioned here?

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Appendix A Waste Characterization Data

Tons Disposed by Sector and Materials Type (2010/11)

Waste Composition (2008) - Southern Region

Category	Type	Tons	Weight Percentage	Volume/ Loadings	Consumer Type	End Use	Single Family Residential	Multi-Family Residential	Commercial	Self-Gen
Other Organics		40,513	13,293	2,396	18,817	6,067	47.0175%	41.7502%	31.8567%	10.1212%
	37 Food	17,372	6,837	1,206	9,027	302	2.1815%	21.5570%	75.7610%	0.5018%
	38 Leaves and Grass	4,257	2,189	83	1,473	512	7.7922%	1.4922%	1.9214%	0.1535%
	39 Prunings and Trimmings	4,686	945	5	2,490	1,247	1.3431%	0.0614%	1.3166%	2.0175%
	40 Branches and Stumps	1,561	1	0	435	1,124	0.0052%	0.0000%	0.7219%	1.8750%
	41 Manures	21	21	0	0	0	0.0735%	0.0000%	0.0000%	0.0010%
	42 Textiles	2,234	978	185	625	446	7.7582%	3.3079%	1.0579%	0.7153%
	43 Carpet	5,800	360	346	2,950	2,144	1.2746%	6.1751%	1.7614%	7.5770%
44 Remainder/Composite Organic	4,582	1,962	511	1,817	292	5.2862%	5.1341%	3.0763%	0.1875%	
Inerts and Other		59,472	4,159	992	16,593	37,729	14.7107%	17.7250%	28.0903%	62.9392%
	45 Concrete	2,420	414	0	440	1,566	1.4191%	0.0000%	0.7452%	1.6119%
	46 Asphalt Paving	1,312	0	0	0	1,312	0.0000%	0.0000%	0.0000%	2.1582%
	47 Asphalt Roofing	4,986	57	0	1,372	3,556	0.2031%	0.0000%	1.3725%	7.3716%
	48 Lumber	28,036	2,200	694	9,719	15,422	7.7315%	12.4121%	16.4540%	75.7266%
	49 Gypsum Board	3,568	92	0	1,031	2,445	0.3210%	0.0000%	1.7445%	4.0753%
	50 Rock, Soil and Fines	8,355	464	0	930	6,961	1.5401%	0.0000%	1.5742%	1.6123%
51 Remainder/Composite Inerts and Other	10,797	931	297	3,101	6,468	1.2507%	5.1119%	5.1930%	10.7492%	
HHW		332	68	10	185	68	0.2418%	0.1863%	0.3139%	0.1138%
	52 Paint	183	10	0	157	15	0.0351%	0.0010%	0.1165%	0.0251%
	53 Vehicle & Equipment Fluids	16	6	5	0	5	0.0225%	0.0824%	0.0000%	0.0091%
	54 Used Oil	23	23	0	0	0	0.0813%	0.0000%	0.0000%	0.0000%
	55 Batteries	35	16	4	6	9	0.0111%	0.0114%	0.0000%	0.0151%
	56 Remainder/Composite Household Hazardous	76	13	2	22	39	0.0411%	0.0305%	0.0374%	0.0455%

Appendix A Waste Characterization Data

Tons Disposed by Sector and Materials Type (2010/11)

Waste Composition (2008) - Southern Region

Category	Type	Tons Disposed by Sector and Materials Type (2010/11)					Waste Composition (2008) - Southern Region			
		DTIC	Single Use Packaging	Multiserve Containers	Construction	Self-Help	Single-Use Containers	Multiserve Containers	Construction	Self-Help
Special Waste		8,942	61	215	2,090	6,576	0.2145%	3.8371%	3.5389%	10.9698%
	57 Ash	103	5	7	91	0	0.0177%	0.1170%	0.3543%	0.0000%
	58 Treated Medical Waste	0	0	0	0	0	0.0000%	0.0000%	0.0000%	0.0000%
	59 Bulky Items	8,610	0	208	1,826	6,576	0.0000%	2.701%	3.0311%	10.9698%
	60 Tires	147	5	0	142	0	0.0167%	0.0000%	0.2403%	0.0000%
61 Remainder/Composite Special Waste	82	51	0	31	0	0.1501%	0.6030%	0.0512%	0.0000%	
Mixed Residue		1,059	986	61	2	10	3.4863%	1.0890%	0.0040%	0.0171%
	62 Mixed Residue	1,059	986	61	2	10	3.4863%	1.0890%	0.0040%	0.0171%
<b>TOTAL</b>		<b>152,881</b>	<b>28,272</b>	<b>5,595</b>	<b>59,069</b>	<b>59,945</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
Tonnage Allocation (% of total)			18%	4%	39%	39%				

**APPENDIX B    CURRENT POLICIES AND PROGRAMS**

**CURRENT POLICIES AND PROGRAMS**

*Current Policies and Programs*

In planning for Zero Waste, it is important to review and understand existing policies and plans to ensure that the Zero Waste Plan supports and enhances the City's existing goals.

**Pasadena Municipal Code**

Chapters 8.60, 8.61, and 8.62 of the Pasadena Municipal Code (PMC) directly relate to the City's solid waste programs. Ordinances related to solid waste collection are covered in Chapters 8.60-8.61. Chapter 8.60 contains ordinances for the City's solid waste collection services, including the waste reduction program, solid waste collection and service fees, and the bulky item pickup program. Chapter 8.61 provides ordinances for the franchised collection services, which include requirements for waste reduction and recycling services as well as required recycling diversion rates.

Chapter 8.62 includes a requirement to have waste management plans for certain construction and demolition (C&D) projects. C&D recycling was mandated with the adoption of Ordinance 6917 in 2002. An amendment to Chapter 8.62 was adopted in February 2014 requiring applicable C&D projects to divert a minimum of 75 percent of the materials generated through recycling, salvage, or deconstruction. The ordinance is applicable to all demolitions, residential additions and remodels regardless of size, new structures of at least 120 square feet, tenant improvements of at least 1,000 square feet, and all City projects and competitively bid projects regardless of size. A performance security deposit is required to be collected at the beginning of each project and is refundable when recycling requirements are met. A final report with a summary of the diversion obtained, including documentation, are required in order for the deposit to be returned.

Table B-1 provides an overview of the amount of C&D materials disposed and diverted from 2006 to 2013 from covered projects hauled by franchised haulers.

*Table B-1*

**C&D Debris Disposal and Diversion**

Year	C&D Disposed (Tons)	C&D Diverted (Tons)	Diversion (%)
2006	4,586	19,011	81%
2007	3,534	19,506	85%
2008	2,525	17,173	87%
2009	1,705	12,732	88%
2010	1,216	8,692	88%
2011	1,295	11,544	90%
2012	1,467	10,365	88%
2013	1,447	9,929	87%

Source: City of Pasadena Non-Exclusive Hauler Reports, 2006-2013

**Zoning Code**

The Zoning Code (PMC 17.10-80) describes various types of zoning districts and land use classifications, land use regulations, development standards, and environmental performance standards. The Zoning Code's purpose is to protect and promote the public's health, safety, and general welfare, and to implement the policies of the General Plan. Related to solid waste, Ordinance 17.40.120 requires development and construction of new structures to include storage areas for the collection of mixed waste and recyclable materials. This helps ensure that new buildings account for the space to house the collection of recyclables, which helps promote the implementation of recycling programs.

**General Plan**

The City's General Plan provides a long range road map to guide the City's decision making process for the future. The General Plan is made up of seven elements that include the following:

1. Land Use
2. Circulation or Mobility
3. Housing
4. Open Space
5. Conservation
6. Noise
7. Safety

In 2009, the City began updating four elements of the General Plan: Land Use, Mobility, Open Space, and Conservation. A General Plan community survey was distributed in the summer of 2011 to collect feedback on the alternatives and the existing General Plan's guiding principles. The survey responses were used to help draft the concept land use map and policies that were presented for review by the public, advisory commissions and City Council in the spring of 2012.

The General Plan's Conservation Element recognizes the finite limits of Pasadena's natural resources and develops means for their protection and orderly use. A major role of this section is to provide policy guidelines for managing Pasadena's natural resources. Goal 2.3 in the Conservation Element states "Environmental management is a key consideration in the planning and decision-making process." The Zero Waste Plan will complement the General Plan by incorporating environmental management as a means of reducing the impact to natural resources.

**California Green Building Standards Code**

Similar to the City's C&D Ordinance, the California Green Building Standards Code (CALGreen) requires a construction waste management plan for residential and non-residential projects. The State Code requires the diversion of a minimum of 50 percent of the C&D debris generated by "efficient usage, recycling, and reuse on the project site or salvage for future use or sale." The City's C&D Ordinance has many features in common with CALGreen. The added requirement of a deposit plus the higher 75 percent diversion requirement, however, make the City's C&D Ordinance more stringent than the Green Building Standards Code, resulting in it being the superseding document for C&D projects. As discussed previously in this document, the City square footage thresholds were lowered in 2014 to meet the most current CALGreen requirements.

***United Nations Urban Environmental Accords and Green Cities Declaration***

On September 18, 2006, the City endorsed the United Nations (U.N.) Urban Environmental Accords (UEA). The U.N.'s Green Cities Declaration is an agreement signed as a part of the UEA that recognizes the importance of global cooperation to mitigate climate change. The UEA contains 21 action items that lay the groundwork for addressing urban environmental issues in seven different areas:

1. Energy
2. Waste reduction
3. Urban design
4. Urban nature
5. Transportation
6. Environmental health
7. Water

The UEA was aimed at implementing as many of the 21 Actions as possible by World Environment Day, June 5<sup>th</sup>, 2012. The 21 action items covered in the UEA are the basis of the City's Green City Action Plan described further in this plan. The UEA addresses the goal of achieving Zero Waste by 2040; the Zero Waste Plan will be developed to help Pasadena reach that goal.

***Green City Action Plan***

Approved by the City Council on September 18, 2006, the Green City Action Plan is a progressive list of environmental initiatives for the City to take in its mission to become a sustainable and green community. The Green City Action Plan is modeled off of the goals listed in the UEA.

The City has developed a set of sustainability indicators grouped by the seven thematic areas of the UEA. The goal is to use these indicators as a tool for assessing Pasadena's progress in meeting the UEA targets in a verifiable and measurable way; 2008 was the first year the indicators were produced and they have been reported every year since then.

The City has been actively pursuing projects to attain the goals outlined in the Green City Action Plan. As of 2010, the City had successfully implemented eight of the 21 actions.

The Waste Reduction category listed in the Green City Action Plan (and UEA) contains the following three initiatives:

- UEA 4 – Achieve Zero Waste to landfill and incinerators by 2040
- UEA 5 – Reduce the use of a disposable, toxic or nonrenewable product category at least 50 percent by 2012
- UEA 6 – Implement "user-friendly" recycling and composting programs with the goal of reducing 20 percent per capita waste disposal to landfills and incinerators by 2012

Of the three initiatives listed above, the City has successfully achieved UEA 6 and is making progress on achieving UEA 4 and 5. As of 2010, the City had achieved the goal listed in UEA 6 by increasing diversion for yard trimmings, hazardous waste, and electronic waste. The development and implementation of the Zero Waste Plan is designed to enable the City to meet the Zero

Waste goal stated in UEA 4. To target UEA 5, City staff conducted an inventory of toxic chemicals used in City facilities in 2010 and they have developed a process to replace those chemicals with safer, more sustainable alternatives. The plastic bag ban, which went into effect on July 1, 2012, is another way the City is reducing the use of disposable products in this category.

**U.S. Conference of Mayors' Climate Protection Agreement**

The U.S. Conference of Mayors' Climate Protection Agreement, signed at the same time as the UEA, advances the goals of the Kyoto Protocol. The Agreement offers 12 measures for cities to take that will contribute to reducing greenhouse gas emissions (GHG). In order to achieve these goals, cities are asked to take actions in their own operations and communities. Under the Agreement, cities commit to the following three actions:

1. Strive to meet or exceed the Kyoto Protocol targets in their own communities
2. Urge state governments and the federal government to enact policies and programs to meet or exceed the GHG emission reduction target of a 7 percent reduction from 1990 levels by 2012
3. Urge the U.S. Congress to pass the bipartisan GHG reduction legislation, which would establish a national emission trading system



*Beverage container recycling at a UCLA football game at the Rose Bowl*

The Agreement is compatible with the UEA and the Green Cities Action Plan, although it has no set dates for communities to reach each measure and the focus is directed towards reducing climate change. The specific measure that targets solid waste is listed in the 10<sup>th</sup> action: "Increase recycling rates in City operations and in the community." The City has been actively increasing recycling rates and will further expand efforts through implementation of its Zero Waste Plan.

**Green Cities California Sustainability Resolution**

On February 4, 2008, the City adopted the Green Cities California (GCC) Sustainability Resolution. The purpose of this collaborative effort is to take action to accelerate local, regional, national and international efforts to achieve sustainability. Participating cities include Berkeley, Los Angeles, Pasadena, Oakland, Sacramento, San Diego, San Francisco, San Jose, Santa Barbara, Santa Monica, and the County of Marin, which together represent over eight million California residents.

The Pasadena City Council adopted the resolution that committed to take the following five actions:

1. Purchasing 100 percent post-consumer recycled paper for municipal operations
2. Prohibiting the purchase of bottled water for municipal operations and government-sponsored events
3. Adopting a carbon offset plan for municipal employee air travel



4. Adopting municipal fleet fuel efficiency standards
5. Promoting the purchase of California foods for municipal events and operations

The Resolution and mission of GCC are consistent with the U.S. Mayors' Climate Protection Agreement, the U.N. Green Cities Declaration and UEA, and the Green City Action Plan. The City has either implemented or actively promotes the five GCC actions (via the Green City Action Plan), where possible, meeting the requirements of the Resolution.

#### ***Urban Climate Action Plan***

The City intends to develop the first-ever Urban Climate Action Plan to focus on reduction strategies to cut GHG emissions by 25 percent by 2030. On top of increasing energy efficiency to reduce GHG emissions, the City is also encouraging residents to compost as a part of the plan. The policies and programs that are addressed in the Zero Waste Plan will support efforts in composting and other waste reduction activities that will lead to a reduction in GHG emissions.

#### ***Extended Producer Responsibility (EPR) Resolution***

The City adopted an Extended Producer Responsibility (EPR) Resolution on February 22, 2010. The City's EPR Resolution establishes the following:

- Support to pursue legislation and statewide EPR policies
- Support and membership in the California Product Stewardship Council (CPSC)
- Signature of the CPSC Pledge of Support and contributing to CPSC to educate and advocate for EPR policies and programs
- Development of EPR policies within the City

Extended producer responsibility is an important area to address in order to reach Zero Waste and implementation of the Zero Waste Plan will support the goals of the EPR Resolution.

#### ***Plastic Bag Ban Ordinance***

On October 3, 2011 the City Council unanimously approved an ordinance to prohibit the distribution of single-use plastic carryout bags for consumer use and to establish a \$0.10 fee on single-use paper carryout bags.

Implementation of the Pasadena Plastic Bag Ban Ordinance took place in two phases. Phase 1 of the ordinance went into effect for large supermarkets on July 1, 2012. Phase 2 of the ordinance went into effect on December 31, 2012 and applies to the smaller markets, liquor stores, convenience stores, farmers markets, drug stores, pharmacies, and vendors at City-sponsored events, facilities, or on City property.

The definition of a supermarket includes the following:

- Per the California Public Resources Code (Section 14526.5), a "Supermarket" means a full-line, self-service retail store with gross annual sales of two million dollars (\$2,000,000), or more, and which sells a line of dry grocery, canned goods, or nonfood items and some perishable items"



- Buildings that have over 10,000 square feet of retail space that generate sales or use tax pursuant to the Bradley-Burns Uniform Local Sales and Use Tax Law and have a pharmacy licensed pursuant to Chapter 9 of Division 2 of the Business and Professions Code

At a minimum, the implementation of this ordinance advances the Zero Waste goals by reducing the following: the amount of litter in Pasadena; the number of plastic bags that are disposed in landfills; and the amount of contamination in yard trimmings containers.

***Greenhouse Gas Inventory and Reduction Plan***

The Greenhouse Gas Inventory and Reduction Plan was released in October 2009 under the premise that the City is capable of addressing the various sources of emissions that contribute to climate change. The objectives of the Greenhouse Gas Inventory and Reduction Plan were to achieve the following:

- Create a greenhouse gas (GHG) baseline
- Provide a plan that is in line with the efforts conducted at the state (AB 32), federal, and global level
- Determine if the City's sustainability efforts meet the City's GHG emissions reduction goals
- Provide a policy for future developments

The GHG emission goals identified in the Greenhouse Gas Inventory and Reduction Plan were to reduce emissions to 1990 GHG emissions levels by 2020, and ultimately by 80 percent below 1990 GHG emissions levels by 2050, which is consistent with the Kyoto Protocol.

Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006, requires the California Air Resources Board to develop regulations and market mechanisms to reduce California's greenhouse gas emissions to 1990 levels by 2020. The City has demonstrated that it will surpass the 2020 reduction target established in AB 32 as a result of the ordinances and existing City programs implemented in combination with established State reduction programs. The City is also expected to meet the 2050 goal. Recommended solid waste programs to reduce GHG emissions include implementing the following: a Zero Waste plan; composting; multifamily and commercial recycling; reduction of C&D debris; E-waste recycling; and eliminating single-use bags. Some of the programs have been implemented by the City wholly or partially. Those that are partially addressed are expanded on in the Zero Waste Plan.

***Environmental Advisory Commission (EAC)***

The Environmental Advisory Commission (EAC) was formed in January 2007 and consists of nine residents who advise the City Council and make policy recommendations in support of the goals and objectives of the City's Environmental Charter and monitor and guide the Green City Action Plan. This commission holds monthly meetings open to the public to discuss environmental issues with local, regional, and global impacts.

***Municipal Collection, Recycling, and Disposal***

**Single-Family Residential Program**

The City is responsible for the collection, removal, and disposal of materials from all single-family residences and multifamily complexes that have four units or less. Each single-family home and multifamily residence has three carts for the separate collection of recyclables, yard trimmings, and mixed waste. The wheeled carts are all collected on the same day each week. The City uses a Pay-As-You-Throw (PAYT) variable rate structure for residential collection. The PAYT system charges residents for the mixed waste portion based on the size of the cart: 32, 60, or 100-gallons. It is estimated that approximately 26 percent of residents use 32 gallon carts, 42 percent use 60 gallon carts, and 32 percent use 100 gallon carts. As part of the PAYT system, residents are not charged separately for recycling (collected in 60 gallon carts) or yard trimmings (collected in 100 gallon carts).

Single-family customers can schedule free bulky item pickups twice a year. Additional bulky item pickups are available for a fee that ranges from approximately \$49 to \$104 per pickup. Free curbside collection of used motor oil and oil filters may also be



scheduled. Christmas tree recycling is offered in January through a free curbside program and through a drop-off program at locations around Pasadena.

*City of Pasadena PAYT cart options*

**Commercial and Multifamily Program**

The City operates a non-exclusive Solid Waste Franchise System that allows authorized haulers to collect and dispose of materials from commercial businesses and multifamily complexes with five or more units. The current non-exclusive franchised haulers for the City are listed in **Table B-2**. In August 2007, City Council approved the closure of the franchise system to improve customer service and reduce the number of trucks operating within Pasadena and the resulting environmental pollution. The environmental impact of solid waste collection vehicles is significant and includes street deterioration, traffic, noise, decreased air quality and solid waste vehicles interfering with resident vehicle access. Other considerations for the closure of the system included the desire to increase the diversion rate required of franchise haulers, making haulers responsible for collection of all refuse onsite, demonstration by haulers of a greater commitment to applicable elements of the Green City Action plan and providing staff more time to enforce franchise requirements. After the franchise system was closed, the City stopped accepting

applications for new franchised haulers and any non-permitted haulers found operating in Pasadena are fined. Disposed materials from commercial generators are collected primarily in three cubic yard bins, serviced by front-loader collection vehicles. There are a number of compactors located at large commercial sites as well, including office buildings, shopping centers, schools, and colleges/universities. Each franchisee is required to ensure that recycling services are provided to all of its customers directly or by arrangement with another franchised hauler. At least every six months, each franchisee is also required to provide educational outreach to its customers on collection and recycling options for various materials such as Christmas trees.

As of October 2008, (per Municipal Code 8.61.175), the City requires the franchised haulers to divert a minimum of 60 percent of the solid waste and 75 percent of the construction and demolition (C&D) debris collected on a monthly basis. Haulers must report to the City monthly on the quantities of materials disposed and diverted. If the diversion goals are not met, then the haulers are required to pay a fee per ton of recycling shortfall tonnage, based on the diversion rate that was obtained. The recycling shortfall tonnage is the number of additional tons of material that a franchisee would need to divert in order to meet the diversion requirements.

Annually, haulers have the option to report to the City on the quantity of third party diversion that takes place within their customer accounts. The third party diversion reported is incorporated into the hauler's overall diversion rate. Up to 25 percent of materials collected by the hauler can be accounted for from third party diversion at commercial businesses. Each year, the City contacts a select number of businesses that generate a significant amount of disposed materials in Pasadena. Each of the businesses confirm the source reduction and/or recycling programs implemented on-site so the City can account for the third party diversion separately from the materials the hauler collects.

Per Section 12 of the Rules and Regulations, franchised haulers are required to provide customers with on-call, curbside pickup of bulky items twice per calendar year as a part of customers' basic commercial solid waste services. Bulky items include small appliances, furniture, carpets, mattresses, white goods, oversized yard trimmings such as tree trunks and large branches and similar large items discarded by franchisees' customers. Bulky items cannot interfere with pedestrian or vehicular traffic or regular access to the public right-of-way and cannot create a nuisance or a danger to public health and safety.

Also, per Section 13 of the Rules and Regulations, franchised haulers are required to pick up abandoned items on or in front of customer locations as soon as possible upon driver observation and within 24 hours when requested by the City.

**Table B-2  
Non-Exclusive Franchised Haulers**

#	Company
1.	AAA Rubbish, Inc.
2.	American Reclamation
3.	Arakelian Enterprises, Inc. doing business as Athens Services
4.	Cedarwood-Young, Company doing business as Allan Company*
5.	City of Pasadena*
6.	City Rent A Bin/Serv-Wel Disposal/A Rent A Bin
7.	Consolidated Disposal Service, L.L.C.
8.	Crown Disposal Company, Inc.
9.	Direct Disposal
10.	Haul-Away-Rubbish Service Company, Inc.
11.	Heritage Disposal, Inc.
12.	Interior Removal Specialist, Inc.
13.	J & L Hauling & Disposal, Inc.
14.	Metropolis Disposal Inc.
15.	Nasa Services, Inc.
16.	Perez Disposal Company, Inc.
17.	Southland Disposal Company
18.	United Pacific Waste
19.	Universal Waste Systems, Inc.
20.	USA Waste of California doing business as Waste Management
21.	Valley Vista Services, Inc.
22.	Ware Disposal Company, Inc.
23.	Waste and Recycling Services

Source: City of Pasadena list of Non-Exclusive Franchised Haulers, 2012

\*Indicates companies that do not accept C&D debris

Construction and Demolition (C&D) Debris

C&D debris is collected by a majority of the non-exclusive franchised haulers (see Table B-2). Commercial haulers are required to divert 75 percent of C&D debris generated at construction, demolition, renovation, and remodeling projects.

In 2002, the City established an ordinance requiring each applicable and permitted construction or demolition project to divert 50 percent of C&D debris generated through recycling, salvage, or deconstruction. Projects are required to pay a performance security deposit at the beginning of the project and the deposit is reimbursed if the diversion requirement is met and if the supporting documentation is provided. From 2006 through 2013, the program has contributed to the diversion of over 108,000

tons of materials from landfilling. (Note: The Puente Hills Landfill closed and stopped disposing of waste in the landfill in October 2013.)

In 2014, the C&D Ordinance was amended to comply with the State's updated California Green Building Standards Code (CALGreen) requirements. Covered projects' square footage thresholds were lowered and the diversion requirements were increased to 75 percent to support the City of Pasadena's Zero Waste Goal.

#### Disposal

The majority of the mixed waste from Pasadena is disposed at the Scholl Canyon landfill located in Glendale, approximately three miles west of the City. Pasadena is one of the Scholl Canyon watershed cities, which by ordinance, limits disposal at the landfill to materials generated within the cities of Glendale, La Cañada Flintridge, Pasadena, South Pasadena, San Marino, Sierra Madre, and a select number of Los Angeles County unincorporated communities.

Other Los Angeles County landfills utilized by haulers serving Pasadena include the Antelope Valley, Chiquita Canyon, Lancaster, Puente Hills, and Sunshine Canyon landfills (Note: The Puente Hills Landfill closed and stopped disposing of waste in the landfill in October 2013). Landfills in surrounding counties are also utilized for disposal of materials from Pasadena. Based on fiscal year 2010 data, approximately 5 percent of disposed materials were taken to one of the waste-to-energy facilities in Los Angeles County: Commerce Refuse to Energy Facility or Southeast Resource Recovery Facility.

#### Other City Programs

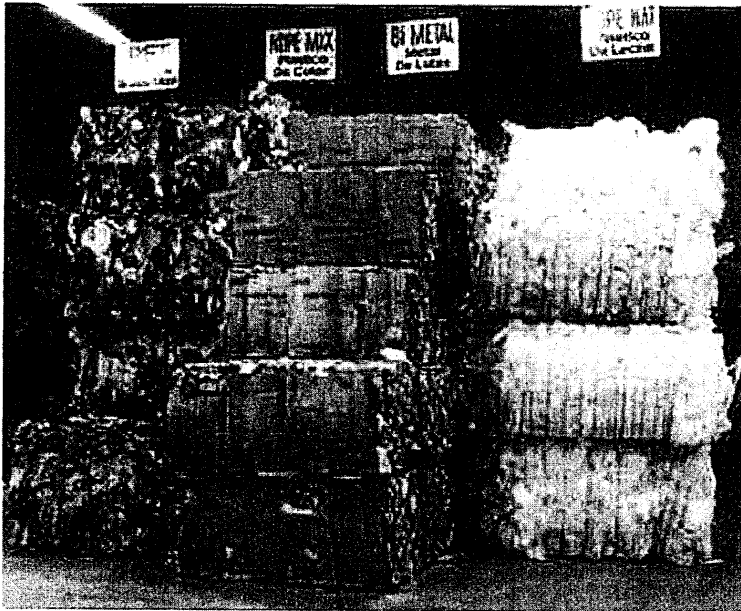
A description of waste reduction, recycling, and disposal programs offered by the City, in addition to those discussed above, is included below:

- Free mulch for residents from February through October at Victory Park
- Ten certified used oil centers at various locations in Pasadena
- Fourteen residential drop off sites located through Pasadena for compact fluorescent light bulbs/batteries/cell phones
- Periodic electronic waste (E-waste) recycling and document shredding events open to all Pasadena residents and businesses
- Recycling receptacles loaned for special events
- Free mail-back program for home generated medical sharps (hypodermic needles) through the Pasadena Public Health Department
- Compost bins available for sale at cost
- Free junk mail opt-out program through Catalog Choice

**City Facilities**

The City does not own or operate any solid waste transfer stations or landfills. The City contracts with facilities located outside of City limits for waste processing and disposal. Pasadena's residential recyclables are processed by Allan Company at its facility located in Baldwin Park. Mixed waste collected by the City, which includes residential waste and waste generated by City operations, is disposed of at the Scholl Canyon Landfill located in Glendale. When the City's contract for processing curbside recyclables was about to expire in 2013, a Request for Proposals was advertised. In addition to curbside recycling, proposals were solicited for processing food waste, green waste, special events waste and street sweeping materials. Through the Request for Proposals process, the City has secured processing capacity for material generated at special events, including material from the Rose Parade and the Rose Bowl Game.

The City has many programs in place to divert waste generated by City operations. At City-owned facilities, the City collects single stream recyclables including: mixed paper, cardboard, and beverage containers. Offices leased by the City, franchise



*Baled commodities at a Material Recovery Facility*

haulers run the waste management programs. For special employee events and public meetings held at City facilities, the City provides beverage container recycling. The City has established employee CFL/battery recycling drop off locations at City offices. At the City Yards and Rose Bowl Stadium, dedicated cardboard recycling bins have been installed and they are serviced as needed. Tree trimmings produced by the maintenance of City-owned trees is turned into mulch for use on parkways and City grounds. This free mulch is offered to the public from February through October.

**APPENDIX C    DIVERSION CALCULATIONS**





