

Existing Mercury Lamp and Household Battery Take-Back Programs in the San Gabriel Valley

Project Summary

San Gabriel Valley Council of Governments
January 2010



San Gabriel Valley
Council
of Governments



Funded by a grant from the Department of Resources Recycling and Recovery
© Copyright 2010 by the California Department of Resources Recycling and Recovery
(CalRecycle). All rights reserved. This publication, or parts thereof, may not be reproduced
without permission from CalRecycle.

Table of Contents

Abstract.....	1
Introduction/Background.....	2
Objectives.....	3
Survey Methodology.....	3
Findings/Results.....	4
Conclusions.....	7
Appendix A—Telephone Survey.....	8
Appendix B—Map of Retail Take-Back Locations in the San Gabriel Valley.....	9
Appendix C—Inventory of Businesses.....	10
Appendix D—Matrix of Responses to Phone Survey.....	12

Abstract

The San Gabriel Valley Council of Governments (SGVCOG) staff inventoried and surveyed hardware and home stores in the San Gabriel Valley to identify existing mercury lamp and household battery take-back programs and best practices. The purpose of this study is to assess public attitude, consumer motivation, and consumer knowledge level and understanding of the U-waste disposal ban in the San Gabriel Valley in order to develop an appropriate, viable producer managed and financed system. The survey is part of the SGVCOG's household hazardous waste grant program, funded by the California Department of Resources Recycling and Recovery (CalRecycle) during its 18th grant cycle. Highlights from the survey are as follows:

Summary Points

- 8 Almost all (95%) of take-back programs in the San Gabriel Valley are located at national chain retailers.
- 8 Rechargeable batteries are the most common material accepted at the identified take-back programs (73%).
- 8 The majority of stores with take-back programs contact outside waste management companies to pick up their collected waste. Each of the stores surveyed pay for the cost of offering the recycling service, with the exception of hardware stores located in Pasadena which utilize the city-sponsored program.
- 8 The national chain stores have had programs in place for approximately 3 years.
- 8 Retailers surveyed affirm that their programs send a positive environmental message to their customers and encourage customer loyalty.

Introduction

The Household Hazardous Waste Competitive Grant was awarded to the SGVCOG by CalRecycle in 2009. This grant program was created by CalRecycle to provide funding for projects directed at establishing or expanding hazardous waste management programs. One of the primary goals of the SGVCOG's program is to establish convenient pilot household hazardous waste take-back locations that benefit both the consumer and the businesses that voluntarily become take-back centers. As part of the work plan, a survey was conducted to identify existing take-back programs and practices utilized by local businesses in the San Gabriel Valley. This baseline assessment will provide a foundation for developing an appropriate, viable producer managed and financed take-back system.

Background

The San Gabriel Valley Council of Governments is a Joint Powers Authority representing the 31 incorporated cities, Los Angeles County, and the Valley's water agencies. SGVCOG endeavors to serve as the coordinating and unifying planning agency for the many local government agencies servicing the 2 million residents living in the area. The San Gabriel Valley represents approximately 20% of the County's population and more than 40% of its incorporated communities. It also has the largest number of county residents living in unincorporated communities. The Valley's history is linked to the development of independent cities which in turn has garnered it the nickname the "Valley of Local Control."

Given the Valley's character, there is widespread interest in local government issues, which includes developing strategies to respond to and comply with State regulations such as the u-waste disposal ban. Currently, local governments solely bear the \$100 million cost of properly collecting and recycling or disposing of hazardous waste as mandated by these bans. U-waste makes up 0.2% of the waste stream currently managed by local government agencies. However, this does not account for the many tons of HHW that are not disposed of properly, a major challenge for solid waste managers throughout the region. The Los Angeles Sanitation District reports that during its load screening and field monitoring efforts in 2007, the agency collected more than 96,000 lbs. of illegally disposed commercial and household hazardous waste in their three major landfills. Approximately 65% of this HHW was detected in the Puente Hills landfill, the landfill that primarily serves San Gabriel Valley residents. In a 2002 report released by the California Integrated Waste Management Board found that less than 1% of mercury bulbs were recycled. Likewise more than 29.5 million batteries sold in California in 2001, and only 162,000 (or 0.6%) were collected.¹

Local jurisdictions were given responsibility for the costly proper management of items banned from the general solid waste stream by default, and struggle with time and budget limitations to meet these objectives. Establishing take-back programs in this region will help move towards a paradigm shift where end-of-life product waste management responsibilities traditionally borne by local governments and taxpayers are now shared with producers who benefit from product sales and are the only parties able to redesign the products to reduce environmental impacts.

¹ "Household Universal Waste Generation in California," California Integrated Waste Management Board, August 2002.

Objectives

The first step in this process is to assess the existing take-back program infrastructure in the San Gabriel valley in order to develop an appropriate pilot program for the region. The objectives of this baseline assessment are to:

- Identify and inventory businesses that have existing mercury bulb and household battery take-back programs, and
- Identify overall operational practices utilized by these programs.

Survey Methodology

Three methods were utilized to achieve these objectives:

1) *Home and hardware store inventory and phone survey*

This study utilized NAICS and SIC codes to identify a comprehensive list of home and hardware stores located in the San Gabriel Valley. While we recognize that other types of stores may operate take-back programs, given the limitations of this study, home and hardware stores were considered the most likely candidates to operate such programs and therefore were selected for the phone survey. Two hundred and fifteen stores were identified in the “home and hardware store” category. Staff then researched online and through direct calls to stores whether they sold HHW materials. Of these 215 stores, 52 stores (24%) were identified as retailers of CFLs and/or household batteries. The refined list of 52 stores were then contacted by telephone to determine (1) if they operate a take-back program, and (2) the structure of that program. The telephone survey is included as Appendix A. Responses to the survey were compiled and trends were identified among programs.

2) *Cross-reference findings with website database*

After completion of the inventory and phone survey, results were cross-referenced with an online recycling database (www.earth911.com) that provide an inventory of recycling services based on geographic location. Additional programs identified using this method were also contacted to complete the telephone survey.

3) *Survey of city solid waste management staff*

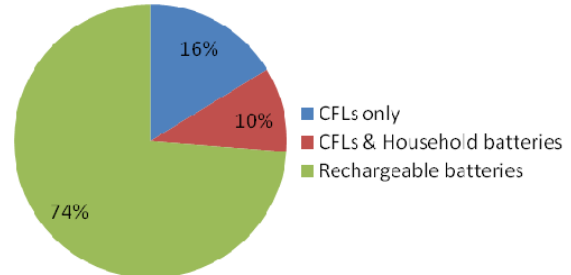
Finally, city staff were contacted and asked to identify any additional take-back programs that had not already been included in the inventory.

Additional programs identified using this method were also contacted to complete the telephone survey and/or information was collected from their website.

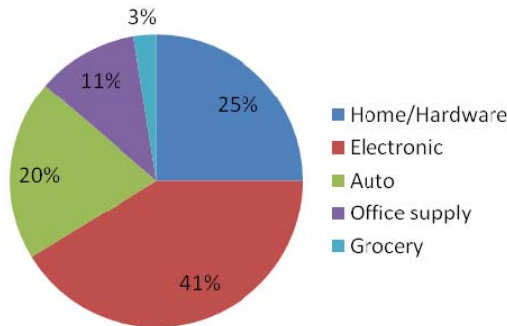
Findings/Results

A total of 79 take-back locations were identified through this assessment out of an estimated 1,500 businesses that were inventoried using NAICS and SIC code databases. The following is a breakdown of results:

Type of Material Accepted. The majority of take-back programs (74%) accept rechargeable batteries as shown in Figure 1. Sixteen percent of stores accept only CFLs and only 10% of stores accept household batteries and/or CFLs.



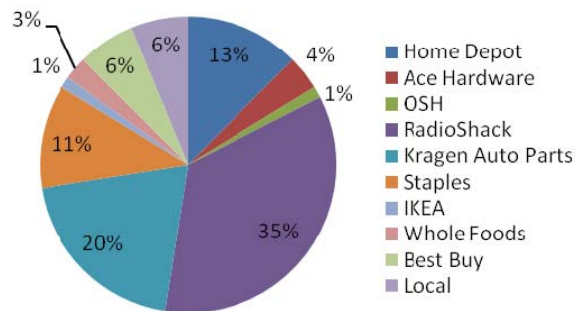
Type of Material Accepted
Figure 1.



Type of Store
Figure 2.

Type of Store. Electronic stores were the most common type of store that would accept household hazardous waste (41%), although these stores accepted only rechargeable batteries. This helps explain why a large proportion of take-back programs focus on rechargeable batteries. Home/hardware stores make up one fourth (1/4) and auto parts stores comprise one fifth (1/5) of this population of the stores that accept household hazardous waste for recycling. Figure 2 shows a breakdown of these findings.

Chain Store Participation. Interestingly, 95% of stores offering take-back programs are chain stores. Nine chain stores with 75 locations offer take back programs and only four local stores provide this service. RadioShack had the largest number of stores (28), making up 35% of the entire inventory as shown in Figure 3. Kragen Auto Parts has 16 take-back locations in the San Gabriel Valley, followed by Home Depot with 10 and Staple with 9 stores offering this service.



Participation by Company
Figure 3.

City of Pasadena CFL and Battery Recycling Program. It is important to note that the five hardware stores offering take-back programs in Pasadena participate as part of the city's household hazardous waste recycling program. The city partners with the business to offer a convenient recycling location to residents, however, the city provides the store with the recycling materials and a prepaid mail back container. Therefore, while these programs encourage increased recycling of these products and involve businesses in the process, they would be considered a "hybrid" approach rather than a full extended producer responsibility system because the local government is still underwriting a large portion of the costs. While other cities in the San Gabriel Valley partner with local auto parts stores to serve as used oil collection

locations, Pasadena is the only city that has collaborated with local retailers to provide take-back services for other household hazardous waste materials such as CFLs and batteries.

Location of Take-Back Programs. The take-back programs are spread across the San Gabriel Valley reflecting the pattern of chain stores locations in the region. Table 1 below shows the distribution of stores by local jurisdiction. Pasadena had the largest proportion of stores (19%) which makes sense given their household hazardous waste program discussed previously. Approximately one-fourth (26%) of cities in the San Gabriel Valley do not have a private sector take-back program location. A map depicting the geographical spread and type of take-back programs is included as Attachment B.



Photo: getwithgreen.com

Home Depot accepts CFLs for recycling.

Jurisdiction	% Population	# of stores	% of programs	Jurisdiction	% Population	# of stores	% of programs
Alhambra	5%	5	6%	Monrovia	2%	4	5%
Arcadia	3%	3	4%	Montebello	3%	2	3%
Azusa	3%	1	1%	Monterey Park	3%	1	1%
Baldwin Park	4%	3	4%	Pasadena	8%	15	19%
Bradbury	0%	0	0%	Pomona	8%	8	10%
Claremont	2%	0	0%	Rosemead	3%	1	1%
Covina	3%	4	5%	San Dimas	2%	2	3%
Diamond Bar	3%	1	1%	San Gabriel	2%	1	1%
Duarte	1%	3	4%	San Marino	1%	0	0%
El Monte	6%	3	4%	Sierra Madre	1%	0	0%
Glendora	3%	6	8%	South El Monte	1%	0	0%
Industry*	0%	0	0%	South Pasadena	1%	1	1%
Irwindale	0%	0	0%	Temple City	2%	1	1%
La Canada-Flintridge	1%	0	0%	Walnut*	2%	3	4%
La Puente*	2%	2	3%	West Covina	6%	3	4%
La Verne	2%	1	1%	Unincorporated	18%	5	6%

Take-Back Programs by Jurisdiction
Table 1.

Additional Program Trends and Practices. This assessment also identified program structural and operational elements of the existing take-back programs in order to gain a better understanding of the current environment. Findings include:

- Stores typically make arrangements with outside waste management companies to pick up materials on site rather than using an in house delivery or mail back system.
- National chain stores have operated their take-back service for three years on average.

*The cities of Industry, La Puente, and Walnut were not included as part of the scope of the grant program, however, they have been included in this inventory in order to present a full picture of private sector take-back programs in the region.

- The volume of material collected is not consistently tracked, however estimates for battery collection ranged from one to nine five-gallon containers every three months. The larger chain stores estimated larger quantities of materials collected.
- Those interviewed felt that providing this service sends a positive environmental message and increases customer loyalty.

A more detailed matrix describing program elements is included as Attachment D.

Conclusions

Based on the results of the survey the following are overall conclusions and implications for the grant program:

1. The San Gabriel Valley offers limited locations for consumers to take back CFLs and household batteries with only approximately 5% of electronic, grocery, home, hardware, and wholesale stores offering take-back services. Excluding rechargeable batteries recycling locations, there are only eight businesses that accept alkaline batteries and twenty businesses that accept CFLs and/or fluorescent tubes for a population of two million people. This is equivalent to one store for every 70,000 people in the Valley demonstrating a clear need and opportunity for increased drop-off locations.
2. The national chain stores are able to collect the largest quantity of waste materials and they also conduct the most outreach and advertising for their programs. Smaller, local retailers present a key opportunity for establishing additional take back programs in the region, however, without the resources of a larger chain this may prove more challenging.
3. By providing the take-back service to customers, local retailers believe that they are sending the message that they are doing their part to help the environment and serve their customers.

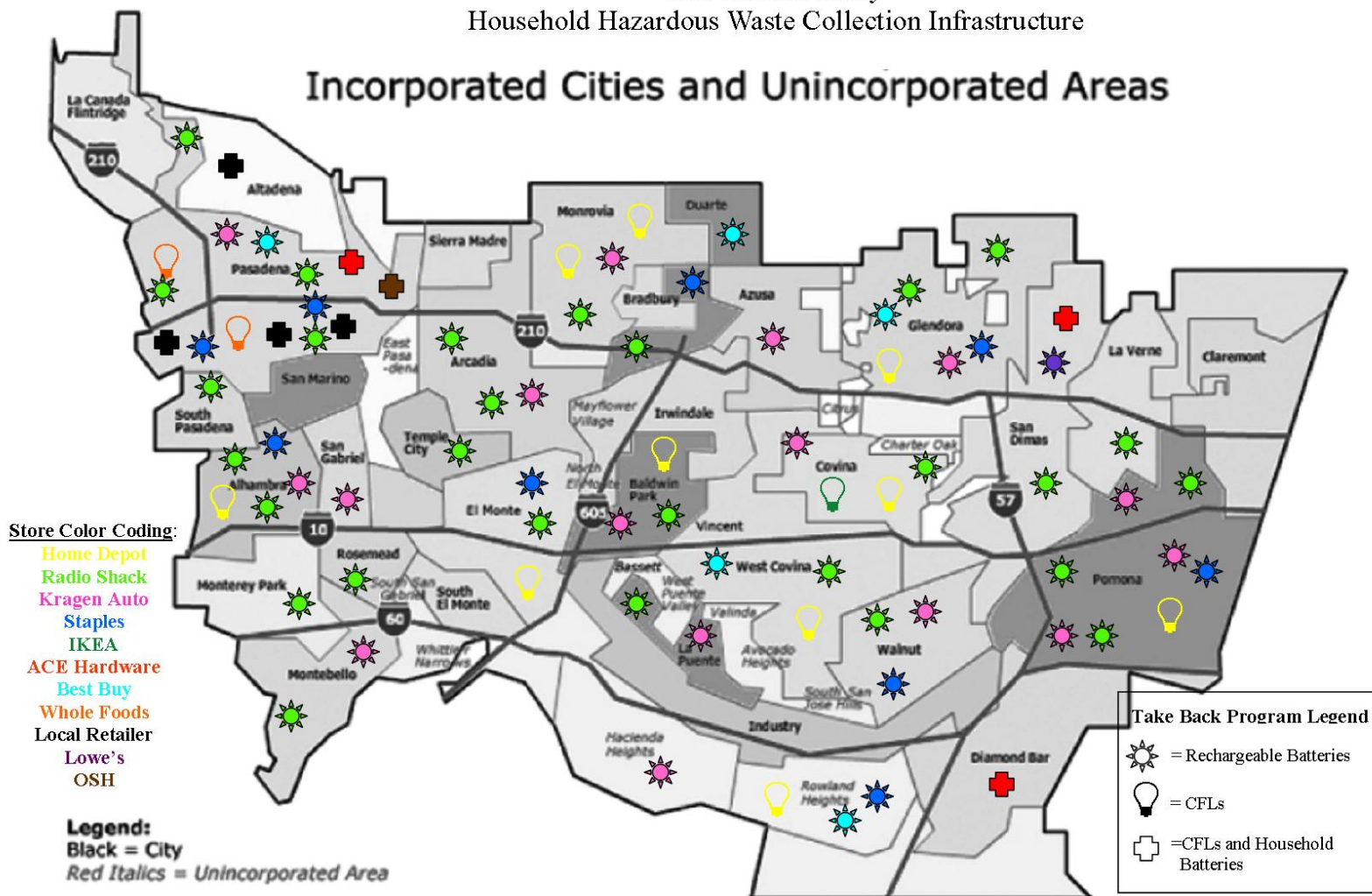


Questions Used for Retailer Take-back Phone Survey

1. Does your store accept any hazardous waste materials for recycling?
2. What hazardous waste materials will your store take-back from customers? (i.e. batteries, light bulbs, paint)
3. What is the procedure for the take-back program?
 - a. Do the customers bring them to an employee or deposit them in a designated bin or area?
4. What does the store do with the materials after they have been brought back to the store?
5. Who is in charge of organizing and facilitating the take-back program?
6. How long has your program been in place?
7. What are the success rates? What are the numbers—items recycled, frequency collected—?
8. Are there any regulations or requirements for the customers who bring items to be recycled?
9. Who covers the cost of taking back and properly disposing of the items?
10. What percent (volume) of your sales are materials that contain hazardous materials (paint, batteries, light bulbs, etc.)?
11. Do you advertise your program? If so, how?
12. Do you think your program enhances customer loyalty or do you think customers like the program?

San Gabriel Valley
Household Hazardous Waste Collection Infrastructure

Incorporated Cities and Unincorporated Areas



Inventory of CFL and Household Battery Take-Back Programs in the San Gabriel Valley

City	Business	Material
Alhambra	Home Depot	CFLs & Fluorescent tubes
	RadioShack	Rechargeable batteries
	Kragen Auto Parts	Rechargeable batteries
	RadioShack	Rechargeable batteries
	Staples	Rechargeable batteries
Altadena	Altadena Hardware Company	CFLs, Fluorescent Tubes & Household batteries
Arcadia	RadioShack	Rechargeable batteries
	RadioShack	Rechargeable batteries
	Kragen Auto Parts	Rechargeable batteries
Azusa	Kragen Auto Parts	Rechargeable batteries
Baldwin Park	Home Depot	CFLs & Fluorescent tubes
	Kragen Auto Parts	Rechargeable batteries
	RadioShack	Rechargeable batteries
Bradbury	none	
Claremont	none	
Covina	Home Depot	CFLs & Fluorescent tubes
	IKEA	CFLs
	Kragen Auto Parts	Rechargeable batteries
	RadioShack	Rechargeable batteries
Diamond Bar	Ace Hardware	CFLs & Household batteries
Duarte	RadioShack	Rechargeable batteries
	Best Buy	Rechargeable batteries
	Staples	Rechargeable batteries
El Monte	Home Depot	CFLs & Fluorescent tubes
	Staples	Rechargeable batteries
	RadioShack	Rechargeable batteries
Glendora	Home Depot	CFLs & Fluorescent tubes
	Kragen Auto Parts	Rechargeable batteries
	RadioShack	Rechargeable batteries
	RadioShack	Rechargeable batteries
	Best Buy	Rechargeable batteries
	Staples	Rechargeable batteries
Hacienda Heights	Kragen Auto Parts	Rechargeable batteries
Industry	none	
Irwindale	none	
La Canada-Flintridge	none	
La Puente	Kragen Auto Parts	Rechargeable batteries
	RadioShack	Rechargeable batteries
La Verne	RadioShack	Rechargeable batteries
Monrovia	Home Depot	CFLs & Fluorescent tubes
	Home Depot	CFLs & Fluorescent tubes
	RadioShack	Rechargeable batteries
	Kragen Auto Parts	Rechargeable batteries

Montebello	RadioShack	Rechargeable batteries
	Kragen Auto Parts	Rechargeable batteries
Monterey Park	RadioShack	Rechargeable batteries
Pasadena	Whole Foods	CFLs
	Whole Foods	CFLs
	True Value/Pasadena Plumbing & Hardware	CFLs & Household batteries
	Crown City Hardware	CFLs & Household batteries
	Berg Hardware	CFLs & Household batteries
	OSH	CFLs & Household batteries
	Ace Hardware	CFLs & Household batteries
	RadioShack	Rechargeable batteries
	Staples	Rechargeable batteries
	RadioShack	Rechargeable batteries
	Kragen Auto Parts	Rechargeable batteries
	RadioShack	Rechargeable batteries
	Best Buy	Rechargeable batteries
	RadioShack	Rechargeable batteries
	Staples	Rechargeable batteries
Pomona	Home Depot	CFLs & Fluorescent tubes
	Kragen Auto Parts	Rechargeable batteries
	Kragen Auto Parts	Rechargeable batteries
	RadioShack	Rechargeable batteries
	RadioShack	Rechargeable batteries
	RadioShack	Rechargeable batteries
	Kragen Auto Parts	Rechargeable batteries
	Staples	Rechargeable batteries
Rosemead	RadioShack	Rechargeable batteries
Rowland Heights	Home Depot	CFLs & Fluorescent tubes
	Best Buy	Rechargeable batteries
	Staples	Rechargeable batteries
San Dimas	RadioShack	Rechargeable batteries
	Ace Hardware	CFLs, Fluorescent tubes & Household batteries
San Gabriel	Kragen Auto Parts	Rechargeable batteries
San Marino	none	
Sierra Madre	none	
South El Monte	none	
South Pasadena	RadioShack	Rechargeable batteries
Temple City	RadioShack	Rechargeable batteries
Walnut	RadioShack	Rechargeable batteries
	Kragen Auto Parts	Rechargeable batteries
	Staples	Rechargeable batteries
West Covina	Home Depot	CFLs & Fluorescent tubes
	Best Buy	Rechargeable batteries
	RadioShack	Rechargeable batteries

Matrix of Responses to Phone Survey

	Home Depot	ACE Hardware-- San Dimas	ACE Hardware-- Diamond Bar	Rechargeable Battery Recycling Corporation (Includes Staples, Radio Shack, and Kragen Auto Parts)	OSH	IKEA	Lowes	Pasadena Plumbing and Hardware	Berg Hardware Co. Inc.	Altadena Hardware Co.
Materials Accepted	Light bulbs Alkaline Batteries Paint	Light bulbs, fluorescent tubes, Alkaline Batteries	Light bulbs, fluorescent tubes, alkaline Batteries	Rechargeable Batteries	Light bulbs Alkaline Batteries Card board Paint	Light bulbs	Rechargeable Alkaline batteries	Light bulbs Alkaline Batteries	Light bulbs Alkaline Batteries	Light bulbs Alkaline Batteries
Procedure	Customers bring items to services or return desk. Store contacts waste mgmt company for pick up.	Customers bring items to front counter. The store packages the materials and brings them to county recycling.	Customers bring items to services or return desk. Store contacts waste mgmt company (Mercury Disposal) for pick up.	Customers bring batteries to local retailer, place into a plastic bag, and deposit in the recycling bin, located in a designated area at the store.	Store puts out containers. The store sends small items to distribution center and a haz mat company comes every 6 months to pick up the other waste.	Customers bring in CFLs and deposit them in the green bins located in the lighting section of the store.	Customers bring items to services or return desk. Store contacts waste mgmt company for pick up.	Customers bring items to services or return desk. Store contacts waste mgmt company for pick up.	Customers bring in the items and the store sends them to the City of Pasadena for recycling.	Customers bring items to services or return desk. Store contacts waste mgmt company for pick up.
Program Length	2-3 years	3-4 years	3 years	14 years.	15 years	9 years	Unknown	1 year	6 months	40 years
Amount of Material Collected	No numbers available, but program is highly utilized by customers.	100-150 Bulbs every 3 months; 5 gallon bucket of batteries every 3 months.	Unknown	Since 1996, RBRC has collected over 50 million pounds of rechargeable batteries.	3 5-gallon buckets of batteries per month 4 5-gallon buckets of bulbs per month.	Recycled 156,301 pounds of CFLs in 2006.	Unknown	1 5-gallon bucket of batteries each month.	Unknown	Unknown
Cost Responsibility	Store	Store (approx. \$100 in man hours every months)	Store	Members of the rechargeable battery and portable electronic product industry fund the RBRC through the licensing of Call2Recycle's Battery Recycling Seals	Store	Store	Unknown	Store	Store	Store
Advertising	Occasionally run ads in papers and when there are special programs.	Word of mouth. Employees try to inform customers.	Unknown	Online and through word of mouth.	None	Online and in store	Unknown	Word of mouth	Unknown	Word of mouth
Effect on Customer Loyalty	Enhances customer loyalty.	Enhances customer loyalty.	Unknown		No opinion, but a high quantity of customers bring in items.		Unknown	The store is not sure if the program increases customer loyalty, but it shows they are doing their part to help the environment.	Program is too new to have a sense of the effect.	The store owners believe the program has always increased customer loyalty.