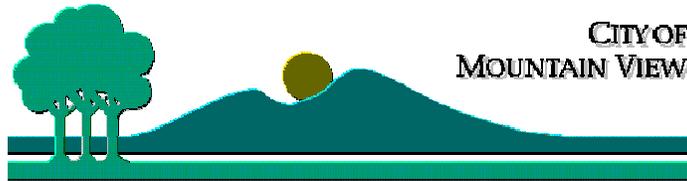




City of Mountain View Waste Characterization Report 2010

November



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1. Introduction and Objectives

The following section outlines the purpose and approach of the study, presents a summary of findings, identifies key opportunities for future diversion, and provides an overview of the report.

Purpose and Approach of the Study

The City of Sunnyvale and the City of Mountain View (Cities) commissioned this study to achieve the following objectives:

- **Provide detailed waste composition and quantity information** for the Sunnyvale Materials Recovery and Transfer (SMaRT) Station, including materials from residuals and four waste sectors: single-family residential, multi-family residential, commercial, and construction and demolition (C&D).
- **Identify key opportunities for diversion, recovery, or reuse** of specific material categories.
- **Determine the presence or absence of six unique material categories.**

To meet these goals, the consultant team applied a statistical sampling approach to the City's waste stream, using two characterization methods:

- **Hand-sorting** of single-family residential, multi-family residential, commercial, and SMaRT Station residual waste samples.
- **Visual characterization** of C&D waste samples.

This document presents a statistical analysis of the waste sampling results, with an emphasis on recyclable and compostable material categories. The consultant team expects the findings to be used in the development of a Zero Waste strategic plan for each City and to help the Cities design and target their waste reduction, recycling, and composting programs for each waste sector.

In addition, results from this characterization were used to generate annual disposal estimates for each city.

Field collection occurred during the spring and summer of 2010. Representative samples from five substreams were selected and characterized according to 88 material categories and six presence versus absence categories. The five substreams are: single-family, multi-family, commercial, construction and demolition, and SMaRT Station residuals. Materials from the single-family substream, multi-family substream, commercial substream, and SMaRT Station residuals were hand sorted and weighed. Materials from the construction and demolition substream were visually characterized. The four incoming substreams from single-family, multi-family, commercial, and construction and demolition consist of waste that is "disposed" by residents, businesses and contractors. This waste was sampled and characterized before being processed through the SMaRT Station materials recovery facility, which diverts an average of 25% of material from the landfill. The fifth substream, SMaRT Station residuals, is the remaining material that is sent to landfill.

Summary of Findings

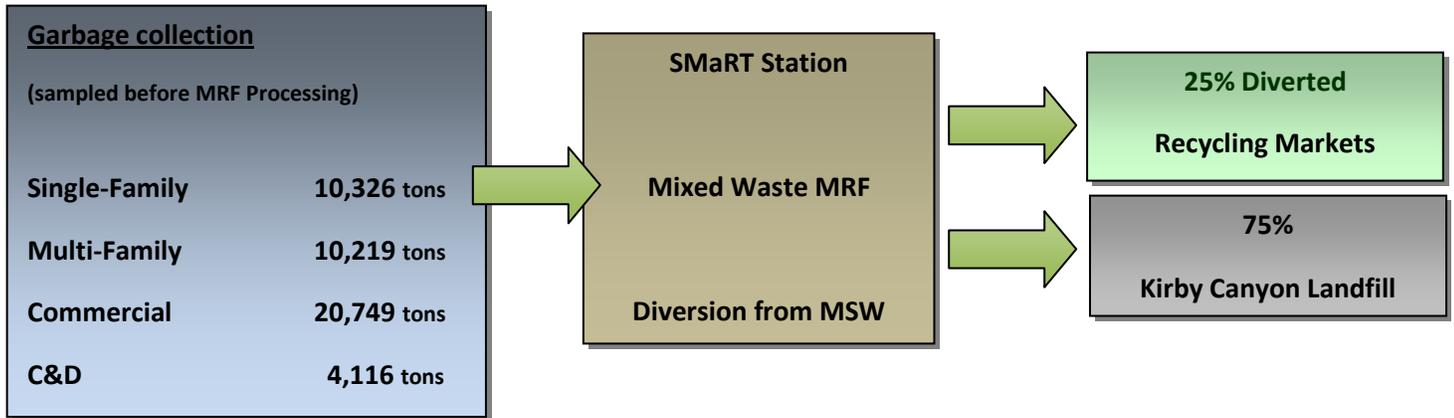
The consultant team successfully characterized 93 samples from the City of Mountain View and 30 residual samples from the SMaRT Station. Waste was sorted into a total of 88 standard material categories (described in detail in Appendix A). To help identify additional diversion opportunities, these 88 categories were classified into five recoverability groups: recyclable paper; other recyclables; compostable/potentially compostable; potentially recyclable; and problem materials. Detailed descriptions of these recoverability groups are provided in Chapter 2, and a discussion of the factors that affect recoverability efforts is provided in the Key Opportunities section below.

Based on 2008-09 tonnages, waste collected from the four incoming substreams (single-family [SF], multi-family [MF], commercial [C], construction and demolition [C&D]) totaled approximately 45,411 tons. This is waste collected by the City's hauler and brought to the SMaRT Station, but does not represent all the waste generated in Mountain View and delivered to the SMaRT Station. Additional waste is delivered via self-haul (860 tons), roll-off/drop box, and compactors by Recology (10,002 tons).

The 45,411 tons of waste from the four incoming waste streams (SF, MF, C and C&D) was sampled and characterized for this study prior to going through the material processing facility (MRF) to be further sorted and diverted. The additional waste stream of 10,862 tons (commercial/industrial roll-off/drop boxes and self-haul) was not sampled prior to going through the MRF, but the residue was included (represented) in the sampling of the MRF residual. The MRF uses mechanical equipment and human labor to sort and separate the incoming waste to capture marketable recyclable and compostable materials. The incoming waste is dropped on the floor of the SMaRT Station. Heavy materials are removed and the remainder of the waste is placed on a conveyor to be processed through the sorting facility. The waste remaining at the end of the sorting process is the "SMaRT Station Residual."

The following chart illustrates the flow of the four incoming (SF, MF, C, and C&D) and the residual waste streams.

City of Mountain View Solid Waste Stream Flow



Characterization Incoming Substreams

The study found that approximately 79% (32,703 tons) of wastes (excluding C&D waste), prior to sorting at the MRF, fall into the recoverability categories of: recyclable paper, other recyclables, and compostable/potentially compostable. The recoverability categories above do not take into account the condition of materials or marketability. Of this amount:

- Nearly 44% (18,203 tons), is categorized as Compostable/Potentially Compostable, including food, compostable paper, leaves and grass, and other compostable organics;
- Recyclable Paper comprised about 13.6% (5,628 tons), including cardboard, office paper, newspaper, and other miscellaneous paper;
- Approximately 21.5% (8,872 tons) is categorized as Other Recyclables. This is a broad category that includes bulky items like: furniture or mattresses, other ferrous metal such as: structural steel beams or metal coat hangers, durable plastic items including: plastic outdoor furniture or plastic pipes and fittings, and wood pallets and crates.

The remaining 21% (8,591 tons) of waste disposed by residents and businesses is categorized as Potentially Recyclable (e.g., textiles, carpet, food service plastic) or Problem Materials (e.g., diapers, trash bags, kitty litter).

After these materials are processed at the MRF, approximately 25% are recovered and diverted from the landfill. The study then examined the composition of the residual waste remaining after going through the MRF.

Characterization MRF Residues

After incoming waste is processed to remove the marketable Compostable/Potentially Compostable, Recyclable Paper, and Other Recyclables materials, approximately 53,881 tons of residuals is actually sent to landfill.

Approximately 84% of SMaRT Station residuals are categorized as Compostable/Potentially Compostable, Recyclable Paper, or Other Recyclables. Again, the recoverability categories do not take into account the material condition and market availability. Of this amount:

- The majority, 57%, is categorized as Compostable/Potentially Compostable;
- Recyclable Paper comprised 14%;
- Other Recyclables comprised 18%.

The remaining 17% of SMaRT Station residuals is categorized as Potentially Recyclable or Problem Materials.

Key Opportunities

The purpose of this section is to review the disposal findings from the waste characterization study and identify key opportunities for reduction or diversion in each of four substreams: single-family, multi-family, commercial, and C&D. This section also identifies potential opportunities for the SMaRT Station's current MRF residual stream and identifies potential new technologies for addressing residual waste. This information can help the City target its efforts to increase waste reduction, reuse, and recycling. The City plans to explore these opportunities in detail in a Zero Waste Plan to be developed in 2011. The plan will assess the viability of new programs based on such factors as cost and availability of markets.

The following key opportunities for single-family, multi-family, and commercial waste were identified based on analyses of material categories with potential for additional diversion, as presented in the findings detailed in Chapter 3 and summarized by recoverability category in the table below.

Recoverability Category	Single-Family		Multi-Family		Commercial	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Compostable/ Potentially Compostable	45.4%	4,693	46.3%	4,729	41.8%	8,674
Recyclable Paper	11.3%	1,166	15.4%	1,576	13.8%	2,866
Other Recyclables	17.5%	1,806	17.0%	1,740	26.9%	5,573
Potentially Recyclable	6.5%	669	5.5%	561	4.4%	916
Problem Materials	19.3%	1,992	15.8%	1,613	13.1%	2,719
TOTAL	100%	10,326	100%	10,220	100%	20,749

To gain the most additional diversion, the City should look first at the top materials disposed by residents and businesses and assess the viability of new programs based on such factors as cost and availability of markets. Viable markets for recovered materials are essential to the success of diversion programs. Reliance on mere separation and collection of materials is inadequate unless those materials can be effectively marketed over the long term at a minimal public subsidy. In addition, since all incoming waste shown in the table above, as well as C&D waste, is sorted to remove additional recyclable or compostable material prior to landfilling, choices that would result in additional "up-front" diversion could affect choices made for residual diversion later. This should be addressed in more detail in the Zero Waste Plan.

Implement Organics Diversion

Food waste and compostable paper from single-family, multi-family, and commercial sources totaled more than 15,000 tons, approximately 36% of the total. The generation of this waste is about evenly split between the residential and commercial sectors. Since these readily compostable materials represent a large amount of the waste sampled for this study, capturing them for diversion, either through new collection programs or additional MRF residual processing through the SMaRT Station, provides the greatest opportunity to enhance diversion.

For example, depending on markets for compostables, an up-front diversion program could recover more and better quality compostables than the current residual MRF process. A cost-efficient program might target the commercial sector during outreach to acquire the same volume of organics as the residential sector but at a lower cost, since there would be fewer collection stops. These considerations should be addressed in the Zero Waste Plan.

Yard waste (leaves, grass, prunings, trimmings) totaled nearly 2,700 tons. About 55% of this yard waste came from multi-family residential sources. The City could consider ways to capture these yard trimmings, perhaps by expanding yard trimming cart collection service to all multi-family residences as in the single-family program. Currently, this service is offered only to a few multi-family residences that regularly produce a large volume of clean yard trimmings.

Focus on Recyclable Paper

Recyclable paper, such as cardboard, kraft bags, newspaper, catalogs, magazines, and office paper, represents 14% of disposed materials at about 5,600 tons. This is a significant amount considering that the City accepts a wide range of paper types in both its curbside residential and office recycling programs. Since the recyclability of paper often diminishes once the paper runs through the MRF, refocusing on efforts to capture this material in curbside and commercial programs would be beneficial.

MRF Residuals

Materials entering the SMaRT Station go through a MRF where a percentage of materials are diverted. The remainder is the MRF Residual. The SMaRT Station MRF residuals include a significant amount of compostable materials (57.1%), most of which is compostable paper (45.6%). Composition of MRF residuals is shown in the table below.

MRF RESIDUALS WASTE COMPOSITION		
Mountain View and Sunnyvale		
Material Class	Est. Percent	Est. Tons
Recyclable Paper	14.0%	19,580
Other Recyclables	12.8%	17,784
Compostable/ Potentially Compostable	57.1%	79,689
Potentially Recyclable	4.5%	6,256
Problem Materials	11.6%	16,170
Total	100%	139,480

The City has expressed interest in alternative markets for MRF residuals, including alternative technologies such as composting and anaerobic digestion.

Composting

Among the options available for processing highly organic MRF residuals, the most proven technology is composting, which is the highest and best use of this material in the diversion hierarchy. While it has been demonstrated that MRF residuals can be co-composted with yard trimmings, food scraps, and other organics, there are only a small number of facilities that currently do so, and only one (with very limited capacity) in Santa Clara County. Although this process simplifies and reduces the costs of the collection process, combining food scraps with green materials results in having to process all of the materials as if they were food scraps, and the output is less marketable.

Since compostable paper is 45.6% of the residual, implementing a composting program could provide more diversion (and of what is otherwise a non-recyclable paper). Food is 9% of the residual and would be more marketable in an upstream composting program instead of the current practice of recovering it as “fines” from the MRF processing.

Other options the City might explore include:

Anaerobic Digestion

In this process, compostable material is placed in a chamber where microbial activity occurs in the absence of oxygen, producing biogas that can be used for energy production. Anaerobic digestion of solid waste is sometimes included in descriptions of “conversion technology” or “alternative

technology”. Anaerobic digestion is regulated as composting under state law¹.

There is active interest in developing biological treatment methods, such as anaerobic digestion, for organic materials and post-processing residual solid waste. The cities of San Jose and San Francisco are supporting private sector development of anaerobic digestion for treating organic materials. The City of Oakland and Stopwaste.org are supporting the development of anaerobic digestion at the East Bay Municipal Utility District, where excess biosolids digester capacity at the facility is being used for source-separated food scraps and other digestible materials. The cities of Palo Alto and San Jose are each exploring the use of a dry fermentation type digestion process which would process a mixture of yard waste, food scraps, and possibly biosolids.

“Non-Combustion Thermal Technologies” -- including Pyrolysis, Gasification, and Plasma Arc Gasification

Pyrolysis, gasification, and plasma arc gasification are typically referred to as “conversion technologies” or “non-combustion thermal technologies.” These technologies treat waste to produce a synthesis gas, or “syngas,” that can produce electricity or be converted into a transportation fuel. Pyrolysis uses an indirect external source of heat in the absence of oxygen, gasification partially oxidizes the waste, and plasma arc uses a plasma torch to super-heat the waste to produce the synthesis gas. These technologies may be defined as renewable energy under the Renewable Portfolio Standard, but only if the facility meets specific environmental standards². Under state law, “pyrolysis” is considered “transformation,” and jurisdictions may count up to 10 percent of their 50 percent diversion goal through transformation. “Gasification” is specifically not included in the definition of “transformation.”³ State legislation⁴ has been introduced to allow facilities that convert solid waste into energy or chemicals to count as a renewable energy generation facility under the State’s Renewable Portfolio Standard and allows local governments to count solid waste that is converted into energy toward their recycling diversion goals. However, siting of thermal conversion technology facilities in California is potentially controversial based on a number of environmental concerns.

Given the strict regulatory environment for air emissions in the Bay Area, it is unlikely that a thermal facility could be sited in the city or nearby. Therefore, while the conversion technologies are emerging, they do not appear to be viable for Mountain View at this time.

¹ Guidance Document: How Conversion Technologies Fit Current Board Regulatory Structure, December 2007, CIWMB, p. 5.

² California Public Resources Code Section 25741, Subdivision (b)(3)

³ California Public Resources Code Section 40201.

⁴ Assembly Bill 222 (State of California 2009-10 legislative session) introduced by Assembly Members Anthony Adams and Fiona Ma. This bill failed to pass out of the legislature.

Organization of the Report

The remaining portions of the report describe the study methodology and findings, organized as follows:

- **Chapter 2, *Summary of Methodology***, defines the four waste sectors and SMaRT Station residuals and explains the methodology used to design and implement the data collection portion of this study. It also briefly describes the data analysis methods.
- **Chapter 3, *Findings***, presents key findings and waste composition results for each of the four waste sectors and SMaRT Station residuals.
- **Appendices** follow the main body of the report. They provide additional detail on the study, definitions of all waste-sorting categories, a complete explanation of the methodology, and copies of field forms.

2. Summary of Methodology

The following section summarizes the three steps of the methodology: 1) Develop Plan, 2) Collect Data, and 3) Analyze Data.

Develop Plan

Step 1: Coordinate with Staff and Haulers

In advance of the scheduled fieldwork, the consultant team met with key staff at the SMaRT station to gain permission to sort waste on site and to coordinate sample traffic flow and other logistics of the field data collection effort.

The consultant team also coordinated with Recology Mountain View and Specialty Solid Waste and Recycling, the Cities' waste haulers, to learn anticipated vehicle traffic and to arrange special route coordination.

Step 2: Define Waste Sectors

This study included five primary waste sectors:

- **Single-family waste** was waste collected by a franchised waste-hauling company from single-family residences (including townhouses or buildings with up to four residential units). It typically arrived at the solid waste facility in packer trucks (e.g., side loaders or rear loaders). The geographic region that waste originated from was noted for this waste sector, and only results for materials from the City of Mountain View are presented in this report.
- **Multi-family waste** was waste collected by a franchised waste-hauling company from multi-family residences (apartment or condominiums with more than four residential units). It typically arrived at the solid waste facility in packer trucks (e.g., front loaders). The geographic region that waste originated from was noted for this waste sector, and only results for materials from the City of Mountain View are presented in this report.
- **Commercial waste** was waste collected by a franchised waste-hauling company from businesses, institutions, public venues, and industrial sources. It typically arrived at the solid waste facility in packer trucks (e.g., front loaders), drop boxes, or compactor units. This waste stream did not include C&D waste. The geographic region that waste originated from was noted for this waste sector, and only results for materials from the City of Mountain View are presented in this report.
- **SMaRT Station residuals** were waste produced as by products from the SMaRT Station's material recovery facility (MRF). Samples were collected at random intervals.
- **C&D waste** included all waste that was brought to solid waste facility from construction or demolition activities. It typically arrived at the solid waste facility in self-haul vehicles or in drop boxes. The geographic region that waste originated from was noted for this waste sector, and only results for materials from the City of Mountain View are presented in this report.

Step 3: Classify Waste

This study assigned waste to one of ten material classes: **Paper, Plastic, Glass, Metal, Electronics, Organics, C&D, Household Hazardous Waste (HHW), Special Waste, and Mixed Residue**. Materials were further sorted into 88 standard material categories and six additional uncommon materials to determine their presence versus absence. These material categories are defined in Appendix A.

To identify additional diversion opportunities, the consultant team also classified material categories according to their recoverability using five recoverability groups, which were color-coded to make the viewing of the figures and tables clearer and are described below:

- Recyclable paper (blue) – all paper materials considered recyclable by the project team.
- Other recyclables (purple) – all plastic, metals, glass, and other recyclable materials considered recyclable by the project team.
- Compostable/potentially compostable (green) – all materials considered compostable or potentially compostable by the project team.
- Potentially recyclable (peach) – all materials where markets are emerging or being developed to process or recover materials.
- Problem materials (brown) –all materials for which there is no existing processing option.

The following table shows the 88 material categories arranged according to material class and recoverability group.

Table 1. Overview of Materials and Recoverability Categories

	Recyclable Paper	Other Recyclables	Compostables / Potentially Compostables	Potentially Recyclable	Problem Materials
Paper	OCC		Compostable Paper	Aseptic Packaging	R/C Paper
	Kraft Bag/Kraft Paper			Poly-coated Paperbrd Pack.	
	Kraft Grocer Bags				
	Newspaper				
	Other Office Paper				
	Catalogs, Directories, Mags., & Phonebooks				
	Other Misc. Paper				
Glass		Glass Bottles and Conts.		Flat Glass	R/C Glass
Metal		Aluminum Cans		R/C Metal	
		Tin/Steel Cans			
		Major Appliances			
		Used Oil Filters			
		Other Ferrous			
		Other Non-ferrous			
Electronics		Small Appliances			
		Brown Goods			
		Small Computer-related Electronics			
		Large Computer-related Electronics			
		Other Consumer Electronics			
		CRT Televisions & Monitors			
Plastic		PETE Bottles		PETE Food Packaging	Trash Bags
		HDPE Containers (<1gal.)		PETE Non-food Packaging	R/C Plastic
		HDPE Containers (>1gal.)		Misc. Food Service Plastic	
		Misc. Plastic Containers		Exp. Polystyrene Food Pack.	
		Other Film		Exp. Polystyrene Other	
		Durable Plastic Items		Plastic Grocery Bags	
				Other Merchandise Bags	
				Non-bag Com. & Ind. Pack. Film	
			Film Products		
Organics			Food	Textiles	Animal Feces
			Leaves & Grass		R/C Non-compostable Organic
			Prunings & Trimmings		
			Branches & Stumps		
			Agricultural Crop Residue		
		R/C Compostable Organics			
C & D		Concrete		Asph. Comp. Shingles	Roofing Tar Paper/Felt
		Asphalt Paving		Carpet	Roofing Mastic
		Untreated Dim. Lumber		Carpet Padding	Built-up Roofing
		Untreated Eng. Wood		Clean Gypsum Board	Other Asph. Roof Mat.
		Pallets and Crates			Treated Dim. Luber
		Other Untreated Wood Waste			Treated Eng. Wood
		Rock, Soil, and Fines			Other Treated Wood Waste
					Pnt./Demo. Gyp. Board
				R/C C&D	
Household Hazardous Waste		Paint		Veh. & Equip. Fluids	R/C Household Waste
		Used Oil			
		Lead-acid Batteries			
		Other Batteries			
Special Waste		Bulky Items			Ash
		Vehicle & Truck Tires			Kitty Litter
					Diapers
					Treated Medical Waste
					Other Tires
Mixed Residue					R/C Special Waste
					Mixed Residue

Step 4: Allocate Samples

This study was designed to provide composition estimates for each of the five waste sectors: single-family, multi-family, commercial, SMaRT residuals, and C&D. The number of samples allocated to each substream is summarized in the table below.

Table 2. Number of Samples Collected by Waste Sector

WASTE SECTOR	TARGET NUMBER OF SAMPLES	ACTUAL NUMBER OF SAMPLES
Single-family Waste	30	30
City of Mountain View	15	13
City of Sunnyvale	15	17
Multi-family Waste	26	23
City of Mountain View	13	15
City of Sunnyvale	13	8
Commercial	40	42
City of Mountain View	20	21
City of Sunnyvale	20	21
SMaRT Station Residuals	30	30
C&D (visual characterization)	80	91
City of Mountain View	40	44
City of Sunnyvale	40	47
Total	206	216

The sampling plan was designed to obtain samples from each waste sector at the SMaRT Station to meet the targets shown in the table above.

Step 5: Coordinate Sampling Activities

Load selection and sample characterization occurred between March 1 and March 5, 2010 for the first sampling season, and between June 14 and June 18, 2010 for the second sampling season.

Collect Data

Determine Waste Quantities

To determine the quantity of waste from each waste sector and from the SMaRT Station, the consultant team requested data from the City of Mountain View and from the City's hauler, Recology. According to the data, the City of Mountain View collected or disposed of about 45,410 tons of waste in 2008/2009 from the four incoming substreams sampled for this study. This does not represent all the waste delivered to the SMaRT Station from Mountain View residents and businesses. Additional waste is

delivered via roll-off/drop boxes and compactors by Recology (approximately 10,002 tons) and via self-haul (approximately 860 tons). Residuals attributed to Mountain View from the SMaRT Station after this waste is processed through the MRF totaled approximately 53,881 tons.

Hand-sort Municipal Solid Waste

For this study, the consultant team hand-sorted single-family residential waste, multi-family residential waste, commercial waste, and SMaRT Station residuals. Material was sorted into 88 material categories and then weighed. Materials smaller than ½ inch were considered mixed residues. The crew leader recorded the weight for each sorted material category on the sampling form, reviewed the form, and later entered the data into a custom database for analysis. Separately, the crew leader also assessed the presence or absence of six additional materials in each sample. A full description of the hand-sort procedures is included in Appendix B.

Visually Characterize C&D

The consultant team visually characterized 44 samples of C&D waste from Mountain View. In conjunction with the former California Integrated Waste Management Board (CIWMB), now CalRecycle, the consultant team developed a reliable method of visually characterizing waste from the C&D sector. The method is especially useful for identifying recoverable materials that may be present in large quantities, characterizing waste loads that contain bulky items, and characterizing waste streams that tend to have substantial composition variation within individual loads (for example, loads that are half dirt and half lumber, separated at opposite ends of the load).

The first step of visually estimating the composition of selected loads was to measure the volume of the waste. The visual estimator then recorded the estimated percentage of the load corresponding to each of the 10 major material classes and subsequently recorded the estimated percentages for each of the 88 more specific material categories within the material classes. The step-by-step procedure that the consultant team used in this study is described fully in Appendix B.

Analyze and Draft Report

Data Analysis

Following on-site data collection, the consultant team entered all data recorded on field forms into a customized database and reviewed it for data entry errors. The team calculated waste composition estimates using the methods described in Appendix B.

3. Findings

Waste Quantities

Based on data received from the SMaRT Station and Recology, a summary of Mountain View waste quantities sampled for this study, by waste stream for fiscal year 2008/2009, is listed below:

- Single-family 10,326 tons
- Multi-family 10,220 tons
- Commercial 20,749 tons
- C&D 4,116 tons
- SMaRT Station Residuals 53,881 tons (Mountain View only)

Composition and Recoverability of Waste

This section describes the composition and recoverability of the City of Mountain View’s overall waste stream; of its single-family, multi-family, commercial, and C&D waste sectors prior to MRFin; and of SMaRT Station residuals from both the Cities of Mountain View and Sunnyvale following MRFin.

Overall Waste Stream – City of Mountain View

The overall waste composition of The City of Mountain View’s waste includes waste from three sectors:

- Single-family
- Multi-family
- Commercial

Waste from the C&D sector and the SMaRT residual substream were excluded from the overall analysis because the C&D substream was assessed through visual characterization and SMaRT Station residuals cannot be separated by municipality after processing.

Key Findings

As shown in Figure 1, the sampling results suggest the following key findings about recovery potential for The City of Mountain View’s overall waste stream, prior to MRFin:

- **Approximately 79%** (32,703 tons) of the City of Mountain View’s waste examined in this study was **Recyclable** or **Compostable/Potentially Compostable**.
- **Approximately 44%** (18,203 tons) of the City of Mountain View’s overall waste was **Compostable/Potentially Compostable**, shown in green. The **Compostable/Potentially Compostable** fraction included the following material categories (see Table 4):
 - *Food* (11,193 tons)
 - *Remainder/composite compostable organics* (288 tons)

- *Compostable paper* (3,686 tons)
 - *Leaves & grass* (2,425 tons)
 - *Prunings & trimmings* (534 tons)
 - *Branches & stumps* (77 tons)
 - *Agricultural crop residue* (none)
- **Approximately 35%** (14,499 tons) of the City of Mountain View’s overall waste was **Recyclable**, including **Recyclable Paper** (13.6%; 5,628 tons), shown in blue, and **Other Recyclables** (21.5%; 8,872 tons), shown in purple.
- By weight, the five largest **Recyclable Paper** categories include
 - *Uncoated corrugated cardboard* (1,978 tons)
 - *Other miscellaneous paper* (1,276 tons)
 - *Other office paper* (954 tons)
 - *Newspaper* (623 tons)
 - *Catalogs, directories, magazines, and phonebooks* (550 tons)
 - By weight, the five largest recyclable **Other Recyclable** categories included these materials:
 - *Bulky items* (1,409 tons)
 - *Other ferrous* (1,110 tons)
 - *Durable plastic items* (903 tons)
 - *Pallets and crates* (772 tons)
 - *Other films* (596 tons)
- **Approximately 5%** (2,180 tons) of the City of Mountain View’s overall waste was **Potentially Recyclable**, shown in peach. By weight, the five largest **Potentially Recyclable** categories included these materials:
- *Textiles* (914 tons)
 - *Remainder/composite metal* (765 tons)
 - *Carpet* (545 tons)
 - *Food service plastic* (193 tons)
 - *Expanded polystyrene food packaging* (126 tons)
- **Approximately 16%** (6,411 tons) of the City of Mountain View’s overall waste was **Problem Materials**, shown in brown. By weight, the five largest **Problem Material** categories included these materials:
- *Diapers* (1,440 tons)
 - *Remainder/composite paper* (1,173 tons)
 - *Remainder/composite plastic* (495 tons)
 - *Trash bags* (470 tons)
 - *Kitty litter* (444 tons)

- Waste composition is broken down by class in Figure 2 and the ten most prevalent disposed materials can be found in Table 3.

Figures and Tables: Overall

Figure 1. Waste Composition & Recoverability, City of Mountain View Overall, 2010

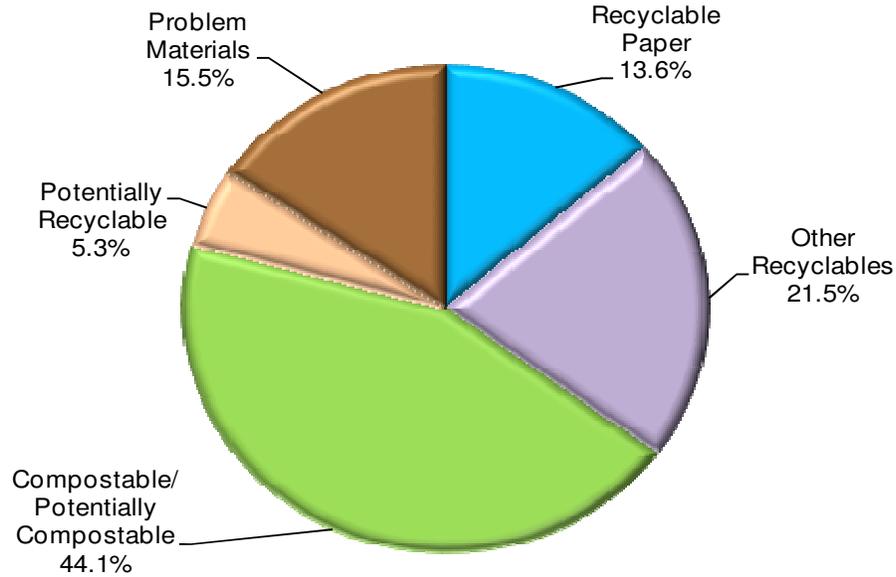


Figure 2. Waste Composition, City of Mountain View Overall, 2010

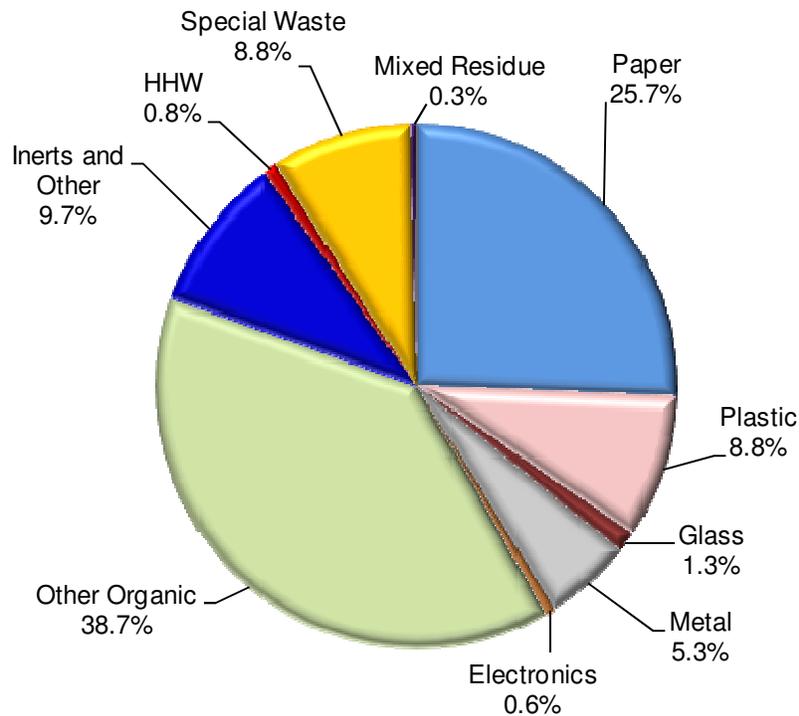


Table 3. Ten Most Prevalent Disposed Materials, City of Mountain View Overall, 2010

Material	Est.	Cum.	Est. Tons
	Percent	Percent	
Food	27.1%	27.1%	11,193
Compostable Paper	8.9%	36.0%	3,686
Leaves and Grass	5.9%	41.9%	2,425
Uncoated Corrugated Cardboard	4.8%	46.7%	1,978
Diapers	3.5%	50.2%	1,440
Bulky Items	3.4%	53.6%	1,409
Other Miscellaneous Paper	3.1%	56.7%	1,276
Remainder/Composite Paper	2.8%	59.5%	1,173
Other Ferrous	2.7%	62.2%	1,110
Other Office Paper	2.3%	64.5%	954
Total	64.5%		26,646

Table 4. Detailed Waste Composition, City of Mountain View Overall, 2010

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper	25.7%		10,601	Organics	38.7%		15,989
Uncoated Corrugated Cardboard	4.8%	1.3%	1,978	Food	27.1%	4.9%	11,193
Kraft Bags/Kraft Paper	0.1%	0.1%	39	Leaves and Grass	5.9%	2.8%	2,425
Kraft Grocer Bags	0.5%	0.1%	207	Prunings and Trimmings	1.3%	1.0%	534
Newspaper	1.5%	0.5%	623	Branches and Stumps	0.2%	0.3%	77
Other Office Paper	2.3%	0.8%	954	Agricultural Crop Residues	0.0%	0.0%	0
Catalogs, Directories, Magazines, and Phonebooks	1.3%	0.7%	550	Animal Feces	0.8%	0.4%	310
Compostable Paper	8.9%	2.3%	3,686	Textiles	2.2%	0.7%	914
Aseptic Packaging	0.0%	0.0%	9	Remainder/Composite Compostable Organic	0.7%	0.6%	288
Poly-coated Paperboard Packaging	0.3%	0.1%	105	Remainder/Composite Non-compostable Organic	0.6%	0.2%	247
Other Miscellaneous Paper	3.1%	0.6%	1,276				
Remainder/Composite Paper	2.8%	1.5%	1,173	C & D	9.7%		3,992
Plastic	8.8%		3,640	Concrete	0.0%	0.0%	2
PETE Bottles	0.3%	0.1%	131	Asphalt Paving	0.0%	0.0%	0
PETE Food Packaging	0.1%	0.0%	22	Asphalt Composition Shingles	0.0%	0.0%	0
PETE Non-food Packaging	0.0%	0.0%	4	Roofing Tar Paper/Felt	0.0%	0.0%	0
HDPE Containers (<1 gallon)	0.4%	0.1%	175	Roofing Mastic	0.0%	0.0%	0
HDPE Containers (>1 gallon)	0.1%	0.1%	56	Built-up Roofing	0.0%	0.0%	0
Food Service Plastic	0.5%	0.1%	193	Other Asphalt Roofing Material	0.0%	0.0%	0
Miscellaneous Plastic Containers (#3, #4, #5, and	0.2%	0.1%	99	Untreated Dimensional Lumber	0.9%	0.6%	356
Expanded Polystyrene Food Packaging	0.3%	0.1%	126	Treated Dimensional Lumber	0.6%	0.6%	236
Expanded Polystyrene Other	0.2%	0.1%	80	Untreated Engineered Wood	0.3%	0.3%	115
Trash Bags	1.1%	0.3%	470	Treated Engineered Wood	0.3%	0.3%	133
Plastic Grocery Bags	0.2%	0.1%	95	Pallets and Crates	1.9%	1.8%	772
Other Merchandise Bags	0.2%	0.1%	82	Other Untreated Wood Waste	0.0%	0.0%	4
Non-Bag Commercial and Industrial Packaging Film	0.2%	0.2%	93	Other Treated Wood Waste	0.8%	0.9%	349
Film Products	0.0%	0.1%	18	Carpet	1.3%	1.0%	545
Other Film	1.4%	0.3%	596	Carpet Padding	0.0%	0.1%	17
Durable Plastic Items	2.2%	1.1%	903	Clean Gypsum Board	0.0%	0.0%	0
Remainder/Composite Plastic	1.2%	0.6%	495	Painted/Demolition Gypsum Board	0.5%	0.6%	199
				Rock, Soil, and Fines	2.1%	2.3%	876
				Remainder/Composite Construction and Demolition	0.9%	1.0%	389
Glass	1.3%		547	Household Hazardous Waste (HHW)	0.8%		334
Glass Bottles and Containers	1.2%	0.3%	479	Paint	0.3%	0.4%	106
Flat Glass	0.1%	0.1%	25	Vehicle and Equipment Fluids	0.0%	0.0%	0
Remainder/Composite Glass	0.1%	0.1%	43	Used Oil	0.1%	0.2%	45
Metal	5.3%		2,203	Lead-acid Batteries	0.4%	0.6%	151
Aluminum Cans	0.1%	0.0%	54	Other Batteries	0.0%	0.0%	4
Tin/Steel Cans	0.3%	0.1%	119	Remainder/Composite Household Waste	0.1%	0.1%	29
Major Appliances	0.0%	0.0%	0	Special Waste	8.8%		3,615
Used Oil Filters	0.0%	0.0%	0	Ash	0.0%	0.0%	0
Other Ferrous	2.7%	1.7%	1,110	Kitty litter	1.1%	0.6%	444
Other Non-ferrous	0.4%	0.2%	155	Diapers	3.5%	1.2%	1,440
Remainder/Composite Metal	1.9%	1.3%	765	Treated Medical Waste	0.0%	0.0%	9
Electronics	0.6%		241	Bulky Items	3.4%	2.4%	1,409
Small Appliances	0.1%	0.1%	59	Vehicle and Truck Tires	0.0%	0.0%	0
Brown Goods	0.2%	0.2%	79	Other Tires	0.0%	0.1%	18
Small Computer-related Electronics	0.0%	0.0%	1	Remainder/Composite Special Waste	0.7%	0.7%	295
Large Computer-related Electronics	0.1%	0.2%	59	Mixed Residue	0.3%		133
Other Consumer Electronics	0.1%	0.2%	43	Mixed Residue	0.3%	0.2%	133
CRT Televisions and Monitors	0.0%	0.0%	0				
				Totals	100.0%		41,294
				Sample Count	49		

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Single family – The City of Mountain View

The consultant team hand-sorted 13 samples of waste from this waste sector.

Key Findings

As shown in Figure 3, the sampling results suggest the following key findings about recovery potential for The City of Mountain View’s single-family waste stream:

- **Approximately 74%** (7,665 tons) of the City of Mountain View’s single-family waste examined in this study was **Recyclable** or **Compostable/Potentially Compostable**.
- **Approximately 45%** (4,692 tons) of the City of Mountain View’s single-family waste was **Compostable/Potentially Compostable**, shown in green. The **Compostable/Potentially Compostable** fraction included the following material categories (see Table 6):
 - *Food* (2,880 tons)
 - *Compostable paper* (818 tons)
 - *Leaves & grass* (488 tons)
 - *Prunings & trimmings* (268 tons)
 - *Remainder/composite compostable organics* (165 tons)
 - *Branches & stumps* (73 tons)
 - *Agricultural crop residue* (none)
- **Approximately 29%** (2,972 tons) of the City of Mountain View’s single-family waste was **Recyclable**, including **Recyclable Paper** (11.3%; 1,166 tons), shown in blue, and **Other Recyclables** (17.5%; 1,806 tons), shown in purple.
 - By weight, the five largest **Recyclable Paper** categories included these materials:
 - *Other miscellaneous paper* (403 tons)
 - *Uncoated corrugated cardboard* (218 tons)
 - *Newspaper* (178 tons)
 - *Other office paper* (159 tons)
 - *Catalogs, directories, magazines, and phonebooks* (121 tons)
 - By weight, the five largest recyclable **Other Recyclable** categories included these materials:
 - *Durable plastic items* (193 tons)
 - *Other films* (189 tons)
 - *Rock, soil, and fines* (186 tons)
 - *Bulky items* (178 tons)
 - *Untreated dimensional lumber* (157 tons)

- **Approximately 7%** (669 tons) of the City of Mountain View's single-family waste was **Potentially Recyclable**, shown in peach. By weight, the five largest **Potentially Recyclable** categories included these materials:
 - *Textiles* (356 tons)
 - *Carpet* (257 tons)
 - *Remainder/composite metal* (110 tons)
 - *Food service plastic* (76 tons)
 - *Expanded polystyrene food packaging* (59 tons)

- **About 19%** (1,992 tons) of the City of Mountain View's single-family waste was **Problem Materials**, shown in brown. By weight, the five largest **Problem Material** categories included these materials:
 - *Diapers* (777 tons)
 - *Treated dimensional lumber* (180 tons)
 - *Animal feces* (165 tons)
 - *Remainder/composite paper* (159 tons)
 - *Kitty litter* (135 tons)

- Waste composition is broken down by class in Figure 4 and the ten most prevalent disposed materials can be found in Table 5.

Figures and Tables: Single-family

Figure 3. Waste Composition & Recoverability, City of Mountain View Single-family, 2010

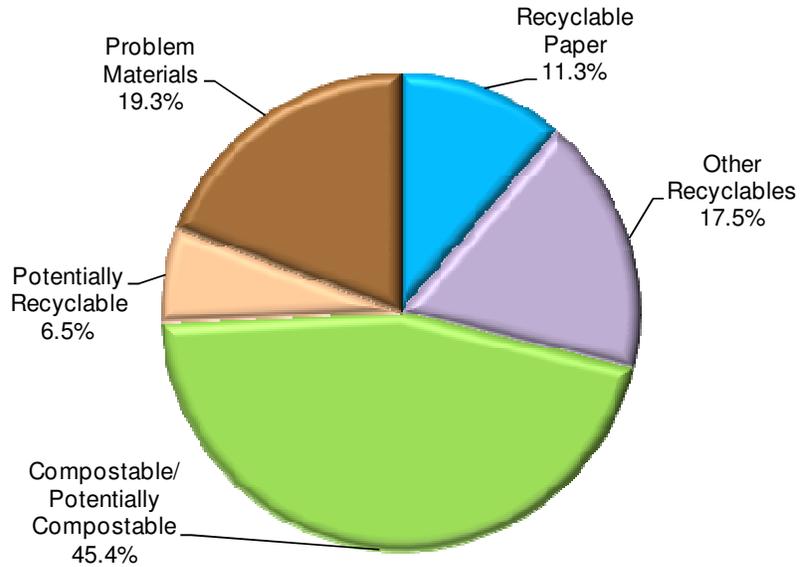


Figure 4. Waste Composition, City of Mountain View Single-family, 2010

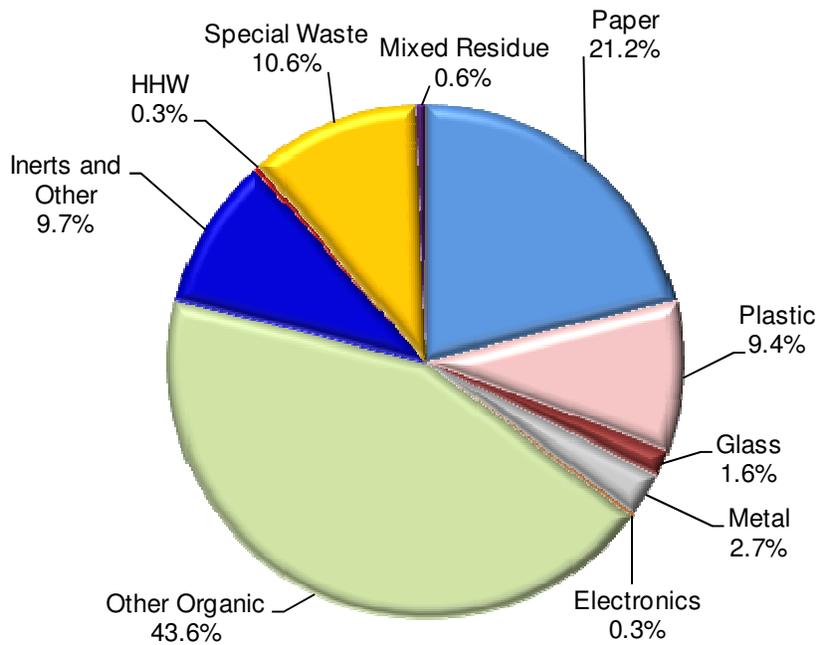


Table 5. Ten Most Prevalent Disposed Materials, City of Mountain View Single-family, 2010

Material	Est.	Cum.	Est. Tons
	Percent	Percent	
Food	27.9%	27.9%	2,880
Compostable Paper	7.9%	35.8%	818
Diapers	7.5%	43.3%	777
Leaves and Grass	4.7%	48.1%	488
Other Miscellaneous Paper	3.9%	52.0%	403
Textiles	3.5%	55.4%	356
Prunings and Trimmings	2.6%	58.0%	268
Carpet	2.5%	60.5%	257
Uncoated Corrugated Cardboard	2.1%	62.6%	218
Durable Plastic Items	1.9%	64.5%	193
Total	64.5%		6,659

Table 6. Detailed Waste Composition, City of Mountain View Single-family, 2010

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper	21.2%		2,193	Organics	43.6%		4,498
Uncoated Corrugated Cardboard	2.1%	0.9%	218	Food	27.9%	7.3%	2,880
Kraft Bags/Kraft Paper	0.0%	0.0%	3	Leaves and Grass	4.7%	3.5%	488
Kraft Grocer Bags	0.8%	0.3%	85	Prunings and Trimmings	2.6%	2.9%	268
Newspaper	1.7%	1.0%	178	Branches and Stumps	0.7%	1.2%	73
Other Office Paper	1.5%	0.6%	159	Agricultural Crop Residues	0.0%	0.0%	0
Catalogs, Directories, Magazines, and Phonebooks	1.2%	0.7%	121	Animal Feeces	1.6%	1.3%	165
Compostable Paper	7.9%	1.7%	818	Textiles	3.5%	1.5%	356
Aseptic Packaging	0.1%	0.1%	7	Remainder/Composite Compostable Organic	1.6%	2.2%	165
Poly-coated Paperboard Packaging	0.4%	0.2%	42	Remainder/Composite Non-compostable Organic	1.0%	0.7%	102
Other Miscellaneous Paper	3.9%	1.0%	403				
Remainder/Composite Paper	1.5%	0.6%	159	C & D	9.7%		1,001
Plastic	9.4%		970	Concrete	0.0%	0.0%	0
PETE Bottles	0.4%	0.2%	40	Asphalt Paving	0.0%	0.0%	0
PETE Food Packaging	0.1%	0.1%	11	Asphalt Composition Shingles	0.0%	0.0%	0
PETE Non-food Packaging	0.0%	0.0%	0	Roofing Tar Paper/Felt	0.0%	0.0%	0
HDPE Containers (<1 gallon)	0.3%	0.1%	35	Roofing Mastic	0.0%	0.0%	0
HDPE Containers (>1 gallon)	0.2%	0.3%	17	Built-up Roofing	0.0%	0.0%	0
Food Service Plastic	0.7%	0.3%	76	Other Asphalt Roofing Material	0.0%	0.0%	0
Miscellaneous Plastic Containers (#3, #4, #5, and	0.4%	0.2%	39	Untreated Dimensional Lumber	1.5%	1.7%	157
Expanded Polystyrene Food Packaging	0.6%	0.2%	59	Treated Dimensional Lumber	1.7%	2.2%	180
Expanded Polystyrene Other	0.2%	0.1%	18	Untreated Engineered Wood	0.7%	1.0%	76
Trash Bags	0.9%	0.2%	91	Treated Engineered Wood	0.4%	0.6%	39
Plastic Grocery Bags	0.3%	0.1%	33	Pallets and Crates	0.0%	0.0%	0
Other Merchandise Bags	0.3%	0.1%	35	Other Untreated Wood Waste	0.0%	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.1%	0.1%	7	Other Treated Wood Waste	0.0%	0.0%	0
Film Products	0.0%	0.0%	0	Carpet	2.5%	2.6%	257
Other Film	1.8%	0.4%	189	Carpet Padding	0.0%	0.0%	0
Durable Plastic Items	1.9%	1.0%	193	Clean Gypsum Board	0.0%	0.0%	0
Remainder/Composite Plastic	1.2%	0.7%	127	Painted/Demolition Gypsum Board	0.5%	0.9%	54
				Rock, Soil, and Fines	1.8%	2.4%	186
				Remainder/Composite Construction and Demolition	0.5%	0.4%	53
Glass	1.6%		169	Household Hazardous Waste (HHW)	0.3%		28
Glass Bottles and Containers	1.2%	0.9%	123	Paint	0.1%	0.1%	15
Flat Glass	0.1%	0.2%	14	Vehicle and Equipment Fluids	0.0%	0.0%	0
Remainder/Composite Glass	0.3%	0.3%	32	Used Oil	0.0%	0.0%	0
				Lead-acid Batteries	0.0%	0.0%	0
Metal	2.7%		284	Other Batteries	0.0%	0.0%	0
Aluminum Cans	0.2%	0.1%	18	Remainder/Composite Household Waste	0.1%	0.2%	13
Tin/Steel Cans	0.4%	0.2%	46				
Major Appliances	0.0%	0.0%	0	Special Waste	10.6%		1,097
Used Oil Filters	0.0%	0.0%	0	Ash	0.0%	0.0%	0
Other Ferrous	0.7%	0.4%	72	Kitty litter	1.3%	1.6%	135
Other Non-ferrous	0.4%	0.2%	39	Diapers	7.5%	3.4%	777
Remainder/Composite Metal	1.1%	1.3%	110	Treated Medical Waste	0.0%	0.0%	2
				Bulky Items	1.7%	2.9%	178
Electronics	0.3%		28	Vehicle and Truck Tires	0.0%	0.0%	0
Small Appliances	0.1%	0.2%	14	Other Tires	0.0%	0.0%	0
Brown Goods	0.1%	0.2%	13	Remainder/Composite Special Waste	0.1%	0.1%	5
Small Computer-related Electronics	0.0%	0.0%	0				
Large Computer-related Electronics	0.0%	0.0%	0	Mixed Residue	0.6%		57
Other Consumer Electronics	0.0%	0.0%	0	Mixed Residue	0.6%	0.4%	57
CRT Televisions and Monitors	0.0%	0.0%	0				
				Totals	100.0%		10,326
				Sample Count	13		

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Multi-family – The City of Mountain View

The consultant team hand-sorted 15 samples of waste from this waste sector.

Key Findings

As shown in Figure 5, the sampling results suggest the following key findings about recovery potential for the City of Mountain View’s multi-family waste stream:

- **Approximately 79%** (8,045 tons) of the City of Mountain View’s multi-family waste examined in this study was **Recyclable** or **Compostable/Potentially Compostable**.
- **Approximately 46%** (4,729 tons) of the City of Mountain View’s multi-family waste was **Compostable/Potentially Compostable**, shown in green. The **Compostable/Potentially Compostable** fraction included the following material categories (see Table 8):
 - *Food* (2,798 tons)
 - *Leaves & grass* (1,282 tons)
 - *Compostable paper* (407 tons)
 - *Prunings & trimmings* (186 tons)
 - *Remainder/composite compostable organics* (57 tons)
 - *Agricultural crop residue* (none)
 - *Branches & stumps* (none)
- **Approximately 33%** (3,316 tons) of the City of Mountain View’s multi-family waste was **Recyclable**, including **Recyclable Paper** (15.4%; 1,576 tons), shown in blue, and **Other Recyclables** (17.0%; 1,740 tons), shown in purple.
 - By weight, the five largest **Recyclable Paper** categories included these materials:
 - *Uncoated corrugated cardboard* (709 tons)
 - *Other office paper* (263 tons)
 - *Catalogs, directories, magazines, and phonebooks* (237 tons)
 - *Other miscellaneous paper* (192 tons)
 - *Newspaper* (138 tons)
 - By weight, the five largest recyclable **Other Recyclable** categories included these materials:
 - *Bulky items* (442 tons)
 - *Other ferrous* (167 tons)
 - *Durable plastic items* (151 tons)
 - *Untreated dimensional lumber* (143 tons)
 - *Other films* (100 tons)
- **Approximately 6%** (561 tons) of the City of Mountain View’s multi-family waste was **Potentially Recyclable**, shown in peach. By weight, the six largest **Potentially Recyclable** categories included these materials:
 - *Textiles* (239 tons)

- *Carpet* (229 tons)
 - *Remainder/composite metal* (153 tons)
 - *Food service plastic* (37 tons)
 - *Expanded polystyrene other* (26 tons)
 - *Plastic grocery bags* (26 tons)
- **About 16%** (1,613 tons) of the City of Mountain View’s multi-family waste was **Problem Materials**, shown in brown. By weight, the five largest **Problem Material** categories included these materials:
- *Diapers* (334 tons)
 - *Other treated wood waste* (202 tons)
 - *Remainder/composite plastic* (201 tons)
 - *Remainder/composite paper* (185 tons)
 - *Kitty litter* (182 tons)
- Waste composition is broken down by class in Figure 6 and the ten most prevalent disposed materials can be found in Table 7

Figures and Tables: Multi-family

Figure 5. Waste Composition & Recoverability, City of Mountain View Multi-family, 2010

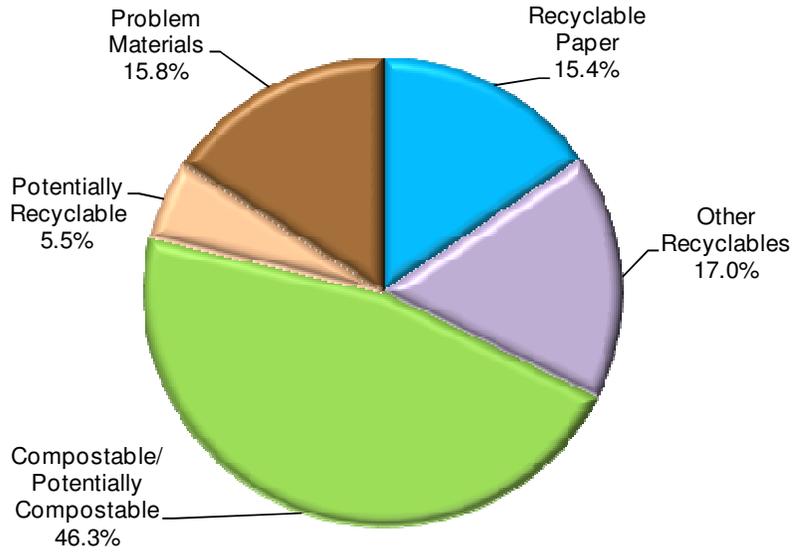


Figure 6. Waste Composition, City of Mountain View Multi-family, 2010

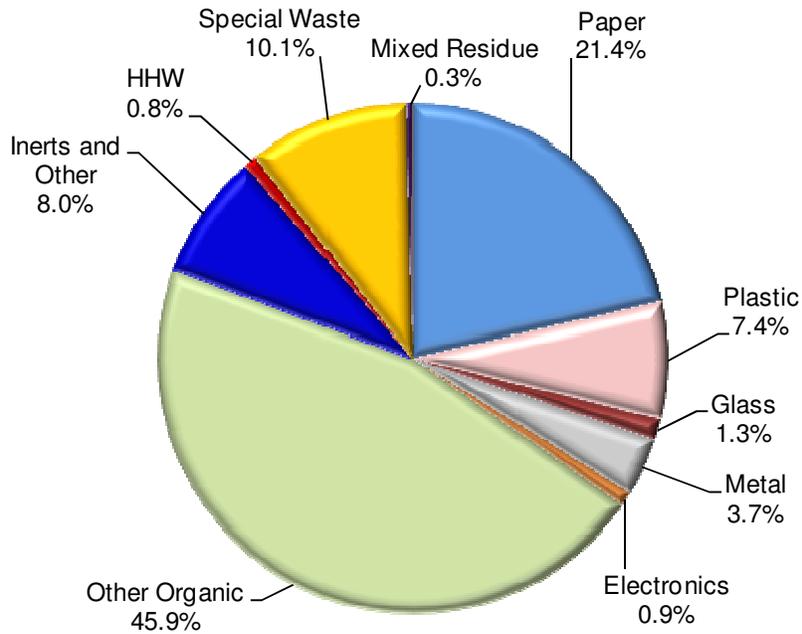


Table 7. Ten Most Prevalent Disposed Materials, City of Mountain View Multi-family, 2010

Material	Est.	Cum.	Est. Tons
	Percent	Percent	
Food	27.4%	27.4%	2,798
Leaves and Grass	12.5%	39.9%	1,282
Uncoated Corrugated Cardboard	6.9%	46.9%	709
Bulky Items	4.3%	51.2%	442
Compostable Paper	4.0%	55.2%	407
Diapers	3.3%	58.4%	334
Other Office Paper	2.6%	61.0%	263
Textiles	2.3%	63.3%	239
Catalogs, Directories, Magazines, and Phonebooks	2.3%	65.7%	237
Carpet	2.2%	67.9%	229
Total	67.9%		6,940

Table 8. Detailed Waste Composition, City of Mountain View Multi-family, 2010

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper	21.4%		2,192	Organics	45.9%		4,693
Uncoated Corrugated Cardboard	6.9%	3.5%	709	Food	27.4%	5.9%	2,798
Kraft Bags/Kraft Paper	0.0%	0.0%	1	Leaves and Grass	12.5%	8.3%	1,282
Kraft Grocer Bags	0.4%	0.2%	36	Prunings and Trimmings	1.8%	1.9%	186
Newspaper	1.4%	0.6%	138	Branches and Stumps	0.0%	0.0%	0
Other Office Paper	2.6%	1.4%	263	Agricultural Crop Residues	0.0%	0.0%	0
Catalogs, Directories, Magazines, and Phonebooks	2.3%	2.3%	237	Animal Feeces	0.7%	0.7%	71
Compostable Paper	4.0%	1.7%	407	Textiles	2.3%	1.6%	239
Aseptic Packaging	0.0%	0.0%	1	Remainder/Composite Compostable Organic	0.6%	0.6%	57
Poly-coated Paperboard Packaging	0.2%	0.2%	22	Remainder/Composite Non-compostable Organic	0.6%	0.3%	62
Other Miscellaneous Paper	1.9%	0.7%	192				
Remainder/Composite Paper	1.8%	1.7%	185	C & D	8.0%		823
Plastic	7.4%		752	Concrete	0.0%	0.0%	0
PETE Bottles	0.4%	0.1%	38	Asphalt Paving	0.0%	0.0%	0
PETE Food Packaging	0.0%	0.0%	1	Asphalt Composition Shingles	0.0%	0.0%	0
PETE Non-food Packaging	0.0%	0.0%	0	Roofing Tar Paper/Felt	0.0%	0.0%	0
HDPE Containers (<1 gallon)	0.4%	0.2%	46	Roofing Mastic	0.0%	0.0%	0
HDPE Containers (>1 gallon)	0.0%	0.0%	4	Built-up Roofing	0.0%	0.0%	0
Food Service Plastic	0.4%	0.1%	37	Other Asphalt Roofing Material	0.0%	0.0%	0
Miscellaneous Plastic Containers (#3, #4, #5, and	0.2%	0.1%	18	Untreated Dimensional Lumber	1.4%	1.1%	143
Expanded Polystyrene Food Packaging	0.2%	0.1%	21	Treated Dimensional Lumber	0.1%	0.2%	12
Expanded Polystyrene Other	0.3%	0.3%	26	Untreated Engineered Wood	0.0%	0.0%	0
Trash Bags	0.5%	0.2%	52	Treated Engineered Wood	0.8%	1.0%	77
Plastic Grocery Bags	0.3%	0.1%	26	Pallets and Crates	0.0%	0.0%	0
Other Merchandise Bags	0.2%	0.1%	23	Other Untreated Wood Waste	0.0%	0.0%	0
Non-Bag Commercial and Industrial Packaging Film	0.1%	0.1%	7	Other Treated Wood Waste	2.0%	2.8%	202
Film Products	0.0%	0.0%	1	Carpet	2.2%	2.5%	229
Other Film	1.0%	0.3%	100	Carpet Padding	0.1%	0.2%	14
Durable Plastic Items	1.5%	0.6%	151	Clean Gypsum Board	0.0%	0.0%	0
Remainder/Composite Plastic	2.0%	1.8%	201	Painted/Demolition Gypsum Board	1.1%	1.7%	107
				Rock, Soil, and Fines	0.3%	0.5%	32
				Remainder/Composite Construction and Demolition	0.1%	0.1%	7
Glass	1.3%		137	Household Hazardous Waste (HHW)	0.8%		81
Glass Bottles and Containers	1.3%	0.6%	130	Paint	0.7%	1.2%	75
Flat Glass	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.0%	0.0%	0
Remainder/Composite Glass	0.1%	0.1%	7	Used Oil	0.0%	0.0%	0
				Lead-acid Batteries	0.0%	0.0%	0
Metal	3.7%		378	Other Batteries	0.0%	0.0%	2
Aluminum Cans	0.1%	0.1%	12	Remainder/Composite Household Waste	0.0%	0.1%	3
Tin/Steel Cans	0.3%	0.1%	31				
Major Appliances	0.0%	0.0%	0	Special Waste	10.1%		1,037
Used Oil Filters	0.0%	0.0%	0	Ash	0.0%	0.0%	0
Other Ferrous	1.6%	1.2%	167	Kitty litter	1.8%	1.1%	182
Other Non-ferrous	0.1%	0.1%	15	Diapers	3.3%	1.6%	334
Remainder/Composite Metal	1.5%	0.8%	153	Treated Medical Waste	0.0%	0.0%	0
				Bulky Items	4.3%	5.3%	442
Electronics	0.9%		95	Vehicle and Truck Tires	0.0%	0.0%	0
Small Appliances	0.1%	0.2%	11	Other Tires	0.1%	0.2%	15
Brown Goods	0.0%	0.0%	0	Remainder/Composite Special Waste	0.6%	1.0%	64
Small Computer-related Electronics	0.0%	0.0%	0				
Large Computer-related Electronics	0.5%	0.8%	49	Mixed Residue	0.3%		34
Other Consumer Electronics	0.3%	0.6%	35	Mixed Residue	0.3%	0.4%	34
CRT Televisions and Monitors	0.0%	0.0%	0				
				Totals	100.0%		10,220
				Sample Count	15		

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Commercial – The City of Mountain View

The consultant team hand-sorted 21 samples of waste from this waste sector.

Key Findings

As shown in Figure 7, the sampling results suggest the following key findings about recovery potential for The City of Mountain View’s commercial waste stream:

- **Approximately 83%** (17,113 tons) of the City of Mountain View’s commercial waste examined in this study was **Recyclable** or **Compostable/Potentially Compostable**.
- **Approximately 42%** (8,674 tons) of the City of Mountain View’s commercial waste was **Compostable/Potentially Compostable**, shown in green. The **Compostable/Potentially Compostable** fraction included the following material categories (see Table 9):
 - *Food* (5,489 tons)
 - *Compostable paper* (2,665 tons)
 - *Leaves & grass* (432 tons)
 - *Remainder/composite compostable organics* (53 tons)
 - Prunings & trimmings (34 tons)
 - Agricultural crop residue (none)
 - Branches & stumps (none)
- **Approximately 41%** (8,440 tons) of the City of Mountain View’s commercial waste was **Recyclable**, including **Recyclable Paper** (13.8%; 2,866 tons), shown in blue, and **Other Recyclables** (26.9%; 5,573 tons), shown in purple.
 - By weight, the five largest **Recyclable Paper** categories included these materials:
 - *Uncoated corrugated cardboard* (1,027 tons)
 - *Other miscellaneous paper* (710 tons)
 - *Other office paper* (537 tons)
 - *Newspaper* (309 tons)
 - *Catalogs, directories, magazines, and phonebooks* (158 tons)
 - By weight, the five largest recyclable **Other Recyclable** categories included these materials:
 - *Other ferrous* (951 tons)
 - *Pallets and crates* (880 tons)
 - *Bulky items* (789 tons)
 - *Durable plastic items* (591 tons)
 - *Other films* (317 tons)

- **Approximately 4%** (916 tons) of the City of Mountain View’s commercial waste was **Potentially Recyclable**, shown in peach. By weight, the five largest **Potentially Recyclable** categories included these materials:
 - *Remainder/composite metal* (531 tons)
 - *Textiles* (289 tons)
 - *Non-bag commercial and industrial packaging film* (89 tons)
 - *Food service plastic* (79 tons)
 - *Expanded polystyrene food packaging* (44 tons)

- **About 13%** (2,719 tons) of the City of Mountain View’s waste was **Problem Materials**, shown in brown. By weight, the five largest **Problem Material** categories included these materials:
 - *Remainder/composite paper* (894 tons)
 - *Remainder/composite construction and demolition* (370 tons)
 - *Trash bags* (356 tons)
 - *Diapers* (255 tons)
 - *Remainder/composite special waste* (242 tons)

- Waste composition is broken down by class in Figure 9 and the ten most prevalent disposed materials can be found in Table 10.

Figures and Tables: Commercial

Figure 8. Waste Composition & Recoverability, City of Mountain View Commercial, 2010

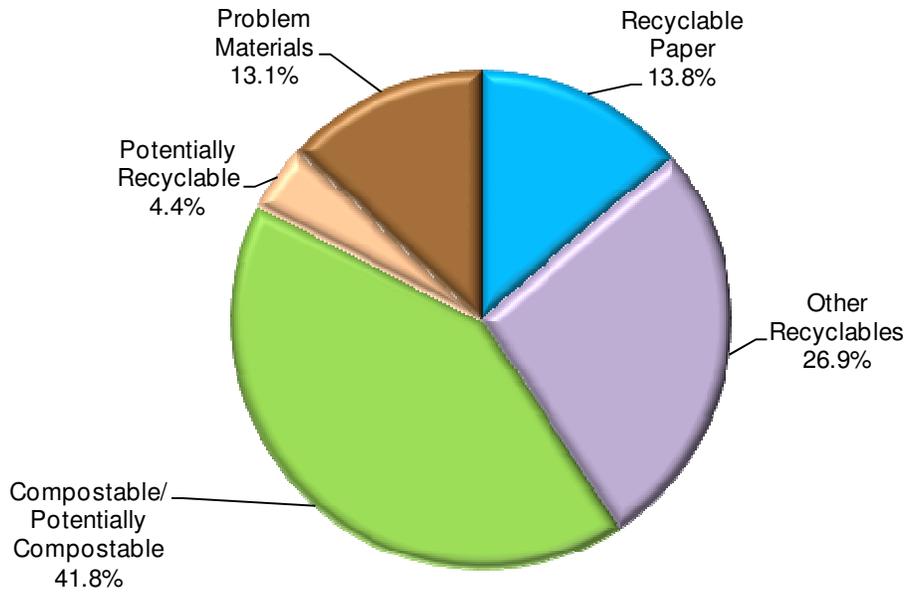


Figure 9. Waste Composition, City of Mountain View Commercial, 2010

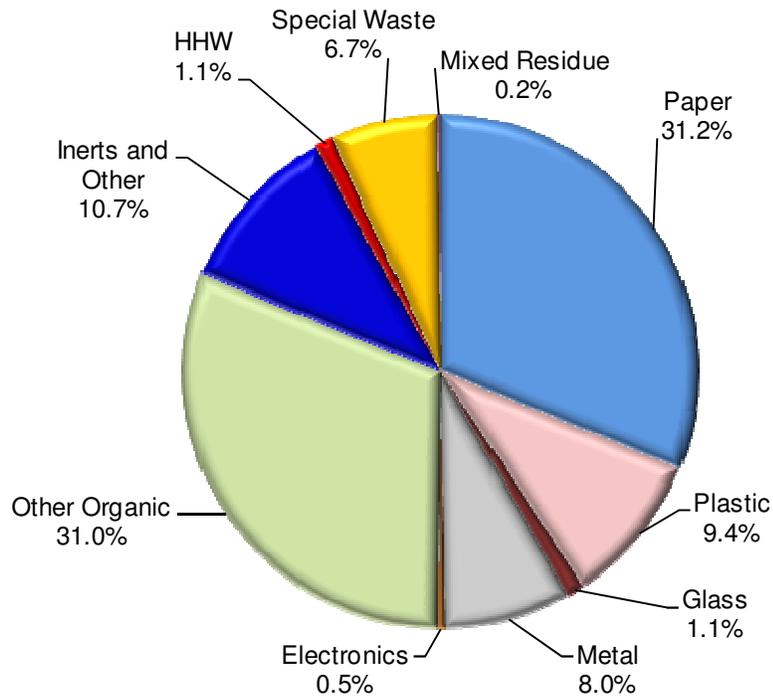


Table 10. Ten Most Prevalent Disposed Materials, City of Mountain View Commercial, 2010

Material	Est. Percent	Cum. Percent	Est. Tons
Food	26.5%	26.5%	5,489
Compostable Paper	12.8%	39.3%	2,665
Uncoated Corrugated Cardboard	5.0%	44.3%	1,027
Other Ferrous	4.6%	48.8%	951
Remainder/Composite Paper	4.3%	53.1%	894
Pallets and Crates	4.2%	57.4%	880
Bulky Items	3.8%	61.2%	789
Rock, Soil, and Fines	3.5%	64.7%	732
Other Miscellaneous Paper	3.4%	68.1%	710
Durable Plastic Items	2.8%	71.0%	591
Total	71.0%		14,730

Table 11. Detailed Waste Composition, City of Mountain View Commercial, 2010

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper	31.2%		6,465	Organics	31.0%		6,431
Uncoated Corrugated Cardboard	5.0%	1.6%	1,027	Food	26.5%	9.6%	5,489
Kraft Bags/Kraft Paper	0.2%	0.1%	40	Leaves and Grass	2.1%	1.4%	432
Kraft Grocer Bags	0.4%	0.2%	84	Prunings and Trimmings	0.2%	0.2%	34
Newspaper	1.5%	0.9%	309	Branches and Stumps	0.0%	0.0%	0
Other Office Paper	2.6%	1.6%	537	Agricultural Crop Residues	0.0%	0.0%	0
Catalogs, Directories, Magazines, and Phonebooks	0.8%	0.5%	158	Animal Feeces	0.3%	0.4%	59
Compostable Paper	12.8%	4.7%	2,665	Textiles	1.4%	0.7%	289
Aseptic Packaging	0.0%	0.0%	0	Remainder/Composite Compostable Organic	0.3%	0.2%	53
Poly-coated Paperboard Packaging	0.2%	0.2%	39	Remainder/Composite Non-compostable Organic	0.4%	0.3%	74
Other Miscellaneous Paper	3.4%	1.2%	710				
Remainder/Composite Paper	4.3%	3.2%	894	C & D	10.7%		2,228
Plastic	9.4%		1,960	Concrete	0.0%	0.0%	2
PETE Bottles	0.2%	0.1%	50	Asphalt Paving	0.0%	0.0%	0
PETE Food Packaging	0.1%	0.0%	10	Asphalt Composition Shingles	0.0%	0.0%	0
PETE Non-food Packaging	0.0%	0.0%	5	Roofing Tar Paper/Felt	0.0%	0.0%	0
HDPE Containers (<1 gallon)	0.5%	0.2%	96	Roofing Mastic	0.0%	0.0%	0
HDPE Containers (>1 gallon)	0.2%	0.2%	38	Built-up Roofing	0.0%	0.0%	0
Food Service Plastic	0.4%	0.2%	79	Other Asphalt Roofing Material	0.0%	0.0%	0
Miscellaneous Plastic Containers (#3, #4, #5, and	0.2%	0.1%	42	Untreated Dimensional Lumber	0.1%	0.1%	23
Expanded Polystyrene Food Packaging	0.2%	0.1%	44	Treated Dimensional Lumber	0.2%	0.3%	38
Expanded Polystyrene Other	0.2%	0.1%	34	Untreated Engineered Wood	0.2%	0.3%	40
Trash Bags	1.7%	0.7%	356	Treated Engineered Wood	0.0%	0.0%	0
Plastic Grocery Bags	0.2%	0.1%	33	Pallets and Crates	4.2%	3.9%	880
Other Merchandise Bags	0.1%	0.1%	21	Other Untreated Wood Waste	0.0%	0.0%	4
Non-Bag Commercial and Industrial Packaging Film	0.4%	0.4%	89	Other Treated Wood Waste	0.6%	0.7%	122
Film Products	0.1%	0.2%	20	Carpet	0.0%	0.0%	0
Other Film	1.5%	0.7%	317	Carpet Padding	0.0%	0.0%	0
Durable Plastic Items	2.8%	2.4%	591	Clean Gypsum Board	0.0%	0.0%	0
Remainder/Composite Plastic	0.7%	0.5%	138	Painted/Demolition Gypsum Board	0.1%	0.1%	17
				Rock, Soil, and Fines	3.5%	5.0%	732
				Remainder/Composite Construction and Demolition	1.8%	2.2%	370
Glass	1.1%		234	Household Hazardous Waste (HHW)	1.1%		237
Glass Bottles and Containers	1.1%	0.5%	221	Paint	0.0%	0.0%	0
Flat Glass	0.1%	0.1%	12	Vehicle and Equipment Fluids	0.0%	0.0%	0
Remainder/Composite Glass	0.0%	0.0%	1	Used Oil	0.2%	0.4%	51
				Lead-acid Batteries	0.8%	1.4%	172
Metal	8.0%		1,656	Other Batteries	0.0%	0.0%	1
Aluminum Cans	0.1%	0.1%	24	Remainder/Composite Household Waste	0.1%	0.1%	13
Tin/Steel Cans	0.2%	0.1%	40				
Major Appliances	0.0%	0.0%	0	Special Waste	6.7%		1,390
Used Oil Filters	0.0%	0.0%	0	Ash	0.0%	0.0%	0
Other Ferrous	4.6%	3.6%	951	Kitty litter	0.5%	0.8%	96
Other Non-ferrous	0.5%	0.5%	110	Diapers	1.2%	0.9%	255
Remainder/Composite Metal	2.6%	2.9%	531	Treated Medical Waste	0.0%	0.1%	8
				Bulky Items	3.8%	3.9%	789
Electronics	0.5%		111	Vehicle and Truck Tires	0.0%	0.0%	0
Small Appliances	0.2%	0.3%	35	Other Tires	0.0%	0.0%	0
Brown Goods	0.4%	0.4%	74	Remainder/Composite Special Waste	1.2%	1.5%	242
Small Computer-related Electronics	0.0%	0.0%	1				
Large Computer-related Electronics	0.0%	0.0%	0	Mixed Residue	0.2%		37
Other Consumer Electronics	0.0%	0.0%	1	Mixed Residue	0.2%	0.2%	37
CRT Televisions and Monitors	0.0%	0.0%	0				
				Totals	100.0%		20,749
				Sample Count	21		

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

C&D – The City of Mountain View

The consultant team visually characterized 44 samples of waste from this waste sector.

Key Findings

As shown in Figure 10, the sampling results suggest the following key findings about recovery potential for The City of Mountain View’s C&D waste stream:

- **Approximately 41%** (1,679 tons) of the City of Mountain View’s C&D waste examined in this study was **Recyclable** or **Compostable/Potentially Compostable**.
- **Approximately 7%** (299 tons) of the City of Mountain View’s C&D waste was **Compostable/Potentially Compostable**, shown in green. The **Compostable/Potentially Compostable** fraction included the following material categories (see Table 13):
 - *Prunings & trimmings* (134 tons)
 - *Branches & stumps* (18 tons)
 - *Leaves & grass* (101 tons)
 - *Remainder/composite compostable organics* (41 tons)
 - *Food* (5 tons)
 - *Compostable paper* (1 tons)
 - *Agricultural crop residue* (none)
- **Approximately 34%** (1,380 tons) of the City of Mountain View’s C&D waste was **Recyclable**, including **Recyclable Paper** (1.3%; 55 tons), shown in blue, and **Other Recyclables** (32.2%; 1,325 tons), shown in purple.
 - By weight, the five largest **Recyclable Paper** categories included these materials:
 - *Uncoated corrugated cardboard* (39 tons)
 - *Other miscellaneous paper* (11 tons)
 - *Newspaper* (2 tons)
 - *Kraft bags/kraft paper* (1 ton)
 - *Other office paper* (1 ton)
 - By weight, the five largest recyclable **Other Recyclable** categories included these materials:
 - *Rock, soil, and fines* (259 tons)
 - *Untreated dimensional lumber* (212 tons)
 - *Other ferrous* (189 tons)
 - *Concrete* (178 tons)
 - *Untreated engineered wood* (166 tons)

- **Approximately 11%** (433 tons) of the City of Mountain View's C&D waste was **Potentially Recyclable**, shown in peach. By weight, the five largest **Potentially Recyclable** categories included these materials:
 - *Clean gypsum board* (259 tons)
 - *Carpet* (104 tons)
 - *Carpet padding* (18 tons)
 - *Flat glass* (18 tons)
 - *Remainder/composite metal* (17 tons)

- **About 49%** (2,004 tons) of the City of Mountain View's C&D waste was **Problem Materials**, shown in brown. By weight, the five largest **Problem Material** categories included these materials:
 - *Remainder/composite construction and demolition* (1,160 tons)
 - *Painted/demolition gypsum board* (463 tons)
 - *Treated engineered wood* (199 tons)
 - *Treated dimensional lumber* (68 tons)
 - *Roofing tar paper/felt* (49 tons)

- Waste composition is broken down by class in Figure 11 and the ten most prevalent disposed materials can be found in Table 12

Figures and Tables: C&D

Figure 10. Waste Composition & Recoverability, City of Mountain View C&D, 2010

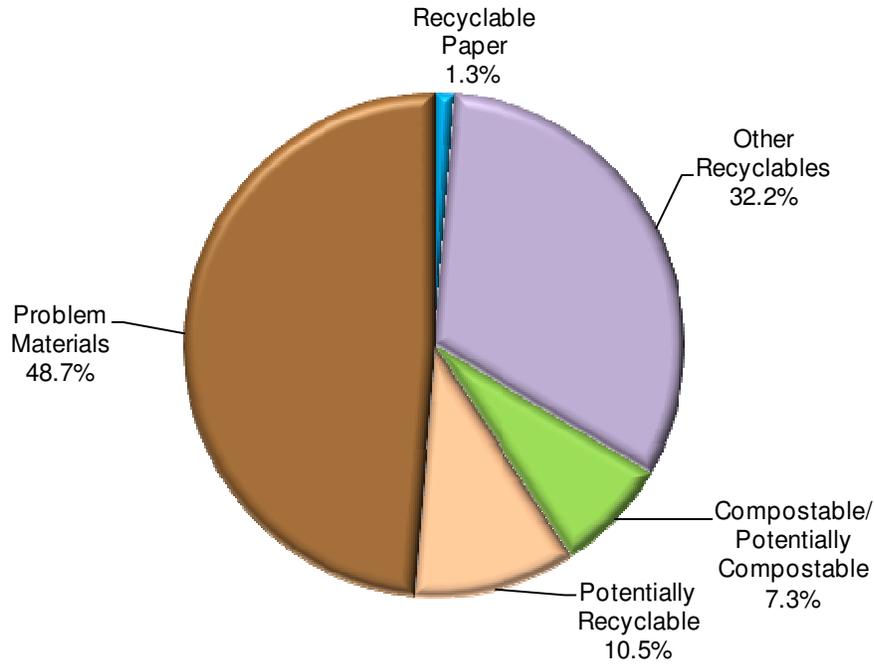


Figure 11. Waste Composition, City of Mountain View C&D, 2010

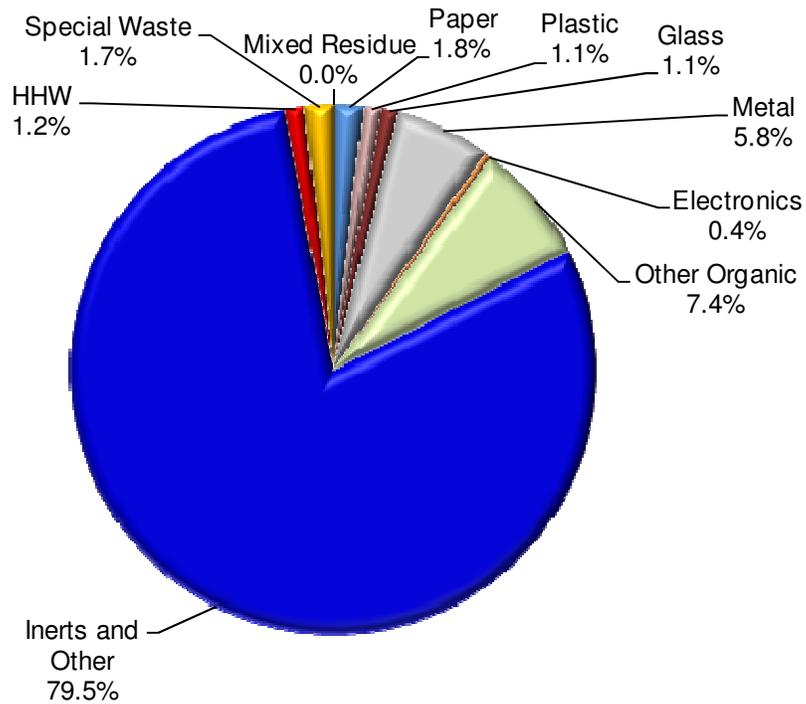


Table 12. Ten Most Prevalent Disposed Materials, City of Mountain View C&D, 2010

Material	Est.	Cum.	Est. Tons
	Percent	Percent	
Remainder/Composite Construction and Demolition	28.2%	28.2%	1,160
Painted/Demolition Gypsum Board	11.3%	39.4%	463
Rock, Soil, and Fines	6.3%	45.7%	259
Clean Gypsum Board	6.3%	52.0%	259
Untreated Dimensional Lumber	5.1%	57.2%	212
Treated Engineered Wood	4.8%	62.0%	199
Other Ferrous	4.6%	66.6%	189
Concrete	4.3%	70.9%	178
Untreated Engineered Wood	4.0%	74.9%	166
Prunings and Trimmings	3.3%	78.2%	134
Total	78.2%		3,219

Table 13. Detailed Waste Composition, City of Mountain View C&D, 2010

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper	1.8%		75	Organics	7.4%		303
Uncoated Corrugated Cardboard	0.9%	0.7%	39	Food	0.1%	0.2%	5
Kraft Bags/Kraft Paper	0.0%	0.0%	1	Leaves and Grass	2.4%	2.5%	101
Kraft Grocer Bags	0.0%	0.0%	0	Prunings and Trimmings	3.3%	2.5%	134
Newspaper	0.1%	0.1%	2	Branches and Stumps	0.4%	0.5%	18
Other Office Paper	0.0%	0.0%	1	Agricultural Crop Residues	0.0%	0.0%	0
Catalogs, Directories, Magazines, and Phonebooks	0.0%	0.0%	0	Animal Feeces	0.0%	0.0%	0
Compostable Paper	0.0%	0.0%	1	Textiles	0.1%	0.1%	4
Aseptic Packaging	0.0%	0.0%	0	Remainder/Composite Compostable Organic	1.0%	1.1%	41
Poly-coated Paperboard Packaging	0.0%	0.0%	0	Remainder/Composite Non-compostable Organic	0.0%	0.0%	0
Other Miscellaneous Paper	0.3%	0.3%	11				
Remainder/Composite Paper	0.5%	0.3%	19	C & D	79.5%		3,271
Plastic	1.1%		44	Concrete	4.3%	2.5%	178
PETE Bottles	0.0%	0.0%	0	Asphalt Paving	0.0%	0.0%	0
PETE Food Packaging	0.0%	0.0%	0	Asphalt Composition Shingles	0.0%	0.0%	0
PETE Non-food Packaging	0.0%	0.0%	0	Roofing Tar Paper/Felt	1.2%	1.1%	49
HDPE Containers (<1 gallon)	0.0%	0.0%	0	Roofing Mastic	0.0%	0.0%	0
HDPE Containers (>1 gallon)	0.0%	0.0%	0	Built-up Roofing	0.0%	0.0%	0
Food Service Plastic	0.0%	0.0%	0	Other Asphalt Roofing Material	0.0%	0.0%	0
Miscellaneous Plastic Containers (#3, #4, #5, and	0.0%	0.0%	1	Untreated Dimensional Lumber	5.1%	3.4%	212
Expanded Polystyrene Food Packaging	0.0%	0.0%	1	Treated Dimensional Lumber	1.7%	0.9%	68
Expanded Polystyrene Other	0.1%	0.1%	3	Untreated Engineered Wood	4.0%	3.3%	166
Trash Bags	0.0%	0.0%	1	Treated Engineered Wood	4.8%	3.2%	199
Plastic Grocery Bags	0.0%	0.0%	0	Pallets and Crates	3.1%	2.6%	127
Other Merchandise Bags	0.0%	0.0%	0	Other Untreated Wood Waste	0.2%	0.3%	8
Non-Bag Commercial and Industrial Packaging Film	0.1%	0.1%	6	Other Treated Wood Waste	0.0%	0.1%	2
Film Products	0.2%	0.1%	8	Carpet	2.5%	1.7%	104
Other Film	0.0%	0.0%	1	Carpet Padding	0.4%	0.4%	18
Durable Plastic Items	0.4%	0.3%	15	Clean Gypsum Board	6.3%	3.7%	259
Remainder/Composite Plastic	0.2%	0.1%	8	Painted/Demolition Gypsum Board	11.3%	11.1%	463
				Rock, Soil, and Fines	6.3%	5.2%	259
				Remainder/Composite Construction and Demolition	28.2%	11.3%	1,160
Glass	1.1%		46	Household Hazardous Waste (HHW)	1.2%		50
Glass Bottles and Containers	0.0%	0.0%	1	Paint	1.0%	1.7%	43
Flat Glass	0.4%	0.6%	18	Vehicle and Equipment Fluids	0.0%	0.0%	0
Remainder/Composite Glass	0.7%	0.6%	27	Used Oil	0.0%	0.0%	0
				Lead-acid Batteries	0.0%	0.0%	0
Metal	5.8%		240	Other Batteries	0.0%	0.0%	0
Aluminum Cans	0.0%	0.0%	0	Remainder/Composite Household Waste	0.2%	0.3%	6
Tin/Steel Cans	0.0%	0.0%	0				
Major Appliances	0.0%	0.0%	1	Special Waste	1.7%		71
Used Oil Filters	0.0%	0.0%	0	Ash	0.0%	0.0%	0
Other Ferrous	4.6%	2.9%	189	Kitty litter	0.0%	0.0%	0
Other Non-ferrous	0.8%	1.1%	32	Diapers	0.0%	0.0%	0
Remainder/Composite Metal	0.4%	0.3%	17	Treated Medical Waste	0.0%	0.0%	0
				Bulky Items	1.7%	1.4%	71
Electronics	0.4%		16	Vehicle and Truck Tires	0.0%	0.0%	0
Small Appliances	0.1%	0.2%	5	Other Tires	0.0%	0.0%	0
Brown Goods	0.3%	0.3%	10	Remainder/Composite Special Waste	0.0%	0.0%	0
Small Computer-related Electronics	0.0%	0.0%	0				
Large Computer-related Electronics	0.0%	0.0%	0	Mixed Residue	0.0%		0
Other Consumer Electronics	0.0%	0.0%	1	Mixed Residue	0.0%	0.0%	0
CRT Televisions and Monitors	0.0%	0.0%	0				
				Totals	100.0%		4,116
				Sample Count	44		

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

SMaRT Station Residuals

The consultant team hand-sorted 30 samples of waste from this waste stream. This is waste that is left over after MRFin and will go directly to the landfill. Residual samples collected and characterized did not include minus 2" fines separated by the MRF trommels. It is estimated that these fines represent approximately 18% of the incoming waste stream.

Key Findings

As shown in Figure 12, the sampling results suggest the following key findings about recovery potential for the overall SMaRT Station residuals substream:

- **Approximately 84%** (117,054 tons) of SMaRT Station residuals examined in this study was **Recyclable** or **Compostable/Potentially Compostable**.
- **Approximately 57%** (79,689 tons) of SMaRT Station residuals was **Compostable/Potentially Compostable**, shown in green. The **Compostable/Potentially Compostable** fraction included the following material categories (see Table 15):
 - *Compostable paper* (63,536 tons)
 - *Food* (13,150 tons)
 - *Prunings & trimmings* (1,874 tons)
 - *Remainder/composite compostable organics* (553 tons)
 - *Leaves & grass* (536 tons)
 - *Branches & stumps* (41 tons)
 - *Agricultural crop residue* (0 tons)
- **Approximately 27%** (37,365 tons) of SMaRT Station residuals was **Recyclable**, including **Recyclable Paper** (14.0%; 19,581 tons), shown in blue, and **Other Recyclables** (12.8%; 17,784 tons), shown in purple.
 - By weight, the five largest **Recyclable Paper** categories included these materials:
 - *Other miscellaneous paper* (6,380 tons)
 - *Uncoated corrugated cardboard* (5,352 tons)
 - *Other office paper* (3,183 tons)
 - *Newspaper* (3,063 tons)
 - *Catalogs, directories, magazines, and phonebooks* (723 tons)
 - By weight, the five largest recyclable **Other Recyclable** categories included these materials:
 - *Other films* (5,225 tons)
 - *Durable plastic items* (2,302 tons)
 - *Other ferrous* (1,084 tons)
 - *HDPE containers (<1 gallon)* (822 tons)
 - *PETE bottles* (716 tons)

- **Approximately 5%** (6,256 tons) of SMaRT Station residuals was **Potentially Recyclable**, shown in peach. By weight, the five largest **Potentially Recyclable** categories included:
 - *Textiles* (3,588 tons)
 - *Food service plastic* (1,333 tons)
 - *Remainder/composite metal* (988 tons)
 - *Expanded polystyrene food packaging* (689 tons)
 - *Carpet* (672 tons)

- **About 12%** (16,170 tons) of SMaRT Station residuals was **Problem Materials**, shown in brown. By weight, the five largest **Problem Material** categories included:
 - *Diapers* (3,759 tons)
 - *Trash bags* (3,251 tons)
 - *Remainder/composite paper* (2,727 tons)
 - *Remainder/composite plastic* (1,771 tons)
 - *Treated engineered wood* (1,199 tons)

- Waste composition is broken down by class in Figure 13 and the ten most prevalent disposed materials can be found in Table 14.

Figures and Tables: SMaRT Station Residuals

Figure 12. Waste Composition & Recoverability, SMaRT Station Residuals, 2010

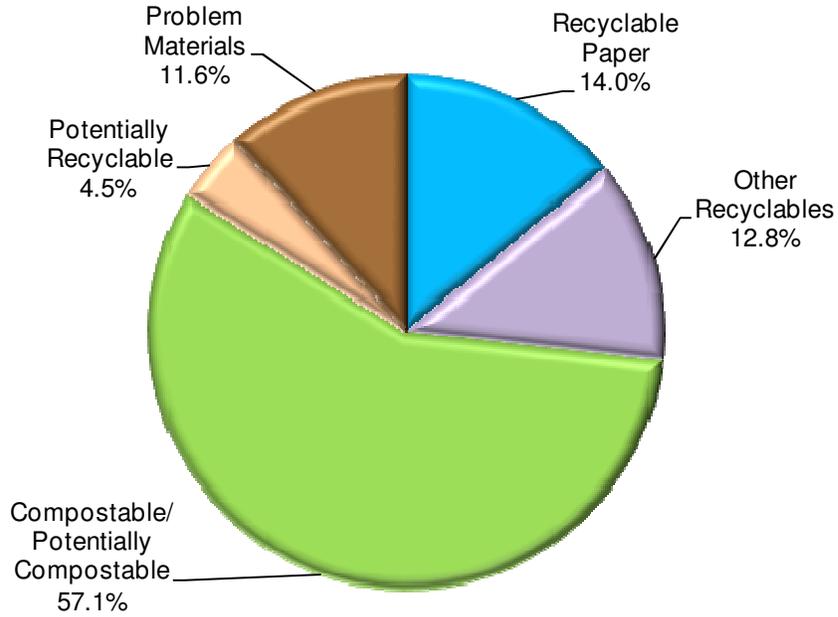


Figure 13. Waste Composition, SMaRT Station Residuals, 2010

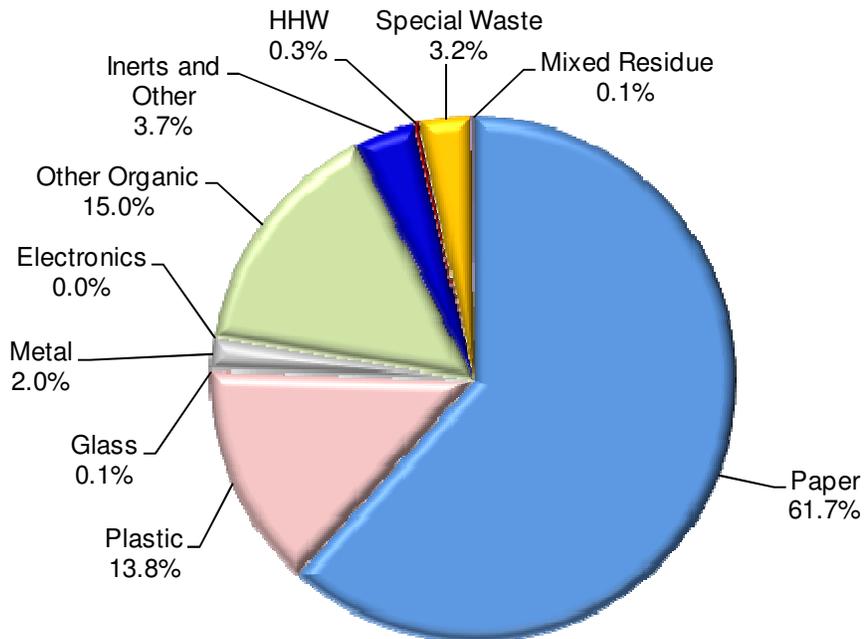


Table 14. Ten Most Prevalent Materials, SMaRT Station Residuals, 2010

Material	Est.	Cum.	Est. Tons
	Percent	Percent	
Compostable Paper	45.6%	45.6%	63,536
Food	9.4%	55.0%	13,150
Other Miscellaneous Paper	4.6%	59.6%	6,380
Uncoated Corrugated Cardboard	3.8%	63.4%	5,352
Other Film	3.7%	67.1%	5,225
Diapers	2.7%	69.8%	3,759
Textiles	2.6%	72.4%	3,588
Trash Bags	2.3%	74.7%	3,251
Other Office Paper	2.3%	77.0%	3,183
Newspaper	2.2%	79.2%	3,063
Total	79.2%		110,486

Table 15. Detailed Waste Composition, SMaRT Station Residuals, 2010

Material	Est. Percent	+ / -	Est. Tons	Material	Est. Percent	+ / -	Est. Tons
Paper	61.7%		86,077	Organics	15.0%		20,932
Uncoated Corrugated Cardboard	3.8%	0.9%	5,352	Food	9.4%	2.6%	13,150
Kraft Bags/Kraft Paper	0.1%	0.1%	199	Leaves and Grass	0.4%	0.3%	536
Kraft Grocer Bags	0.5%	0.2%	682	Prunings and Trimmings	1.3%	0.9%	1,874
Newspaper	2.2%	0.4%	3,063	Branches and Stumps	0.0%	0.0%	41
Other Office Paper	2.3%	0.6%	3,183	Agricultural Crop Residues	0.0%	0.0%	0
Catalogs, Directories, Magazines, and Phonebooks	0.5%	0.2%	723	Animal Feeces	0.2%	0.1%	250
Compostable Paper	45.6%	3.4%	63,536	Textiles	2.6%	0.7%	3,588
Aseptic Packaging	0.0%	0.0%	18	Remainder/Composite Compostable Organic	0.4%	0.3%	553
Poly-coated Paperboard Packaging	0.2%	0.1%	216	Remainder/Composite Non-compostable Organic	0.7%	0.2%	940
Other Miscellaneous Paper	4.6%	1.1%	6,380				
Remainder/Composite Paper	2.0%	0.6%	2,727	C & D	3.7%		5,207
Plastic	13.8%		19,205	Concrete	0.0%	0.1%	55
PETE Bottles	0.5%	0.1%	716	Asphalt Paving	0.0%	0.0%	0
PETE Food Packaging	0.1%	0.1%	134	Asphalt Composition Shingles	0.0%	0.0%	0
PETE Non-food Packaging	0.0%	0.0%	0	Roofing Tar Paper/Felt	0.0%	0.0%	0
HDPE Containers (<1 gallon)	0.6%	0.1%	822	Roofing Mastic	0.0%	0.0%	0
HDPE Containers (>1 gallon)	0.3%	0.4%	397	Built-up Roofing	0.0%	0.0%	0
Food Service Plastic	1.0%	0.1%	1,333	Other Asphalt Roofing Material	0.0%	0.0%	0
Miscellaneous Plastic Containers (#3, #4, #5, and	0.5%	0.1%	661	Untreated Dimensional Lumber	0.6%	0.3%	874
Expanded Polystyrene Food Packaging	0.5%	0.1%	689	Treated Dimensional Lumber	0.6%	0.3%	798
Expanded Polystyrene Other	0.3%	0.1%	418	Untreated Engineered Wood	0.3%	0.2%	408
Trash Bags	2.3%	0.3%	3,251	Treated Engineered Wood	0.9%	0.4%	1,199
Plastic Grocery Bags	0.4%	0.1%	620	Pallets and Crates	0.0%	0.0%	0
Other Merchandise Bags	0.4%	0.1%	589	Other Untreated Wood Waste	0.0%	0.0%	21
Non-Bag Commercial and Industrial Packaging Film	0.2%	0.2%	276	Other Treated Wood Waste	0.4%	0.5%	586
Film Products	0.0%	0.0%	0	Carpet	0.5%	0.4%	672
Other Film	3.7%	0.6%	5,225	Carpet Padding	0.0%	0.0%	0
Durable Plastic Items	1.7%	0.4%	2,302	Clean Gypsum Board	0.0%	0.0%	34
Remainder/Composite Plastic	1.3%	0.2%	1,771	Painted/Demolition Gypsum Board	0.0%	0.0%	9
				Rock, Soil, and Fines	0.0%	0.1%	51
				Remainder/Composite Construction and Demolition	0.4%	0.3%	501
Glass	0.1%		135	Household Hazardous Waste (HHW)	0.3%		412
Glass Bottles and Containers	0.1%	0.1%	102	Paint	0.0%	0.0%	0
Flat Glass	0.0%	0.0%	0	Vehicle and Equipment Fluids	0.2%	0.3%	271
Remainder/Composite Glass	0.0%	0.0%	33	Used Oil	0.0%	0.0%	0
				Lead-acid Batteries	0.0%	0.0%	0
Metal	2.0%		2,812	Other Batteries	0.1%	0.1%	98
Aluminum Cans	0.1%	0.0%	91	Remainder/Composite Household Waste	0.0%	0.0%	43
Tin/Steel Cans	0.2%	0.1%	336				
Major Appliances	0.0%	0.0%	0	Special Waste	3.2%		4,484
Used Oil Filters	0.0%	0.0%	0	Ash	0.0%	0.0%	0
Other Ferrous	0.8%	0.4%	1,084	Kitty litter	0.0%	0.0%	0
Other Non-ferrous	0.2%	0.1%	313	Diapers	2.7%	0.6%	3,759
Remainder/Composite Metal	0.7%	0.4%	988	Treated Medical Waste	0.0%	0.0%	6
				Bulky Items	0.4%	0.7%	589
Electronics	0.0%		51	Vehicle and Truck Tires	0.0%	0.0%	0
Small Appliances	0.0%	0.0%	0	Other Tires	0.1%	0.1%	99
Brown Goods	0.0%	0.0%	0	Remainder/Composite Special Waste	0.0%	0.0%	30
Small Computer-related Electronics	0.0%	0.0%	6				
Large Computer-related Electronics	0.0%	0.0%	0	Mixed Residue	0.1%		164
Other Consumer Electronics	0.0%	0.1%	45	Mixed Residue	0.1%	0.2%	164
CRT Televisions and Monitors	0.0%	0.0%	0				
				Totals	100.0%		139,480
				Sample Count	30		

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

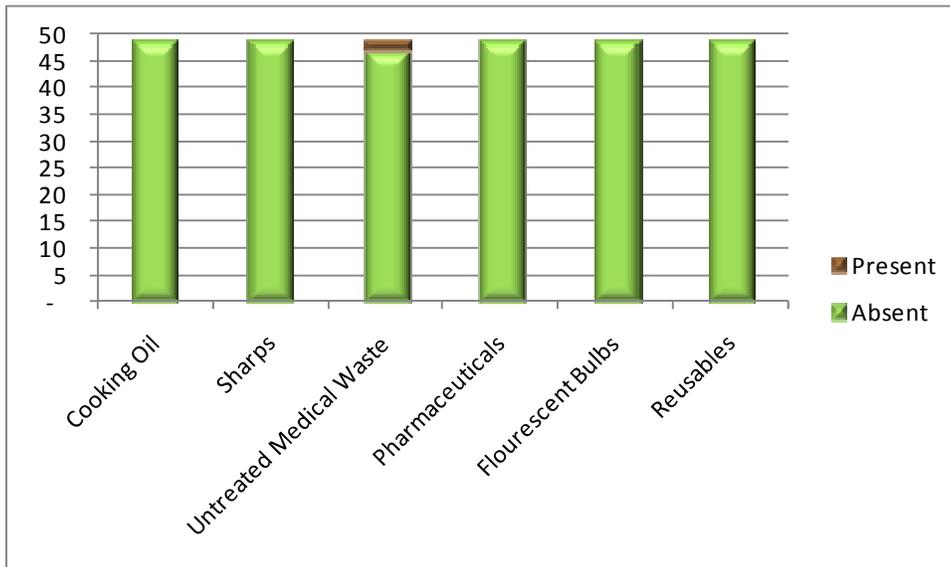
Presence and Absence of Targeted Materials

In addition to characterizing composition and recoverability of waste, the consultant team also carefully observed the presence or absence of six targeted materials: *cooking oil, sharps, untreated medical waste, pharmaceuticals, fluorescent bulbs, and reusables*. This section describes the observed incidence of these materials in the City of Mountain View’s overall waste stream; in its single-family, multi-family, commercial, and C&D waste sectors; and in SMaRT Station residuals from both the Cities of Mountain View and Sunnyvale.

Overall Waste Stream – The City of Mountain View

Two out of 47 (4.3%) of sampled loads contained *untreated medical waste* in the Overall waste stream from the City of Mountain View. No other targeted materials were observed in Mountain View’s Overall waste stream.

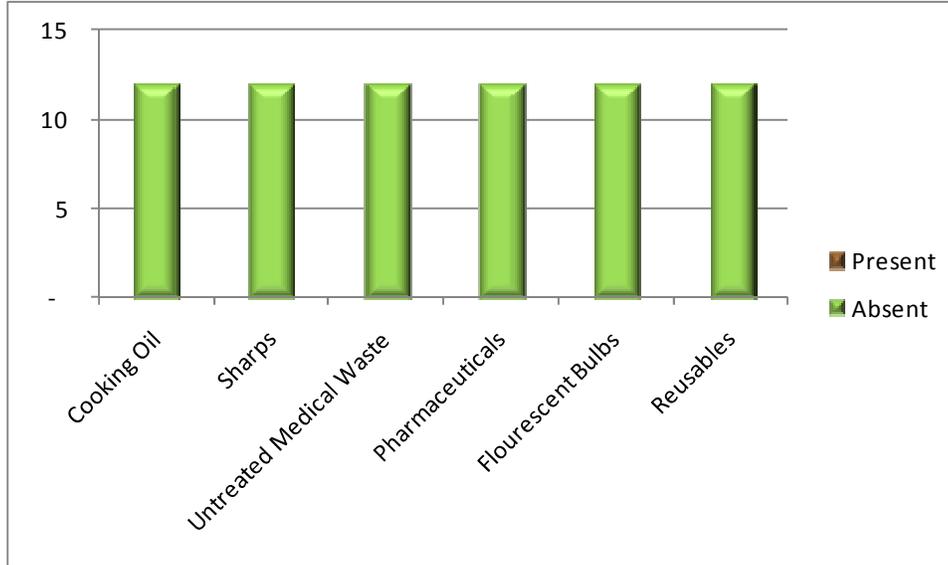
Figure 14. Presence vs. Absence, City of Mountain View Overall, 2010



Single-family – The City of Mountain View

No targeted materials were observed in any single-family loads sampled from the City of Mountain View

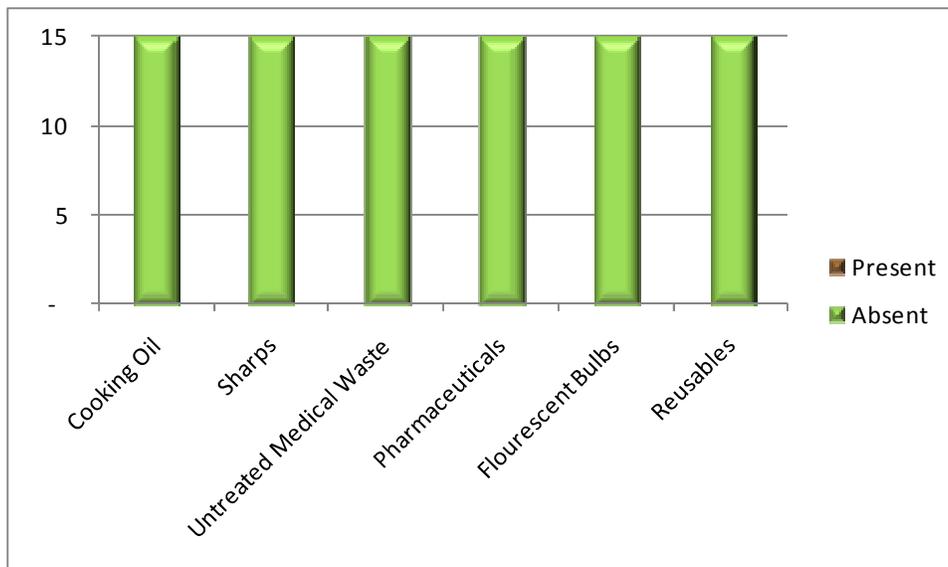
Figure 15. Presence vs. Absence, City of Mountain View Single-family, 2010



Multi-family – The City of Mountain View

No targeted materials were observed in any multi-family loads sampled from the City of Mountain View

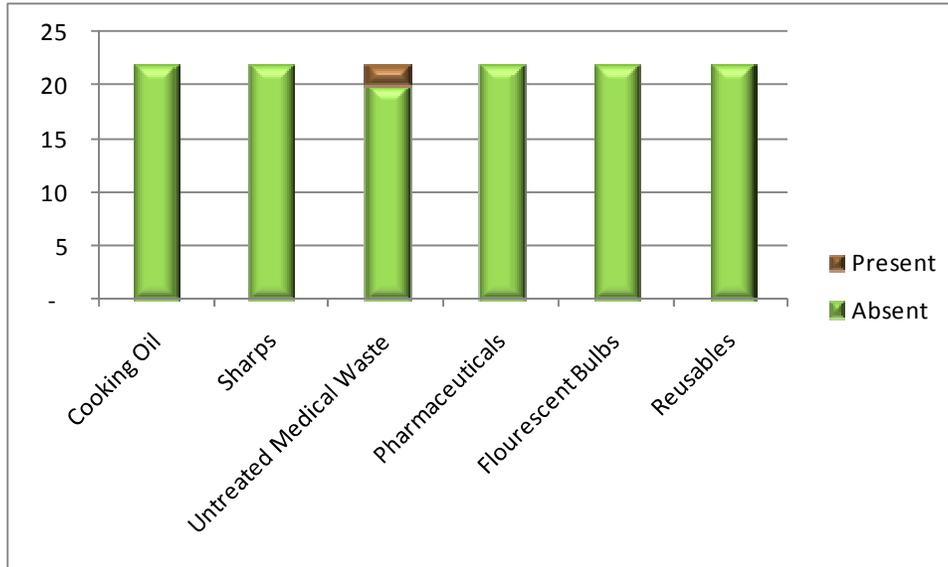
Figure 16. Presence vs. Absence, City of Mountain View Multi-family, 2010



Commercial – The City of Mountain View

Two out of 22 (9.1%) of sampled loads contained *untreated medical waste* in the Commercial waste stream from the City of Mountain View. No other targeted materials were observed in the Mountain View’s Commercial waste stream.

Figure 17. Presence vs. Absence, City of Mountain View Commercial, 2010

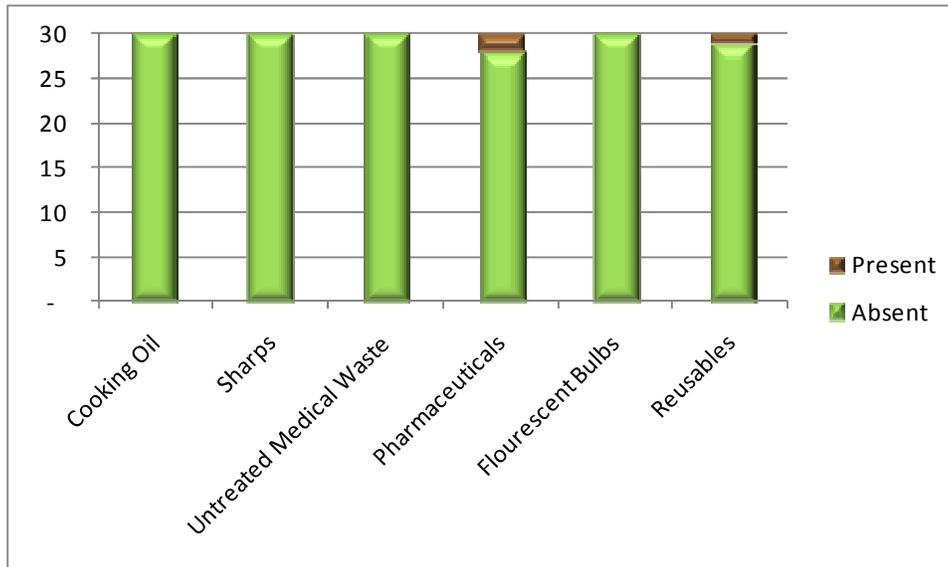


Note: The definition of “Untreated Medical Waste” in this report does not match the definition of “Medical Waste” as described in the California Health and Safety Code Section 117690. Therefore, it cannot be determined if the material observed in the two sampled loads shown above that is categorized as “Untreated Medical Waste” is truly regulated “Medical Waste” or simply solid waste typical of a medical facility.

SMaRT Station Residuals

Two out of 30 (6.7%) of sampled loads contained *pharmaceuticals*, and one out of 30 (3.3%) contained *reusables* in the SMaRT Station Residual waste stream. No other targeted materials were observed in the SMaRT Station Residual waste stream.

Figure 18. Presence vs. Absence, SMaRT Station Residuals, 2010



Appendix A: Material Type Definitions

Paper

1. **Uncoated Corrugated Cardboard** usually has three layers. The center wavy layer is sandwiched between the two outer layers. It does not have any wax coating on the inside or outside and is free of food contamination. Examples include entire cardboard containers, such as shipping and moving boxes, computer packaging cartons, and sheets and pieces of boxes and cartons. This type does not include chipboard boxes such as cereal and tissue boxes.
2. **Kraft Bags/Kraft Paper** means bags and sheets made from kraft paper. The paper may be brown (unbleached) or white (bleached). Examples include paper fast food bags, department store bags, and heavyweight sheets of kraft packing paper.
3. **Kraft Grocer Bags** means bags originating from a grocer made from kraft paper. The paper may be brown (unbleached) or white.
4. **Newspaper** means paper used in newspapers. Examples include newspaper and glossy inserts found in newspapers, and all items made from newsprint, such as free advertising guides, election guides, and tax instruction booklets.
5. **Other Office Paper** means paper used in offices. Examples include white paper used in photocopiers and laser printers, letter paper, colored ledger, computer paper, manila folders, manila envelopes, index cards, white envelopes, white window envelopes, notebook paper, ground wood computer paper, junk mail, and carbonless forms.
6. **Catalogs, Directories, Magazines, and Phonebooks** means either items made of glossy coated paper or thin paper between coated covers. These items are bound along the spine with glue. Examples include magazines, catalogs, brochures, pamphlets, whole or damaged telephone books, yellow pages, and real estate listings.
7. **Compostable Paper** means paper not defined in other categories that can be composted, such as paper towels, paper cups, paper plates, paper take-away food packaging, tissues, pizza boxes, and waxed cardboard boxes.
8. **Aseptic Packaging** means packaging that is multilayer, often including a paper layer, a foil layer, and a plastic layer. Most aseptic packaging has a foil/plastic pull tab for as an opener. Examples include some juice boxes, milk cartons, some soymilk cartons, and some broth cartons.
9. **Poly-coated Paperboard Packaging** means packaging that is made of a stiffer paperboard and coated with a plastic lining. Examples include milk cartons, orange juice cartons, and other juice cartons.
10. **Other Miscellaneous Paper** means items made mostly of paper that are used for things other than food, and that do not fit into any of the other paper types. Paper may be combined with minor amounts of other materials such as wax or glues. Examples include chipboard packaging such as tissue boxes, paperboard boxes for software, paper sleeves for CD or DVD cases, paper packaging for over-the-counter medications, boxes for games, containers for printer ink or toner cartridges, and non-corrugated consumer electronics packaging.
11. **Remainder/Composite Paper** means items made mostly of paper but combined with large amounts of other materials such as wax, plastic, glues, foil, food, and moisture. Examples include packages

laminated with Mylar, boxes with large plastic windows (common for children's toys), packages with foam or plastic cushions integrated into the package, paper-coated polystyrene containers.

Glass

12. **Glass Bottles and Containers** means glass containers with or without a California Redemption Value (CRV) label of all colors. Examples include whole or broken soda and beer bottles, fruit juice bottles, peanut butter jars, and mayonnaise jars.
13. **Flat Glass** means clear or tinted glass that is flat. Examples include glass window panes, doors and table tops, flat automotive window glass (side windows), safety glass, and architectural glass. This type does not include windshields, laminated glass, or any curved glass.
14. **Remainder/Composite Glass** means glass that cannot be put in any other type. It includes items made mostly of glass but combined with other materials. Examples include Pyrex, Corningware, crystal and other glass tableware, mirrors, light bulbs, auto windshields, laminated glass, or any curved glass.

Metal

15. **Aluminum Cans** means any food or beverage container made mainly of aluminum. Examples include aluminum soda or beer cans, and some pet food cans. These items do not include bimetal containers with steel sides and aluminum ends.
16. **Tin/Steel Cans** means rigid containers made mainly of steel. These items will stick to a magnet and may be tin-coated. This type of can is used to store food, beverages, paint, and a variety of other household and consumer products. Examples include canned food and beverage containers, empty metal paint cans, empty spray paint and other aerosol containers, and bimetal containers with steel sides and aluminum ends.
17. **Major Appliances** means discarded major appliances of any color. These items are often enamel-coated. Examples include washing machines, clothes dryers, hot water heaters, stoves, and refrigerators. These items do not include electronics, such as televisions and stereos.
18. **Used Oil Filters** means metal oil filters used in motor vehicles and other engines, which contain a residue of used oil.
19. **Other Ferrous** means any iron or steel that is magnetic or any stainless steel item. This type does not include tin/steel cans. Examples include structural steel beams, metal clothes hangers, metal pipes, stainless steel cookware, security bars, and scrap ferrous items.
20. **Other Non-ferrous** means any metal item, other than aluminum cans, that is not stainless steel and that is not magnetic. These items may be made of aluminum, copper, brass, bronze, lead, zinc, or other non-ferrous metals. Examples include aluminum window frames, aluminum siding, copper wire, shell casings, brass pipe, and aluminum foil.
21. **Remainder/Composite Metal** means metal items that cannot be categorized as any other material type. This material type includes items made mostly of metal but combined with other materials and items made of both ferrous metal and non-ferrous metal combined. Examples include small non-electronic appliances such as toasters and hair dryers, motors, insulated wire, and finished products that contain a mixture of metals, or metals and other materials, whose weight is derived significantly from the metal portion of its construction.

Electronics

22. **Small Appliances** means small appliances without extensive circuitry. Examples include toasters, blenders, mixers, coffee makers, kitchen scales, and other small appliances.
23. **Brown Goods** means generally larger, non-portable electronic goods that have some circuitry. Examples include microwaves, stereos, VCRs, DVD players, large radios, fax machines, and audio/visual equipment. Does not include items with video display devices.
24. **Small Computer-related Electronics** means electronics with large circuitry that is computer-related, not including monitors. Items in this category should be smaller than a basketball. Examples include mice, disk drives, and modems.
25. **Large Computer-related Electronics** means electronics with large circuitry that is computer-related, not including monitors. Items in this category should be larger than a basketball. Examples include processors, scanners, keyboards, and printers.
26. **Other Consumer Electronics** means portable non-computer-related electronics with large circuitry. Examples include personal digital assistants (PDA), cell phones, phone systems, phone answering machines, computer games and other electronic toys, portable CD players, camcorders, and digital cameras.
27. **CRT Televisions and Monitors** means items with video displays larger than 4 inches. Includes televisions, computer monitors, and other items containing a cathode ray tube (CRT), portable DVD players, laptop computers, and non-CRT televisions (such as LCD and LED televisions).

Plastic

28. **PETE Bottles** means clear or colored PETE (polyethylene terephthalate) bottles that are one liter or less in size. When marked for identification, they bear the number 1 in the center of the triangular recycling symbol and may also bear the letters PETE or PET. The color is usually transparent green or clear. A PETE water bottle usually has ribs and a narrow neck as well as a small dot, not a seam, left from the manufacturing process. Examples include single-serve water bottles, sports drink bottles, and soda bottles.
29. **PETE Food Packaging** means clear or colored PETE (polyethylene terephthalate) food packaging. When marked for identification, they bear the number 1 in the center of the triangular recycling symbol and may also bear the letters PETE or PET. The color is usually clear. Examples include clamshells of various sizes and food trays.
30. **PETE Non-food Packaging** means clear or colored PETE (polyethylene terephthalate) non-food packaging. When marked for identification, they bear the number 1 in the center of the triangular recycling symbol and may also bear the letters PETE or PET. The color is usually clear. Examples include electronics packaging, small retail packaging, battery packaging, and many other types.
31. **HDPE Containers (One gallon or less)** means natural and colored HDPE (high-density polyethylene) containers, not including HDPE buckets of 1-gallon or more in size. This plastic is usually either cloudy white, allowing light to pass through it (natural) or a solid color, preventing light from passing through it (colored). When marked for identification, it bears the number 2 in the triangular recycling symbol and may also bear the letters HDPE. Examples include milk jugs, water jugs, detergent bottles, some hair-care bottles, HDPE sealed containers (must be cut, pried, or torn to be

opened), empty motor oil, empty antifreeze, and other empty vehicle and equipment fluid containers.

32. **HDPE Containers (Greater than one gallon)** means colored and natural containers (typically buckets and pails) made of HDPE (high-density polyethylene) and designed to hold 1 gallon or more of material. This plastic is usually either cloudy white, allowing light to pass through it (natural) or a solid color, preventing light from passing through it (colored). When marked for identification, it bears the number 2 in the triangular recycling symbol and may also bear the letters HDPE. This category includes buckets regardless of whether they are attached to metal handles. Examples include large paint buckets and commercial buckets used to contain food for commercial use (restaurants, etc.). These objects are packages containing material for sale, and are not sold as buckets themselves (such as mop buckets).
33. **Miscellaneous Food Service Plastic Containers (#3, #4, #5, and #7)** means containers made of types of plastic other than HDPE (high-density polyethylene), or PETE (polyethylene terephthalate), that must be cut, pried or torn to be opened, and have 2 or more parts, which may be hinged or fitted, that are sealed together. Items may be made of PVC (polyvinyl chloride), LDPE (low-density polyethylene), PP (polypropylene), or mixed resins. When marked for identification, these items may bear the number 3, 4, 5, or 7 in the triangular recycling symbol and may also bear letters (PP, PVC, etc). Examples include non-PETE clam shells, plastic flatware, plastic plates, plastic cups, plastic tubs, and all other food service plastic that does not occur in another plastics category.
34. **Miscellaneous Plastic Containers (#3, #4, #5, and #7)** means containers made of types of plastic other than HDPE (high-density polyethylene), or PETE (polyethylene terephthalate), that must be cut, pried or torn to be opened, and have 2 or more parts, which may be hinged or fitted, that are sealed together. Items may be made of PVC (polyvinyl chloride), LDPE (low-density polyethylene), PP (polypropylene), or mixed resins. When marked for identification, these items may bear the number 3, 4, 5, or 7 in the triangular recycling symbol and may also bear letters (PP, PVC, etc). Examples include hardware, small electronics and battery packaging; these containers may be clear but could also be colored.
35. **Expanded Polystyrene Food Packaging** means food packaging containers made of expanded polystyrene, or “Styrofoam.” When marked for identification, items bear the number 6 or the letters “PS” in the triangular recycling symbol. Examples include clamshells, cups, plates, and bowls.
36. **Expanded Polystyrene Other** means non-food packaging containers made of expanded polystyrene, or “Styrofoam.” When marked for identification, items bear the number 6 or the letters “PS” in the triangular recycling symbol. This material type excludes clamshells, cups, plates, and bowls.
37. **Trash Bags** means plastic bags sold for use as trash bags, for both residential and commercial use. This type includes garbage, kitchen, compactor, can-liner, composting, yard, lawn, leaf, and recycling bags. This type does not include other plastic bags, like shopping bags, that might have been used to contain trash.
38. **Plastic Grocery Bags** means plastic carryout shopping bags with handles intended to carry goods from supermarkets or grocery stores. Bags are provided by the grocery store with the purchase. Does not include produce bags.
39. **Other Merchandise Bags** means plastic shopping bags used to contain merchandise to transport from the place of purchase, given out by the store with the purchase. This type includes dry cleaning bags intended for one-time use. Does not include grocery bags or produce bags.

40. **Non-Bag Commercial and Industrial Packaging Film** means film plastic used for large-scale packaging or transport packaging. Examples include shrink-wrap, mattress bags, furniture wrap, and film bubble wrap.
41. **Film Products** means plastic film used for purposes other than packaging. Examples include agricultural film (films used in various farming and growing applications, such as silage greenhouse films, mulch films, and wrap for hay bales), plastic sheeting used as drop cloths, and building wrap.
42. **Other Film** means all other plastic film that does not fit into any other type. Examples include other types of plastic bags such as sandwich bags, zipper-recloseable bags, newspaper bags, mailing pouches, bank bags, X-ray film, and metalized film (wine containers and balloons).
43. **Durable Plastic Items** means plastic items other than containers, film plastic, or miscellaneous plastic containers (#3-#7. These items may bear the numbers 1 through 7 in the triangular recycling symbol. Examples include plastic outdoor furniture, plastic toys and sporting goods, CDs, and plastic housewares, such as mop buckets, dishes, cups, and cutlery. This type also includes building materials such as house siding, window sashes and frames, housings for electronics such as computers, televisions and stereos, fan blades, impact-resistant cases such as tool boxes and first aid boxes, and plastic pipes and fittings.
44. **Remainder/Composite Plastic** means plastic that cannot be put in any other type. These items are usually recognized by their optical opacity. This material type includes items made mostly of plastic but combined with other materials. Examples include auto parts made of plastic attached to metal, plastic drinking straws, trays found in cookie packages, plastic strapping, and new Formica, vinyl, or linoleum.

Other Organic

45. **Food** means food material resulting from the processing, storage, preparation, cooking, handling, or consumption of food. This type includes material from industrial, commercial, or residential sources. Examples include discarded meat scraps, dairy products, egg shells, fruit or vegetable peels, and other food items from homes, stores, and restaurants. This type includes grape pomace and other processed residues or material from canneries, wineries, or other industrial sources.
46. **Leaves and Grass** means plant material, except woody material, from any public or private landscapes. Examples include leaves, grass clippings, plants, and seaweed. This type does not include woody material or material from agricultural sources.
47. **Prunings and Trimmings** means woody plant material up to 4 inches in diameter from any public or private landscape. Examples include prunings, shrubs, and small branches with branch diameters that do not exceed 4 inches. This type does not include stumps, tree trunks, branches exceeding 4 inches in diameter, or material from agricultural sources.
48. **Branches and Stumps** means woody plant material, branches, and stumps that exceed 4 inches in diameter, from any public or private landscape.
49. **Agricultural Crop Residues** means vegetative materials disposed of from an agricultural scale source. Examples include seed hulls, husks, chaff, or agricultural by-product. Excludes production residues such as pulp, cores, etc.
50. **Animal Feces** means feces, manure, and soiled bedding materials from domestic, farm, or ranch animals. Examples include manure and soiled bedding from animal production operations, race tracks, riding stables, animal hospitals, dog feces, cat feces, and feces from other sources.

51. **Textiles** means items made of thread, yarn, fabric, or cloth. Examples include clothes, fabric trimmings, draperies, and all natural and synthetic cloth fibers. This type does not include cloth covered furniture, mattresses, leather shoes, leather bags, or leather belts.
52. **Remainder/Composite Compostable Organic** means organic material that cannot be put in any other type. This type includes items made mostly of organic materials, but combined with other material types. Examples include cork, hemp rope, hair, small wood products (such as Popsicle sticks and tooth picks), sawdust, and agricultural crop residues.
53. **Remainder/Composite Non-compostable Organic** means organic material that cannot be put in any other type. This type includes items made mostly of organic materials, but combined with other material types. Examples include leather items, garden hoses, rubber items, and cigarette butts..

Construction and Demolition

54. **Concrete** means a hard material made from sand, aggregate, gravel, cement mix and water. Examples include pieces of building foundations, concrete paving, and concrete/cinder blocks.
55. **Asphalt Paving** means a black or brown, tar-like material mixed with aggregate used as a paving material.
56. **Asphalt Composition Shingles** means composite shingles composed of fiberglass or organic felts saturated with asphalt and covered with inert aggregates. This material type is commonly known as three tab roofing and does not include built-up roofing.
57. **Roofing Tar Paper/Felt** means a heavy paper impregnated with tar or a fiberglass or polyester fleece impregnated with tar and used as part of a roof for waterproofing.
58. **Roofing Mastic** means a paste-like material used as an adhesive or seal in roofing applications.
59. **Built-up Roofing** means other roofing material made with layers of felt, asphalt, aggregates, and attached roofing tar and tar paper normally used on flat/low pitched roofs usually on commercial buildings.
60. **Other Asphalt Roofing Material** means any other roofing material containing asphalt that cannot be put into any of the other roofing material types.
61. **Untreated Dimensional Lumber** means unpainted new or demolition dimensional lumber. This material type includes materials such as 2 x 4s, 2 x 6s, 2 x 12s, and other residual materials from framing and related construction activities. May contain nails or other trace contaminants.
62. **Treated Dimensional Lumber** means treated/painted/stained new or demolition dimensional lumber. This material type includes materials such as 2 x 4s, 2 x 6s, 2 x 12s, and other residual materials from framing and related construction activities. May contain nails or other trace contaminants.
63. **Untreated Engineered Wood** means unpainted new or demolition scrap from sheathed goods such as plywood, particleboard, wafer board, oriented strand board, and other residual materials used for sheathing and related construction uses. Items may contain nails or other trace contaminants.
64. **Treated Engineered Wood** means treated/painted/stained new or demolition scrap from sheathed goods such as plywood, particleboard, wafer board, oriented strand board, and other residual materials used for sheathing and related construction uses. Items may contain nails or other trace contaminants.

65. **Pallets and Crates** means unpainted wood pallets, and crates, as well as packaging made of lumber/ or engineered wood.
66. **Other Untreated Wood Waste** means wood waste that cannot be put into any other material type. This type may include untreated/unpainted scrap from production of prefabricated wood products such as wood furniture or cabinets, untreated or unpainted wood roofing and siding.
67. **Other Treated Wood Waste** means wood waste that cannot be put into any other material type. This type may include treated/painted/stained scrap from production of prefabricated wood products such as wood furniture or cabinets, and treated/ painted/stained wood roofing and siding.
68. **Carpet** means flooring applications consisting of various natural or synthetic fibers bonded to some type of backing material. This material type does not include carpet padding.
69. **Carpet Padding** means foam rubber or other materials used as padding under carpets.
70. **Clean Gypsum Board** means unpainted gypsum wallboard or interior wall covering made of a sheet of gypsum sandwiched between paper layers. Examples include used or unused, broken or whole sheets. Gypsum board may also be called sheetrock, drywall, plasterboard, gypboard, gyproc, or wallboard.
71. **Painted/Demolition Gypsum Board** means painted gypsum wallboard or interior wall covering made of a sheet of gypsum sandwiched between paper layers. Examples: This type includes used or unused, broken or whole sheets. Gypsum board may also be called sheetrock, drywall, plasterboard, gypboard, gyproc, or wallboard.
72. **Rock, Soil, and Fines** means rock pieces of any size and soil, dirt, and other matter. Examples include rock, stones, sand, clay, soil and other fines. This type also includes non-hazardous contaminated soil.
73. **Remainder/Composite Construction and Demolition** means inerts and other material that cannot be put in any other type. This type may include items from different types combined, which would be very hard to separate. Examples include brick, ceramics, tiles, toilets, sinks, and fiberglass insulation. This type may also include demolition debris that is a mixture of items such as plate glass, wood, tiles, gypsum board, and aluminum scrap.

Household Hazardous Waste

74. **Paint** means containers with paint in them. Examples include latex paint, oil based paint, and tubes of pigment or fine art paint. This type does not include dried paint, empty paint cans, or empty aerosol containers.
75. **Vehicle and Equipment Fluids** means containers with fluids used in vehicles or engines, except used oil. Examples include used antifreeze and brake fluid. This type does not include empty vehicle and equipment fluid containers.
76. **Used Oil** means the same as defined in [Health and Safety Code section 25250.1\(a\)](#). Examples include spent lubricating oil such as crankcase and transmission oil, gear oil, and hydraulic oil.
77. **Lead-acid Batteries** means batteries fueled by lead-acid cells, such as auto batteries.
78. **Other Batteries** means any type of battery other than lead-acid (automotive) batteries. Examples include household batteries such as AA, AAA, D, button cell, 9 volt, and rechargeable batteries used for flashlights, small appliances, watches, and hearing aids.

79. **Remainder/Composite Household Waste** means household hazardous material that cannot be put in any other type. This type also includes household hazardous material that is mixed. Examples include household hazardous waste which if improperly put in the solid waste stream may present handling problems or other hazards, such as pesticides and caustic cleaners.

Special Waste

80. **Ash** means a residue from the combustion of any solid or liquid material. Examples include ash from fireplaces, incinerators, biomass facilities, waste-to-energy facilities, and barbecues. This type also includes ash and burned debris from structure fires.
81. **Kitty litter** means kitty litter, may be clay, sand, silica, or biodegradable.
82. **Diapers** means disposable diapers of all styles and sizes, include baby diapers, adult diapers, feminine hygiene pads, and absorbent pet pads.
83. **Treated Medical Waste** means medical waste that has been processed in order to change its physical, chemical, or biological character or composition, or to remove or reduce its harmful properties or characteristics, as defined in [Section 25123.5 of the Health and Safety Code](#).
84. **Bulky Items** means large hard to handle items that are not defined elsewhere in the material types list, including furniture, mattresses, and other large items. Examples include all sizes and types of furniture, mattresses, box springs, and base components.
85. **Vehicle and Truck Tires** means pneumatic tires or solid tires manufactured for use on any type of motor vehicle such as trucks, automobiles, motorcycles, and heavy equipment.
86. **Other Tires** means tires not used on motor vehicles such as bicycle tires and lawn mower tires.
87. **Remainder/Composite Special Waste** means special waste that cannot be put in any other type. Examples include asbestos-containing materials such as certain types of pipe insulation and floor tiles, auto fluff, auto bodies, trucks, trailers, truck cabs, untreated medical waste, and artificial fireplace logs.

Mixed Residue

88. **Mixed Residue** means material that cannot be put in any other type or category. This category includes mixed residue that cannot be further sorted. Examples include clumping kitty litter, cosmetics, and residual material from a materials recovery facility or other sorting process that cannot be put in any other material type, including remainder/composite types.

Presence vs. Absence Materials

1. **Cooking Oil** means any edible oil used for cooking.
2. **Sharps** mean any piercing medical device including but not limited to hypodermic needles, suture needles, and scalpels.
3. **Untreated Medical Waste** means any medical waste that has not been bagged in a biomedical waste bag and autoclaved prior to disposal. Examples of untreated medical waste include surgical supplies, bandage material, used gloves, and many other materials clearly associated with a medical practice.

4. **Pharmaceuticals** means any consumable medicine distributed by prescription or over the counter. Examples include pills, liquids, multivitamins, lozenges, and many more.
5. **Florescent Bulbs** means any gas-discharge type lamp. Examples include fluorescent tubes, compact fluorescent bulbs, and any other type of gas-discharge lamp.
6. **Reusable Items** means any material considered to be reusable by the sort crew. Examples include functional lumber, sellable furniture, and any other item a member of the crew might consider functional or valuable.

Appendix B: Study Plan

This section presents the study plan as it was written prior to collecting and characterizing waste samples.

Selection of Single-family Residential, Multi-family Residential, and Commercial loads

Scheduled collection routes will be classified as single-family, multi-family or commercial loads. Only loads of 85% or greater purity will be eligible for inclusion in the sampling process (i.e., routes that include 85% or more waste from commercial sources will be classified as commercial). In addition, separate procedures will be developed to select loads that are from the SMaRT Station residual waste sector and to select loads that are from the C&D waste sector.

Information has been requested from each City's waste haulers in order to establish lists of single-family, multi-family, and commercial collection routes associated with particular sampling days at each facility. A sampling calendar (i.e., a schedule) will be established based on the availability of single-family, multi-family, and commercial routes on particular days.

For selected sampling days, Cascadia will work with the haulers to develop daily counts of single-family, multi-family, and commercial collection routes. For each sampling day, scheduled single-family, multi-family, and commercial collection vehicles will be chosen at random from eligible vehicles arriving each day. Selection intervals for each category will be generated to allow for random selection across each category based on daily traffic averages and known route data.

Multi-family loads from the city of Sunnyvale are an exception from this sampling plan. In the case of Sunnyvale multi-family, a random site selection process has generated a list of 13 approved sites that will be sampled across the two sampling seasons.

The scalehouse staff will be asked to direct eligible vehicles to the sorting area. Scalehouse staff also will be asked to place a brightly colored SAMPLE placard on the windshield of each selected vehicle, in order to make it visible to the sampling crew (see Appendix C for examples of sample placard). Sample placards will be coded by sample type, jurisdiction, and will be uniquely numbered for sample identification.

To insure proper training of the SMaRT Station scalehouse staff, a member of Cascadia Consulting's staff will be onsite for the first day of sampling. This staff member will be responsible for delivering the proper documentation, coaching SMaRT Station staff, and troubleshooting for the first season of characterization.

The manager of the sampling crew will have a list of the eligible routes and vehicles for each day. When a single-family, multi-family, or commercial load is directed to the sampling crew, the sampling crew manager will verify the vehicle against the list and will verify that the vehicle contains the correct type of waste from the expected jurisdiction. The vehicle's entry on the selection list will be "checked off" to record that it has been sampled. In addition, the sampling crew manager will write the route number and the waste sector on the sample composition data form.

SMaRT station residuals will be sampled at randomly selected intervals throughout the sampling period. A list of sample times will be provided to the MRF operations manager so that samples may be taken at known intervals throughout the week. The manager of the sampling crew will be responsible for coordinating sample relocation throughout the sampling day. Residual samples will have a target weight of 125 pounds.

Summary of Expected Roles for Facility Staff in Selecting Single-family, Multi-family, or Commercial loads:

- For each sampling day, the scalehouse attendant will be given a sampling schedule for single family, multi-family, commercial routes, and C&D loads to watch for. When a designated vehicle arrives at the scale house, the attendant will inform the driver that the load is to be tipped in a designated area for characterization. The attendant will then write the hauler and transaction or route number on the sampling schedule and place a SAMPLE placard on the vehicle's windshield.
- The scalehouse attendant will continue selecting single-family, multi-family, and commercial collection routes, and C&D loads until the quota for each type has been met. (Quotas will be printed on the *Vehicle Selection Schedule* that is given to the attendant.)
- Sunnyvale multi-family routes will be pre-selected.

Selection of C&D Vehicles Loads

For each sampling day, the sampling crew manager will be equipped with a list of the numbers and types of C&D vehicles that must be obtained on that day. The list will not describe individual targeted vehicles, but it will provide daily quotas and a sequence in which to obtain the different types of samples.

As the sampling day progresses, the sampling crew manager will use a copy of the vehicle selection schedule to confirm systematic vehicle selection by the scalehouse. Typically, the list will randomly alternate between calling for one of two types of C&D loads. For example, first call for a self-haul load and then three debris boxes.

The sampling crew manager will proceed through the list one vehicle at a time, each time instructing the scalehouse staff to select and send a vehicle of the designated type. When the characterization team has finished with one vehicle load or when there is enough room in the sampling area to accommodate the tipping of an additional vehicle load, the sampling crew manager will instruct the scalehouse staff to send the next vehicle of the type called for in the list.

C&D loads will be stratified according to two types – commercially hauled C&D drop boxes and C&D loads self-hauled by the public. All C&D loads will be characterized visually.

The specific method for selecting self-haul loads will be as follows:

1. At approximately the beginning of each sampling day, after a sufficient number of single-family, multi-family, and commercial samples have been captured and prepared for sorting, the sampling

crew manager will instruct scalehouse staff to identify the next eligible C&D vehicle entering the facility and to direct that vehicle to the sampling crew.

2. The scalehouse staff will query the driver of the next vehicle that arrives, verifying that it meets the following conditions:
 - The vehicle matches one of the two C&D categories.
 - Subsequent loads for each C&D stratum are selected systematically.
3. If the vehicle meets the conditions described in step 2, above, then the scalehouse staff will write the transaction or license number on the vehicle selection schedule and place the associated SAMPLE placard on the vehicle's windshield. The scalehouse staff will then instruct the driver to take the vehicle to the sampling area and tip the load in the designated sampling area.
4. When the selected vehicle arrives at the sampling area, the sampling crew manager will briefly remove the SAMPLE placard from the vehicle's windshield and will note the date and sample number. The sampling crew manager will then place the placard back on the windshield for later collection by the scalehouse staff person. The sampling manager will instruct the driver to weigh out and deliver the sample placard back to the scalehouse staff.
5. C&D loads will be tipped in an area where the visual estimator has adequate room to walk around it and observe it undisturbed for several minutes while recording estimates of waste composition. (The process of characterizing the load is described in the next section.)
6. After tipping the load, the vehicle will go back to the scalehouse with the SAMPLE placard still on its windshield. The scalehouse staff person will instruct the driver to weigh the vehicle out and will collect the SAMPLE placard from the windshield. The scalehouse staff will then write the net weight on the SAMPLE placard.
7. When the characterization process has been finished for the load, or when there is enough room for additional loads to be tipped in the sorting area, the sampling manager will contact the scalehouse staff and instruct them to identify the next load to be directed to the sampling area. The sampling manager will alternate between the two types of C&D loads and will indicate in his instructions to the scale house what the next selected load needs to be.
8. At the end of each sampling day, the sampling crew manager will collect the SAMPLE placards with recorded transaction numbers and net weights from the scalehouse staff.

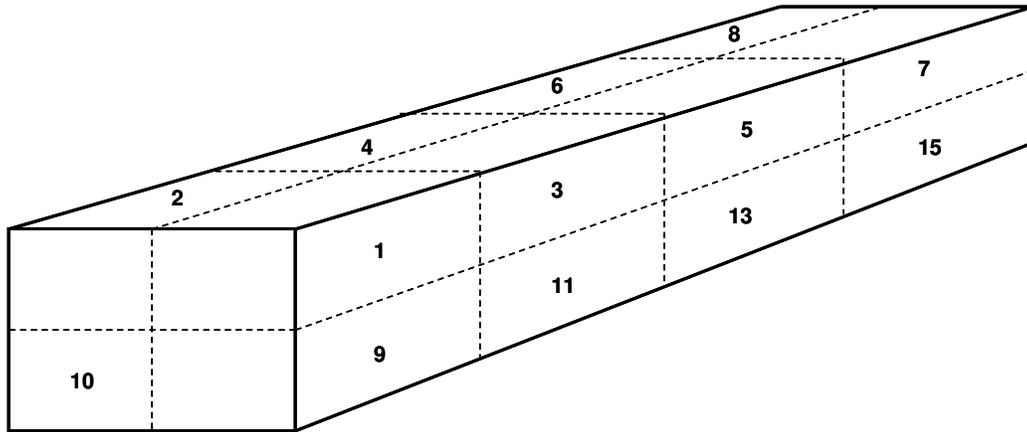
Summary of Expected Roles for Facility Staff in Selecting C&D Loads:

- The sampling crew manager will communicate to the scalehouse attendant when the sampling crew is ready to receive the first load of C&D waste during a given day. The types of loads that will be called for include:
 - Commercially hauled C&D
 - Self-hauled C&D
- When the next load arrives that matches the type needed by the sampling crew, the scalehouse attendant will stop the vehicle and query the driver to ensure that the waste fits into one of the two C&D categories. If the load meets the selection criteria, then the scalehouse attendant will write the vehicle's license number (or the transaction number) on the SAMPLE placard and will place the placard on the vehicle's windshield and instruct driver to go to the sorting area.
- When the selected vehicle returns to the scalehouse after having tipped its load, the scalehouse attendant will retrieve the SAMPLE placard and will write the net weight on the placard.
- The sampling crew manager will collect the completed placards from the scalehouse attendant at the end of each day.

Sampling and Characterization of Hand-sorted Waste Samples

When a load from a scheduled single-family, multi-family, or commercial route arrives at the sampling area, the sampling crew manager will confirm information about the load, as discussed in the previous section, and the driver will be directed to tip the load in an elongated pile below the operating face of the landfill. At this point, the pile will be divided into an imaginary 16-cell grid, as shown in the diagram below, and a sample of waste consisting of 200 or more pounds of material will be extracted from a randomly selected cell using a loader or other machinery operated by facility staff. Residual loads sampled from the SMaRT Station MRF will consist of samples weighing 125 pounds or more. This material will be placed on a tarp. After the extracted material is deposited on the tarp, the sampling crew manager will estimate the weight of each sample. If judged to be less than 200 pounds, additional material will be pulled from the same cell area until the desired weight is achieved. Samples judged to be excessively heavy will be pared down by removing a homogenous slice of material from the tarp. After the sample has been obtained, the remainder of the load can be removed from the tipping area.

Figure 19. Visual Overlay Showing “Cells” of Material



Sorting of Waste Samples

Once a sample has been selected, extracted from the load, and placed on a clean tarp, it will be sorted by hand into the prescribed material categories. (Please refer to Appendix A for the complete list and definitions of the material categories.) Materials will be placed in plastic laundry baskets to be weighed and recorded. Members of the sorting crew typically specialize in groups of materials, but each is trained in the full list of components. Each crew person will direct materials to the appropriate specialist.

The sampling crew manager will monitor the homogeneity of the material baskets as they accumulate, rejecting items that may be improperly classified. Open laundry baskets allow the manager to see the material at all times. The manager will also verify the purity of each material as it is weighed, before recording the weight on the *hand-sort sample form*. (Please refer to Appendix C for a copy of the *hand-sort sample form*.)

The waste samples will be sorted by hand until no more than a small amount of homogeneous fine material (“mixed residue”) remains. The overall goal is to sort each sample directly into the material categories in order to reduce the amount of indistinguishable fines or miscellaneous categories.

Visual Characterization Procedures for C&D Loads

C&D loads will be characterized visually using the method that has been employed by the California Integrated Waste Management Board and using a condensed version of the material list. For these samples, the entire load of each sampled vehicle will be characterized. Once the selected load is placed on the tipping floor, the visual estimator will perform the following steps. Please refer to Appendix C for the *visual sample form*.

The steps for characterizing a load of self-hauled waste will be as follows:

Step 1: Measure load volume. After the driver has dumped the load onto the ground, the visual estimator measures the length, width, and height of the load and records the information on the visual sample form.

Step 2: Note which material classes and materials are present. The visual estimator walks entirely around the load and indicates on the visual sample form which materials and material classes are present in the load. The ten material classes are *Paper, Glass, Metal, Electronics, Plastic, Other Organics, Construction and Demolition, Household Hazardous Waste, Special Waste* and *Mixed Residue*. An example of a material in the *Paper* material class is *newspaper*.

Step 3: Estimate composition by volume for each material class. Beginning with the largest material class present by volume, the visual estimator then estimates the volumetric percentage of this material class and records it on the form. This process is repeated for the next most common material class, and so forth, until the volume percentage of every material class has been estimated. The estimator then calculates the total for this step, ensuring that it totals 100 percent.

Step 4: Estimate composition by volume for each material within each material class. The visual estimator considers each material class separately and estimates the percentage of that material class that is made up of each material. For example, the *Metal* material class includes the following materials:

- Aluminum Cans
- Tin/Steel Cans
- Other Nonferrous
- Ferrous Metals

The sum of the percentages for all of the materials in each material class must equal 100 percent. This process will be repeated for the other material classes.

Step 5: Check and reconcile percentage data. The visual estimator then makes sure the percentage estimates for the material classes add up to 100 percent. Also, the percentage estimates for the materials within each class must total 100 percent.

Appendix C: Detailed Sampling Schedule

This appendix presents the planned sampling schedule developed with the study plan.

March

Single-family Sampling Schedule

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
City of Mountain View	2	1	2	2	1
City of Sunnyvale	2	1	2	1	1

n=15

Multi-family Sampling Schedule

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
City of Mountain View	2	2	1	1	1
City of Sunnyvale	2	1	1	1	1

n=13

Commercial Sampling Schedule

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
City of Mountain View	2*	2	2*	2*	2
City of Sunnyvale	2*	2	2*	2*	2

* Sampling on these days will include one commercial packer and one roll-off

n=20

SMaRT Station Residual Sampling Schedule

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
SMaRT Station MRF	3	3	3	3	3

n=15

C&D Visual Sampling Schedule

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
City of Mountain View	4	4	4	4	4
City of Sunnyvale	4	4	4	4	4

n=40

June

Single-family Sampling Schedule

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
City of Mountain View	2	1	2	1	1
City of Sunnyvale	2	1	2	2	1

n=15

Multi-family Sampling Schedule

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
City of Mountain View	2	1	1	1	1
City of Sunnyvale	2	2	1	1	1

n=13

Commercial Sampling Schedule

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
City of Mountain View	2*	2	2*	2*	2
City of Sunnyvale	2*	2	2*	2*	2

* Sampling on these days will include one commercial packer and one roll-off

n=20

SMaRT Station Residual Sampling Schedule

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
SMaRT Station MRF	3	3	3	3	3

n=15

C&D Visual Sampling Schedule

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
City of Mountain View	4	4	4	4	4
City of Sunnyvale	4	4	4	4	4

n=40

Appendix D: Data Collection Forms

This appendix presents data collection forms used to select loads and routes for sampling, identify loads at the SMaRT Station to be sampled, and record data from hand-sorting or visual characterization. Daily Load Selection Sheet

City of Mountain View and City of Sunnyvale Waste Characterization Vehicle Selection Form																															
Site: <u>SMaRT Station</u>	Goal: <u>13</u> Characterizations																														
Date: <u>Monday, June 14</u>	<u>0</u> Visuals																														
<p>Each number represents an expected vehicle based on the available data.</p> <p>Cross off each number as a vehicle representing each category passes through the scalehouse. When a circled number comes up, cross it off and hand the corresponding vehicle a pink placard.</p> <p>Place a number placard in the window of each vehicle chosen for a sample and instruct them to drive to the South Compactor Building where they will be met by the sorting supervisor.</p>																															
Single Family (SF)																															
<u>Recology (MV):</u> 1 2 3 4 5 Total: 1	<u>Specialty (SV):</u> 1 2 3 4 5 6 7 8 9 10 11 12 13 Total: 2																														
Multifamily (MF)																															
<u>Recology (MV):</u> Route 18 Route 21 Total: 2	<u>Specialty (SV):</u> Special Route (collect two samples) Total: 1																														
Commercial (Com)																															
<u>Recology (MV):</u> Packer 1 2 3 4 5 6 7 8 Rolloff 1 2 3 4 5 6 7 8 9 10 11 12 13 14 Total: 2	<u>Specialty (SV):</u> Packer 1 2 3 4 5 6 Rolloff 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 Total: 2																														
Residuals (R)																															
<u>SMaRT Station:</u> 1 2 3 Total: 3																															
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Tag</th> <th>Net Weight</th> </tr> </thead> <tbody> <tr><td>Mount. View SF-1</td><td></td></tr> <tr><td>Mount. View MF-1</td><td></td></tr> <tr><td>Mount. View MF-2</td><td></td></tr> <tr><td>Mount. View Com-1</td><td></td></tr> <tr><td>Mount. View Com-2</td><td></td></tr> <tr><td>Sunnyvale SF-1</td><td></td></tr> <tr><td>Sunnyvale SF-2</td><td></td></tr> <tr><td>Sunnyvale MF-1</td><td></td></tr> <tr><td>Sunnyvale MF-2</td><td>Same as MF-1</td></tr> <tr><td>Sunnyvale Com-1</td><td></td></tr> <tr><td>Sunnyvale Com-2</td><td></td></tr> <tr><td>SMaRT R-1</td><td></td></tr> <tr><td>SMaRT R-2</td><td></td></tr> <tr><td>SMaRT R-3</td><td></td></tr> </tbody> </table>		Tag	Net Weight	Mount. View SF-1		Mount. View MF-1		Mount. View MF-2		Mount. View Com-1		Mount. View Com-2		Sunnyvale SF-1		Sunnyvale SF-2		Sunnyvale MF-1		Sunnyvale MF-2	Same as MF-1	Sunnyvale Com-1		Sunnyvale Com-2		SMaRT R-1		SMaRT R-2		SMaRT R-3	
Tag	Net Weight																														
Mount. View SF-1																															
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Sunnyvale Com-1																															
Sunnyvale Com-2																															
SMaRT R-1																															
SMaRT R-2																															
SMaRT R-3																															

Special Route Selection Sheet

Monday, June 14, 2010

Please complete this form and hand to scalehouse as you scale in

How to use this form:

Step 1: Collect all of the garbage from a listed site. If you think all of the garbage won't fit in the truck, then skip the site entirely.

Step 2: Continue with the other sites on the list until the truck is approaching full (approximately 30 containers). Don't do a "partial collection" for a site. Stop when the truck is approaching full.

Step 3: Put a check mark in the box next to the addresses or complexes you collected and note the actual number of containers collected at that location.

Step 4: Hand this sheet to the scalehouse attendant as you scale in, ask them to note your net weight on it and have them put it with the rest of the day's study paperwork.

Scalehouse:

Truck Number: _____

Arrival

Time: _____

Route #	Order	Bldg. Name or Contact	Street Address	Street Directional	Street Name	Street Type	Customer #	Expected # of Containers	All Containers Collected?	# of Containers Collected	UTLCID	UTSRR	Collection Days
105	54	WEDDELL ARMS	205	W	WEDDELL	DR		1			1736	C1914	M Th
107	75	ASTER PARK	1059		REED	AV		6			47024	D0417	M
												D0419	M
												D0421	M
												D0422	M
												D0430	M
												D0431	M
111	136	H. MANNINA	1331	S	WOLFE	RD		4			11362	C0272	M Th
												C2731	M Th
												C2825	M Th
												C3760	M Th
102	8	BT PROPERTIES	126	W	AHWANEE	AV		3			52882	C0698	M Th
												C0699	M Th
												C0700	M Th
107	83	EVELYN GLEN OWNERS	108-160	S	-160 WOLFE	RD		7			48466	C3565	M Th
												C3609	M Th
												C3634	M Th
												C3648	M Th
												C3659	M Th
												C3663	M Th
												C3668	M Th
102	3	SUTTON PLACE HOA	315		DUNSMUR	TER		4			49704	C0060	M
												C0062	M
												C3390	M
												C3391	M
101	4	CHATEAU SIERRA	540	E	MAUDE	AVA		3			51368	D0068	M
												D0071	M
												D0074	M
102	5	FAIR OAKS 90 H O A	755	N	FAIR OAKS	AV		8			52906	C2340	M
												C3410	M
												D0320	M
												D0321	M
												D0322	M
												D0323	M
												D0336	M
												D3340	M

Sample Placard

Cell Number: 9

MOUNTAIN VIEW

SF - 1

6/14/2010

Hand-sort Data Entry Sheet

<p>PAPER</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>OCC</td><td></td><td></td><td></td></tr> <tr><td>Kraft Bag/Kraft Paper</td><td></td><td></td><td></td></tr> <tr><td>Kraft Grocer Bags</td><td></td><td></td><td></td></tr> <tr><td>Newspaper</td><td></td><td></td><td></td></tr> <tr><td>Other Office Paper</td><td></td><td></td><td></td></tr> <tr><td>Catalogs, Directories, Mags., & Phonebooks</td><td></td><td></td><td></td></tr> <tr><td>Compostable Paper</td><td></td><td></td><td></td></tr> <tr><td>Aseptic Packaging</td><td></td><td></td><td></td></tr> <tr><td>Poly-coated Paperbrd Pack.</td><td></td><td></td><td></td></tr> <tr><td>Other Misc. 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Polystyrene Other</td><td></td><td></td><td></td></tr> <tr><td>Trash Bags</td><td></td><td></td><td></td></tr> <tr><td>Plastic Grocery Bags</td><td></td><td></td><td></td></tr> <tr><td>Other Merchandise Bags</td><td></td><td></td><td></td></tr> <tr><td>Non-bag Com. & Ind. Pack. 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Food Service Plastic				Misc. Plastic Containers				Exp. Polystyrene Food				Exp. Polystyrene Other				Trash Bags				Plastic Grocery Bags				Other Merchandise Bags				Non-bag Com. & Ind. Pack. Film				Film Products				Other Film				Durable Plastic Items				R/C Plastic				Glass Bottles and Conts.				Flat Glass				R/C Glass				<p>METAL</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Aluminum Cans</td><td></td><td></td><td></td></tr> <tr><td>Tin/Steel Cans</td><td></td><td></td><td></td></tr> <tr><td>Major Appliances</td><td></td><td></td><td></td></tr> <tr><td>Used Oil Filters</td><td></td><td></td><td></td></tr> <tr><td>Other Ferrous</td><td></td><td></td><td></td></tr> <tr><td>Other Non-ferrous</td><td></td><td></td><td></td></tr> <tr><td>R/C Metal</td><td></td><td></td><td></td></tr> </table> <p>OTHER ORGANICS</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Food</td><td></td><td></td><td></td></tr> <tr><td>Leaves & Grass</td><td></td><td></td><td></td></tr> <tr><td>Prunings & Trimmings</td><td></td><td></td><td></td></tr> <tr><td>Branches & Stumps</td><td></td><td></td><td></td></tr> <tr><td>Agricultural Crop Residue</td><td></td><td></td><td></td></tr> <tr><td>Animal Feces</td><td></td><td></td><td></td></tr> <tr><td>Textiles</td><td></td><td></td><td></td></tr> <tr><td>R/C Compostable Organics</td><td></td><td></td><td></td></tr> <tr><td>R/C Non-compostable Organic</td><td></td><td></td><td></td></tr> </table> <p>Electronics</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Small Appliances</td><td></td><td></td><td></td></tr> <tr><td>Brown Goods</td><td></td><td></td><td></td></tr> <tr><td>Small Computer-related Electronics</td><td></td><td></td><td></td></tr> <tr><td>Large Computer-related Electronics</td><td></td><td></td><td></td></tr> <tr><td>Other Consumer Electronics</td><td></td><td></td><td></td></tr> <tr><td>CRT Televisions & Monitors</td><td></td><td></td><td></td></tr> </table> <p>Special Waste</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Ash</td><td></td><td></td><td></td></tr> <tr><td>Kitty Litter</td><td></td><td></td><td></td></tr> <tr><td>Diapers</td><td></td><td></td><td></td></tr> <tr><td>Treated Medical Waste</td><td></td><td></td><td></td></tr> <tr><td>Bulky Items</td><td></td><td></td><td></td></tr> <tr><td>Vehicle & Truck Tires</td><td></td><td></td><td></td></tr> <tr><td>Other Tires</td><td></td><td></td><td></td></tr> <tr><td>R/C Special Waste</td><td></td><td></td><td></td></tr> </table> <p>MIXED RESIDUE</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Mixed Residue</td><td></td><td></td><td></td></tr> </table>	Aluminum Cans				Tin/Steel Cans				Major Appliances				Used Oil Filters				Other Ferrous				Other Non-ferrous				R/C Metal				Food				Leaves & Grass				Prunings & Trimmings				Branches & Stumps				Agricultural Crop Residue				Animal Feces				Textiles				R/C Compostable Organics				R/C Non-compostable Organic				Small Appliances				Brown Goods				Small Computer-related Electronics				Large Computer-related Electronics				Other Consumer Electronics				CRT Televisions & Monitors				Ash				Kitty Litter				Diapers				Treated Medical Waste				Bulky Items				Vehicle & Truck Tires				Other Tires				R/C Special Waste				Mixed Residue				<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Sample ID</td> <td style="width:50%; text-align: center;">PHOTO</td> </tr> <tr> <td>Date</td> <td style="text-align: center;"><input type="checkbox"/> TAKEN</td> </tr> <tr> <td></td> <td style="text-align: center;">JURISDICTION: (circle)</td> </tr> <tr> <td></td> <td style="text-align: center;">SV MV</td> </tr> <tr> <td>SECTOR: (circle)</td> <td>SF - Single Family</td> </tr> <tr> <td>MF - Multi-Family</td> <td>COM - Commercial</td> </tr> <tr> <td colspan="2">R - SMaRT Residuals</td> </tr> </table> <p>HAZARDOUS WASTE</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Paint</td><td></td><td></td><td></td></tr> <tr><td>Veh. & Equip. Fluids</td><td></td><td></td><td></td></tr> <tr><td>Used Oil</td><td></td><td></td><td></td></tr> <tr><td>Lead-acid Batteries</td><td></td><td></td><td></td></tr> <tr><td>Other Batteries</td><td></td><td></td><td></td></tr> <tr><td>R/C Household Waste</td><td></td><td></td><td></td></tr> </table> <p>C & D</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Concrete</td><td></td><td></td><td></td></tr> <tr><td>Asphalt Paving</td><td></td><td></td><td></td></tr> <tr><td>Asph. Comp. Shingles</td><td></td><td></td><td></td></tr> <tr><td>Roofing Tar Paper/Felt</td><td></td><td></td><td></td></tr> <tr><td>Roofing Mastic</td><td></td><td></td><td></td></tr> <tr><td>Built-up Roofing</td><td></td><td></td><td></td></tr> <tr><td>Other Asph. Roof Mat.</td><td></td><td></td><td></td></tr> <tr><td>Untreated Dim. Lumber</td><td></td><td></td><td></td></tr> <tr><td>Treated Dim. Luber</td><td></td><td></td><td></td></tr> <tr><td>Untreated Eng. 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Fluorescent bulbs —
Pharmaceuticals —
Untreated med. waste —
Sharps —
Reusables —
Cooking oil —

