



TOWN OF VAIL COMMERCIAL WASTE STUDY

Prepared for the Town
of Vail, Colorado

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By **LBA ASSOCIATES, INC.**

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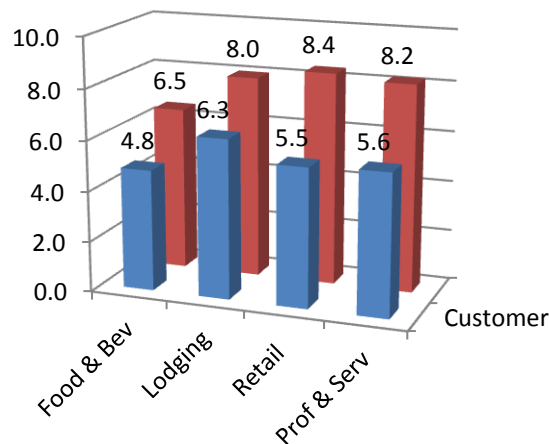
EXECUTIVE SUMMARY

In an effort to pursue increased materials diversion from landfill disposal, the Town of Vail undertook a commercial waste study during the first quarter of 2012 that focused on businesses in the Lionseed and Vail Villages. The intent of the study was to measure current recycling levels in the villages and assess opportunities for future diversion activities. The study included:

- A survey of 100 businesses separated into the categories of food & beverage, lodging, retail and professional & service (findings are described in Section 2.0 of this report)
- An audit of trash samples collected from 32 businesses (Section 3.0)
- Discussions with both representative businesses and private haulers to consider options for improving waste diversion (Section 4.0)
- Develop of waste diversion recommendations for the Town's implementation, based on observations made during this study as well as experience in other Colorado communities (Section 5.0)

The surveys were completed by business managers or owners when they were available, and by staff when they were not. All businesses were asked about the trash and recycling practices. Many noted the lack and high cost of space needed to collect recyclables and the inefficiency (for some) of having to haul materials to distant recycling locations. During the survey, businesses were asked to rank the importance of recycling to their customers on a scale of 1-10 (one being low and 10 high), the range was at 4.8 to 6.3. When asked the same question for businesses owners and staff, the response was 6.5 to 8.4 (Figure ES-1).

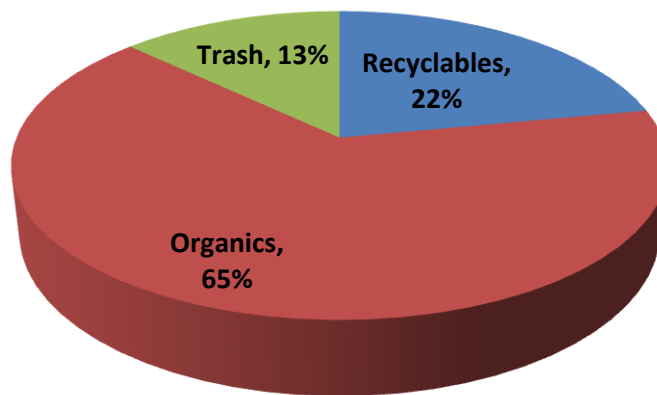
FIGURE ES-1
IMPORTANCE OF DIVERSION TO CUSTOMERS & OWNERS/STAFF



One other key report from the survey was that the TOV's drop-off center is relatively well-used by businesses in both villages (despite complaints about how congested the current location is).

The waste audits were conducted in February and measured the contents of only one or two trash samples from each targeted business on one day – the results are not representative of overall wastes generated. The "snap shot" of data does provide an indication, however, of recyclables and organics currently disposed (instead of diverted) in the commercial waste stream. Figure ES-2 illustrates that, when all sample results were aggregated, 22% (by weight) of the total sample weight was traditional recyclables (paper and containers) and 65% was organics (primarily food waste and food-contaminated paper). It is probable that these results under-estimate the container recyclables as samples from restaurants and bars that close in the early morning hours were not obtained.

FIGURE ES-2
AGGREGATED WASTE AUDIT RESULTS FOR BOTH VILLAGES (% by weight)



The waste audit results were combined with 2011 trash quantities provided by waste haulers to estimate that the potential recyclables and organics in the overall commercial trash may have ranged from 6,700 to 22,400 tons and 16,300 to 62,200 tons, respectively last year (quantities actually recycled were not available). These results were used to estimate that the commercial waste diversion rate in 2011 was approximately 23%.

Based on the measurable outcomes of the study as well as input provided by both businesses and haulers on recycling obstacles and opportunities, the following short-term recommendations were made for future TOV waste diversion program improvements:

- Hauler licensing requirement including annual reporting of quantities collected
- Preliminary programs needed to support mandatory commercial recycling in the long-term – including collaborating with businesses to pilot logistical solutions, better drop-off recycling, a focused marketing program, employee education, reduced Design Review Board obstacles and improved public recycling
- More recycling opportunities and better incentives from the Eagle County MRF

1.0 INTRODUCTION

1.1 Study Purpose

In 2012, the Town of Vail undertook a commercial waste study to measure current diversion practices and evaluate obstacles and opportunities associated with waste diversion in the Lionshead and Vail Villages. These villages have notably differences that impact their waste management needs. Both villages include many buildings with commercial areas on the ground floor for the high levels of foot traffic, and professional offices and lodging on the upper floors. The Lionshead buildings, however, are newer and more generously spaced, making access easier. The quainter Vail Village has older construction with tighter access and less space.

To obtain representative data for the study, the Town targeted 150 representative businesses out of 435 existing commercial operations. To identify diversion issues that may be specific to the type of businesses, findings were tracked in four commercial categories:

- Food & Beverage
- Lodging
- Retail
- Professional & Service

These businesses were surveyed to understand their perceptions about barriers to recycling, as well as explore their suggestions for future recycling and organics recovery. A "snapshot" waste audit was also conducted on the trash generated by a subset of these businesses during mid-day, mid-week operations in the height of ski season¹. This information was used to estimate diversion quantities that could potentially be managed through future programs.

1.2 Background

The Town of Vail's Environmental Sustainability Strategic Plan prioritizes a reduction in landfilled materials from all sectors. The Town is supported in this work by Vail Resorts (whose corporate sustainability program supports waste diversion) and a handful of other programs, such as the Wydham property's Green Leaf Initiative, Inspirato Solaris' recycling program and the Colorado Mountain Medical Center's voluntary recycling task force.

The Town has worked diligently to identify reduction opportunities in the residential sector, and with this study is also tackling commercial waste. Currently the level of recycling activity and commitment is an unknown. What is understood is that commercial waste generators located in the Lionshead and Vail Villages face unique challenges when it comes to solid waste collection, including:

- Difficult access to generator locations requiring staff to manually haul materials to distant collection points
- Extremely limited storage space at individual generator sites requiring daily trash collection
- Virtually no available space for centralized operations
- Heavy congestion during business hours

¹ The project was conducted between mid-January and mid-April 2012 – the Lionshead waste audit was completed February 22nd and the Vail Village audit on February 23rd.

- Close proximity to residential homes/vacation lodging requiring noise control (all collection in Vail Village must be completed by 8:30 am)

The businesses surveyed address these challenges in myriad ways. Trash is collected from most every business, while recyclables collection is less consistent (not all businesses recycle and some that do use alternative collection strategies). For those with "curbside" recyclables collection, the collection point may be at the specific business location, may be at a mid-point for multiple businesses sharing service, may be at a designated building location for all building tenants, or may be in a centralized location for several properties (e.g., the Arrabelle and Mountain Loading docks managed by Vail Resorts).

Curbside waste collection for Vail Resorts properties (and a limited number of other businesses) is managed by the resort company. Other businesses are served by two primary haulers - Vail Honeywagon and Waste Management - whom they select. Depending on the business location and ownership/tenant situation, the hauler may be hired directly by the business or provided by the property owner/manager. The cost of solid waste services may be a separate bill, or may be included in rental, condominium or other fees.

An alternative to curbside collection of commercial recyclables is the Town of Vail Drop-Off Center (DOC). The DOC is a free collection point for Town residents and businesses. It is so well-used, that it can often be overcrowded with limited access and parking. The Town needs to relocate the Town DOC in the near future, and the timing of this project (in terms of a new location and layout) is ideal.

DOC materials (as well as recyclables collected by Vail Resorts and Vail Honeywagon) are hauled to the Eagle County Materials Recovery Facility (MRF) for end-market processing and sales. As the MRF currently accepts cardboard, commingled paper and commingled containers (including plastic resins #1 through #7) - these three streams are typically collected by the DOC and by Vail Resorts and Vail Honeywagon (Waste Management hauls collected recyclables to single-stream MRFs outside of Eagle County and therefore collects some fully commingled materials). Other materials, such as shredded paper, construction materials and restaurant grease, are also diverted by some businesses².

1.3 Study Components

The Town of Vail Study consisted of three basic phases:

- Phone or in-person surveys of commercial operations in Lionshead & Vail Villages - to assess individual levels of recycling, obstacles to recycling and the value businesses & their customers place on waste diversion
- Waste audits of trash generated from representative businesses - to measure recyclable & organic content being landfilled
- Stakeholder outreach & discussions of potential solid waste system changes to improve diversion

The Town hired LBA Associates, Inc. (LBA) to assist in the completion of this work under the direction of the Town's Environmental Health & Sustainability Coordinator, Kristen Bertuglia.

² Confidential paper shreds are typically recycled with mixed paper, although some businesses use a private vendor (Paperwise, Cintas, Shred-It). Construction materials are typically collected on a project-specific, as needed basis (no construction activities were audited during in February). Grease is typically recycled through one of two local vendors (Summit Greasecycling & Rocky Mountain Sustainable Enterprises' RecycOil Program) into biodiesel, cleaning and miscellaneous products.

2.0 SURVEY OF LIONSHEAD & VAIL VILLAGE BUSINESSES

During February and March, LBA contacted 150 businesses in Lionshead and Vail Villages to completed a short survey about current recycling, obstacles and opportunities (Appendix A includes the survey questionnaire). A minimum of three attempts were made to reach each business (many were contacted multiple times by phone and in-person) - ultimately 100 surveys were completed. In many cases property/business owners or managers were interviewed, but in others staff provided survey responses. Appendix B includes the survey results, sorted by category.

It should be recognized that survey questions were intended to illicit "off the cuff" responses that were not researched or studied in advance. As a result, they may reflect the perceptions and opinions of the interviewed party and not the overall business surveyed.

2.1 Food & Beverage Category

Thirty-six bar and restaurant businesses were surveyed (Table 2-1), ranging in size from a high of 2 employees in low season to 200 in high season. These businesses vary widely in size and can generate relatively high quantities of cardboard, glass and food waste.

1. Recyclables Diverted - Most recycle cardboard, paper and commingled containers;
 - Businesses with access to Arrabelle & Mountain Plaza docks are generally recycling the wide range of containers and paper that the Eagle County MRF accepts
 - Avalanche Pub recycles batteries, ballasts & bulbs and Blue Moose Pizza recycles crayons

**TABLE 2-1
FOOD & BEVERAGE BUSINESSES (number of employees during high season)**

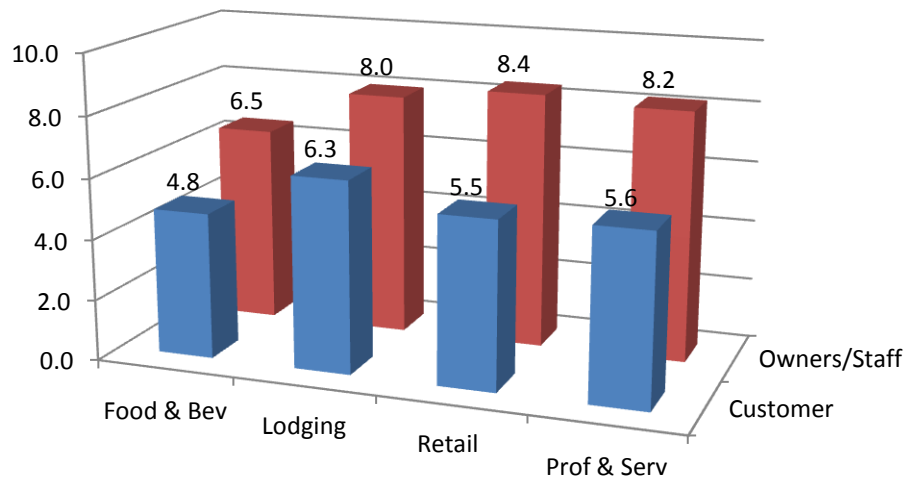
LIONSHEAD	VAIL VILLAGE	
Bart & Yeti's (25)	Blu's (40)	Red Lion (87)
Billy's Island Grill (50)	Club (17)	Kelly Liken Restaurant (25)
Blue Moose Pizza Vail* (5)	Elway's* (70)	Russell's (34)
Garfinkel's (51)	Gasthof Gramshammer (50)	Sebastian Vail (200)
Haagen-Dazs (5)	Grappa Fine Wine & Spirits (8)	Starbuck's Vail Village (7)
Lionshead Liquor Store (5)	Joe's Famous Deli (15)	Sweet Basil (60)
Little Diner (7)	La Bottega (45)	Tap Room/Sanctuary (40)
Moe's Original BBQ (40)	Larkspur* (90)	Vail Fine Wines (3)
Montauk Seafood Grill (35)	Los Amigo's (40)	Vail Mountain Lodge & Spa (50)
Old Forge Pizza (8)	Marketplace Restaurant (45)	Vendetta's (70)
Ritz Carlton Club & Residence (8)	Pazzo's Pizzeria (NA)	
Starbuck's (10)		
Tavern on Square (150)		
Vail Chophouse* (65)		
Vail Marriott Avalanche Pub (NA)		

NA = not available * Vail Resorts properties

2. Organics Diverted - At least 15 restaurants report significant organics consisting of 5% to 90% kitchen prep food waste & the remainder food/food-contaminated paper;
 - Marketplace uses butcher block paper for "plates" & compostable utensils (all trashed)
 - Tap Room has installed "waste catchers" instead of garbage disposals to manage food waste

- Several restaurants recycle grease - Blue Moose Pizza, Little Diner, Tavern on Square, Sweet Basil & Blu's
3. Solid Waste Services Cost - Only 2 business reported costs, which range from approximately \$500 (Bart & Yeti's/Montauk partnership) to \$8,000/month (Sebastian building tenants) for trash & recycling services. Vail Marriott Avalanche Pub pays approximately \$39,000/year on trash services and \$13,000/year on recycling (based on January 2012 data).
 4. Collection - Some use the primary haulers for recyclables collection. Others recycle by "piggy-backing" with nearby residential containers & several haul their recyclables to the Town DOC (many of these have curbside cardboard collection & use the DOC for containers only);
 - Lionshead - Billy's Island Grill, Little Diner, Moe's & Old Forge Pizza
 - Vail Village - Grappa Fine Wine
 5. Perceived Diversion - Of the 17 that reported a diversion level, the average was 33% with a range from 10% (Blu's & Elway's) to 85% (Vail Fine Wine).
 6. Importance to Customers (see Figure 2-1) - Of the 28 that reported a number on a scale of 1 (low) to 10 (high), the average was 4.8 with a range from 0 (Garfinkel's) to 9 (Sweet Basil). The food & beverage category had the lowest customer value (see Figure 3). Multiple food delis & bars observed that the public often asks about recycling, but typically aren't willing to walk out to the public areas to follow through.
 7. Importance to Owners/Management/Staff (see Figure 2-1) - Of the 30 that reported a number on a scale of 1 (low) to 10 (high), the average was 6.5 with a range from 1 (Starbuck's, Blu's & La Bottega) to 10 (Grappa & Vail Fine Wine). The food & beverage category had the lowest owner/management/staff value (see Figure 4).

FIGURE 2-1
IMPORTANCE OF DIVERSION TO CUSTOMERS & OWNERS/STAFF



2.2 Lodging Category

Twelve lodging businesses were surveyed (see Table 2-2), ranging in size from a high of 140 employees in low season to 220 in high season. In general, these businesses generate minimal organics from food services and only two identified full, integrated restaurant operations.

1. Recyclables Diverted - Most recycle cardboard, paper and commingled containers;
 - Only Vail Spa collects all non-cardboard as single-stream
 - Austria Haus & Evergreen Lodge recycle some mix of batteries, bulbs & e-waste

TABLE 2-2
 LODGING BUSINESSES (number of employees during high season)

LIONSHEAD	VAIL VILLAGE
Arrabelle at Vail Square* (170)	Austria Haus Hotel (35)
Lion Square Lodge (30)	Evergreen Lodge at Vail (50)
Montaneros (15)	Inspirato Solaris (50)
Vail Spa Condominiums (20)	Lodge at Vail* (220)
	Lodge Tower* (30)
	Mountain Haus Condominiums (45)
	Sitzmark Lodge (12)
	Tivoli Lodge (33)

* Vail Resorts properties

2. Organics Diverted;
 - Lodge at Vail recycles grease from its restaurant
 - Mountain Haus uses compostable utensils in its continental breakfast service (trashed)
3. Solid Waste Service Cost;
 - Only 5 lodges reported their costs, which range for trash & recycling from \$600 (Tivoli) to \$1,500/month (Evergreen - \$175/month are recycling costs)
 - Both Austria Haus & Solaris have recently reduced their trash bills through recycling
4. Collection - Some use the primary haulers for recyclables collection. Others haul their recyclables to the Town DOC (many of these have curbside cardboard collection & use the DOC for containers only);
 - Lionshead - Vail Spa
 - Vail Village - Mountain Haus (uses an electric car to haul cardboard) & Sitzmark
5. Perceived Diversion - Of the 7 that reported a diversion level, the average was 24% with a range from 5% (Montaneros) to 50% (Mountain Haus).
6. Importance to Customers (see Figure 2-1) - Of the 12 that reported a number on a scale of 1 (low) to 10 (high), the average was 6.3, with a range from 3 (Solaris) to 10 (Evergreen).
7. Importance to Owners/Management/Staff (see Figure 2-1) - Of the 12 that reported a number on a scale of 1 (low) to 10 (high), the average was 8.0 with a range from 5.5 (Solaris) to 10 (Evergreen).

2.3 Retail Category

Thirty-nine retail businesses were surveyed (see Table 2-3), ranging in size from being closed in the low season to 45 in high season. In general, these businesses are small and generate primarily cardboard and no food waste.

1. Recyclables Diverted - Most recycle cardboard;
 - Those with access to Arrabelle or Mountain Plaza docks also recycle paper and commingled containers
 - Others recycle newspaper, mixed paper and containers through public recycling containers in Vail Village
 - Patagonia recycles fluorescent bulbs
 - Reuse - Double Diamond staff reuse coffee cups & Starbucks donates baked goods to employees, Burton works on increasing recycled content of products & decreasing packaging

TABLE 2-3
RETAIL BUSINESSES (number of employees during high season)

LIONSHED	VAIL VILLAGE	
Arriesgado Clothing (NA)	A Secret Garden (5)	Infusion Fine Gifts (3)
Boot Lab (4)	Bag & Pack Shop (7)	Karats (5)
Burton at Arrabelle* (15)	Bella Italia (2)	Kidsport (6)
Charlie's Shirts (35)	Blitz (4)	Luca Bruno (3)
Charter Sports - Marriott (20)	Burton at Vail #704* (6)	Masters Gallery at Vail (5)
Double Diamond Ski & Sport (30)	Charm School Boutique (3)	Moose's Caboose (4)
Jeannie Thoren's Women's (2)	Claggett/Rey Gallery (4)	North Face - Solaris* (NA)
Lionshead Ticket Office** (30)	Colorado Footwear (6)	Pismo Gallery at Vail (NA)
North Face Vail Landmark* (6)	Cos Bar of Vail (4)	Squash Blossom (4)
Patagonia at Arrabelle* (9)	Designer Furs (3)	Toy Store (3)
Quicksilver at Arrabelle* (5)	Elegant Illusion Created (1)	Vail Gear (5)
Vail Sports/Vail 21 #711* (35)	Gilded Spruce (4)	Vail Mountain Club* (45)
	Golden Bear (7)	Vail Sports Mountain Plaza* (25)

NA = not available * Vail Resorts properties ** Curbside trash collection provided by Vail Resorts

2. Organics Diverted - These were limited to retailers with plant/flower waste (A Secret Garden reported 50% organic waste levels).
3. Solid Waste Services - Most are small generators within their buildings & are not actively involved in establishing solid waste services (none of the retailers reported their waste service costs).
4. Collection - Several Vail Village retailers have alternative recyclables collection such as;
 - Use of the Town DOC - Vail Sports/Vail 21, Secret Garden, the Bag & Pack Shop, Bella Italia & Karats
 - Recycling additional cardboard at warehouses in Avon (such as Double Diamond & Pismo Gallery)
 - Multiple Vail Village businesses mentioned hauling recyclables home with workers
5. Perceived Diversion - Of the 28 that reported a diversion level, the average was 47% with a range from 15% (Vail Sports & Claggett/Rey) to 90% (Bella Italia). The retailer diversion was notably higher than all other categories (see Figure 2). Comments from many businesses indicate that they are recycling "as much as possible" already - other responses, however, indicate that several are not aware of all available recycling opportunities.

6. Importance to Customers (see Figure 2-1) - Of the 31 that reported a number on a scale of 1 (low) to 10 (high), the average was 5.9 with a range from 1 (Gilded Spruce & Masters Gallery) to 10 (Charlie's Shirts & Design Furs [who don't recycle]).
7. Importance to Owners/Management/Staff (see Figure 2-1) - Of the 37 that reported a number on a scale of 1 (low) to 10 (high), the average was 8.4 with a ranged from 3 (Colorado Footwear) to 10 (fourteen different businesses including Designer Furs). Peer pressure from other retailers was given as one reason for recycling in Vail Village.

2.4 Professional & Service Category

Thirteen professional and service businesses were surveyed (see Table 2-4), ranging in size from a high of 1 employee in low season to 120 in high season (not counting Colorado Mountain Medical Center, which provides solid waste services for the entire medical complex). Excluding the CMMC cafeteria, these businesses generate minimal organics from food services and only two identified a leased restaurant operations.

TABLE 2-4
PROFESSIONAL & SERVICE BUSINESSES (number of employees during high season)

LIONSHEAD	VAIL VILLAGE
Antlers at Vail (40)	Colorado Mountain Medical Center (700)
Destination Resorts (8)	Firstbank Vail Village (40)
Firstbank Lionshead (3)	Greenauer Design Group (2)
Lionshead Adult Ski School** (35)	Law Office of Nancy Adam (1)
Ski Valet/Bike Valet (6)	Law Offices of Margaret Hamlen (3)
	One Willow Bridge Road (18)
	Spa at Four Seasons Resort (27)
	Vail Athletic Club (120)

** Curbside trash collection provided by Vail Resorts

1. Recyclables Diverted - Most recycle cardboard, paper and commingled containers;
 - Only Antlers collects all non-cardboard as single-stream
 - Four Seasons Spa reports recycling their plastic cups in with commingled containers
 - Several report shredding (most including banks with private service)
 - Antlers, CCMC & One Willow Bridge Road - recycle a mix of wood, batteries & bulbs
2. Organics Diverted - The CMMC cafeteria recycles its kitchen grease.
3. Solid Waste Service Costs - Only 3 businesses reported their costs, which range for trash service from \$525 (Firstbank Vail) to \$900/month (Antlers) and for recycling services from \$80 (Firstbank Vail) to \$400/month (Antlers) (total trash/recycling services for CMMC is \$4,000/month).
4. Collection - Some use the primary haulers for recyclables collection. Others haul their recyclables to the Town DOC (many of these have curbside cardboard collection & use the DOC for containers only);
 - Lionshead - Firstbank Lionshead
 - Vail Village - Greenauer Design, Nancy Adam Law Office & Margaret Hamlen Law Office
5. Perceived Diversion - Of the 9 that reported a diversion level, the average was 31% with a range from 10% (Vail Athletic Club) to 50% (Greenauer Design, One Willow Bridge Road & Four Seasons Spa).

6. Importance to Customers (see Figure 2-1) - Of the 12 that reported a number on a scale of 1 (low) to 10 (high), the average was 5.6 with a ranged from 1 (Nancy Adam Law Office) to 9 (One Willow Bridge Road).
7. Importance to Owners/Management/Staff (see Figure 2-1) - Of the 13 that reported a number on a scale of 1 (low) to 10 (high), the average was 8.2 with a range from 7 (Lionshead Adult Ski School, Ski Valet/Bike Valet & Greenauer Design) to 10 (Firstbank Vail & Four Seasons Spa).

2.5 All-Category Needs for Continued & Increased Diversion Activities

For the most part, businesses in all commercial categories had similar observations. Many are conflicting. Those observations with ** were made numerous times in both the Lionshead and Vail Villages:

Convenience

- Recyclable containers are needed at each business for workers & public - was also observed that recycling is minimal even in lodges with containers in guest rooms
- Recyclables collection is needed at each business (not next door or elsewhere)** - or an easier process is needed to transfer materials
- Carts & dumpsters need to be emptied more frequently - when they overflow, recyclables are placed in trash
- Collection points need to be larger - trucks can't always access loading docks
- All recycling should be single-stream

Space & Cost

- Even if haulers or town provided more carts & curbside collection - there is no space available**
- At these high prices (\$200/square-foot) - can't afford to use space for recycling**
- Recycling adds cost to solid waste bill - don't see that additional recycling will reduce trash costs
- Recycling is consistent with corporate philosophy & many staff felt it's the "right thing to do" (Mountain Haus willing to pay for additional recycling services)
- Town needs to implement (& pay for) recycling improvements - businesses can't pay more
- Glass crushing should be used to decrease space & noise

Materials

- Need to expand what Arrabelle & Mountain Plaza can take for recyclables
- Hauler need to stop disposing of diverted cardboard
- Need separate glass recycling
- Need ability to recycle cups, container lids, tin, six-pack rings, ski passes (contain radio frequency chip), plastic packaging, confidential paperwork & miscellaneous items (ski boots³)
- Grease containers need to be emptied more often

Future Organics Recovery

- Need space for any diversion**
- Need processing capacity (composting) in Vail Valley
- Need containers in kitchen for food waste, unused food
- Needs to be collected daily (especially with fish waste)
- Need containers for public

³ There is a 2011/12 RREO project in northern Colorado evaluating ski boot recycling.

- Need convenient outdoor animal-proof containers
- Need management support & employee training

Other

- Need to expand the Town DOC, re-locate it "closer", improve congestion & parking**
- Need to pair all public trash containers with recycling containers
- Need to make recycling mandatory
- Need Town's help getting approval from condominium HOAs (Design & Review Boards) for additional recycling containers & programming
- Need bilingual training materials for housekeeping
- Need effective Town outreach/education program

3.0 AUDIT OF LIONSHEAD & VAIL VILLAGE BUSINESS WASTE

This phase of the project focused on trash only (not recyclables diverted through existing programs). On February 22nd and 23rd, LBA conducted a waste audit of trash samples collected from 32 Lionshead and Vail Village businesses (55 total samples). To the extent possible, samples were collected during the middle of daily operations (e.g., morning for lodges, mid-day for professional offices, early afternoon for restaurants serving lunch, late day for bars and dinner-only restaurants)⁴. The waste samples were sorted in accordance with the Vail Waste Audit Guidelines (see Appendix C), at the Arrabelle (Lionshead) and the Mountain Plaza (Vail Village) docks. A portable, platform scale was used to obtain all measurements. Each sample was sorted for:

- Recyclables (as accepted at the Eagle County MRF);
 - Paper - cardboard, Kraft paper, paperboard, mixed paper
 - Containers - glass food/beverage containers, aluminum/steel/tin food/beverage containers, plastic #1-#7 (including plastic coffee lids)
- Organics - food waste, food-contaminated paper, garden waste, wood waste, non-recyclable paper (such as waxy coffee cups)
- Non-divertable (trash) materials - all non-recyclable, non-organic waste

3.1 Audit Results

Table 3-1 lists the businesses with trash samples audited during the study. Figure 3-1 illustrates the relative opportunity for additional waste diversion from the aggregate of all Lionshead and Vail Village samples. Figures 3-2 through 3-5 present the waste audit findings for each business category. Appendix C includes the audit results by category.

Key observations include:

- Not surprisingly, food & beverage businesses disposed of high quantities of organics (food, food-contaminated paper which cannot be diverted for composting⁵) & to a lesser extent recyclables - it is likely that the recyclable content would have been higher if trash samples could have been collected from bars at the end of their evening shifts
- More surprisingly, trash from Vail Village lodges had a high organic content - this can be partially explained by the small sample size which included pre-consumer waste from the Austria Haus' kitchen

⁴ Important missed collections were those from bars and restaurants that closed in the early hours of the mornings. These were expected to include especially high levels of glass.

⁵ Vail Resorts does currently divert food waste from mountain-only operations for composting off-site.

TABLE 3-1
BUSINESS TRASH AUDITED

LIONSHEAD	VAIL VILLAGE
Food & Beverage Businesses	
Bart & Yeti's	Gasthof Gramshammer/Pepi's
Garfinkel	La Bottega Inc
The Little Diner	Pazzo's Pizzeria
Lionshead Liquor Store	The Red Lion
Moe's Original BBQ	Sebastian Vail
Old Forge Pizza	Starbucks
Tavern on Square	Vendetta's
Vail Marriott Avalanche Pub	WVMC/Sodexo (CMMC surveyed)
Lodging Businesses	
Arrabelle at Vail Square	Austria Haus Hotel
Montaneros	The Sitzmark Lodge
Retail Businesses	
Burton at Arrabelle	American Ski Exchange*
Charter Sports - Marriott	Annie's*
Lionshead Liquor Store	Burton at Vail
Double Diamond Ski & Sport	Colorado Footwear
	Gorsuch Ltd*
Professional/Service Businesses	
Howard Head (CMMC surveyed)	WVMC Pharmacy (CMMC surveyed)
Lionshead Adult Ski School	WVMC Lobby (CMMC surveyed)

* Not surveyed

FIGURE 3-1
AGGREGATED WASTE AUDIT RESULTS FOR BOTH VILLAGES (% by weight)

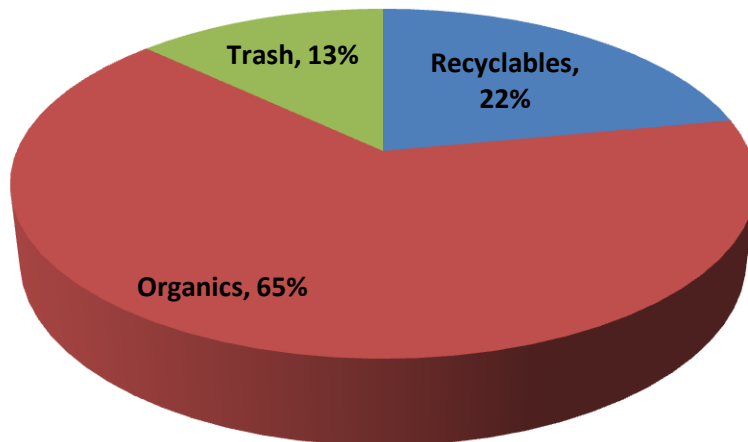


FIGURE 3-2
WASTE AUDIT RESULTS FOR FOOD & BEVERAGE BUSINESSES
(15 businesses/26 samples - % by weight)

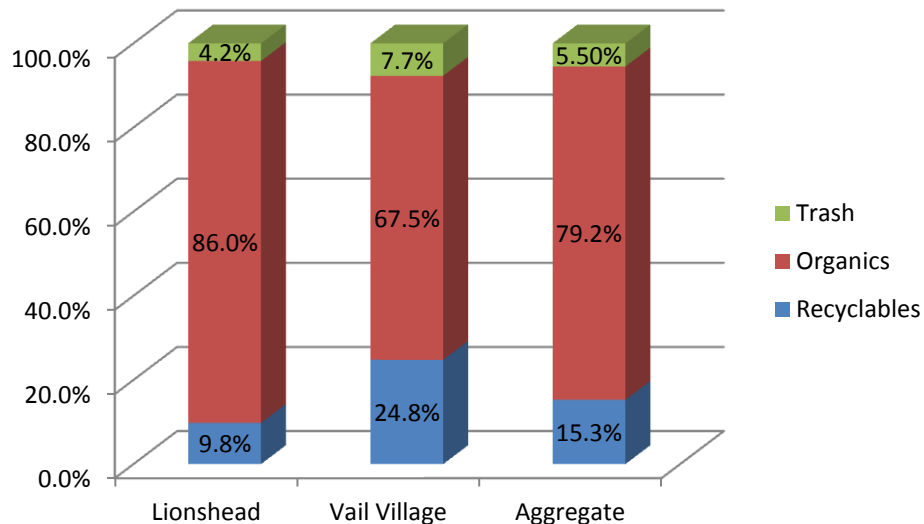
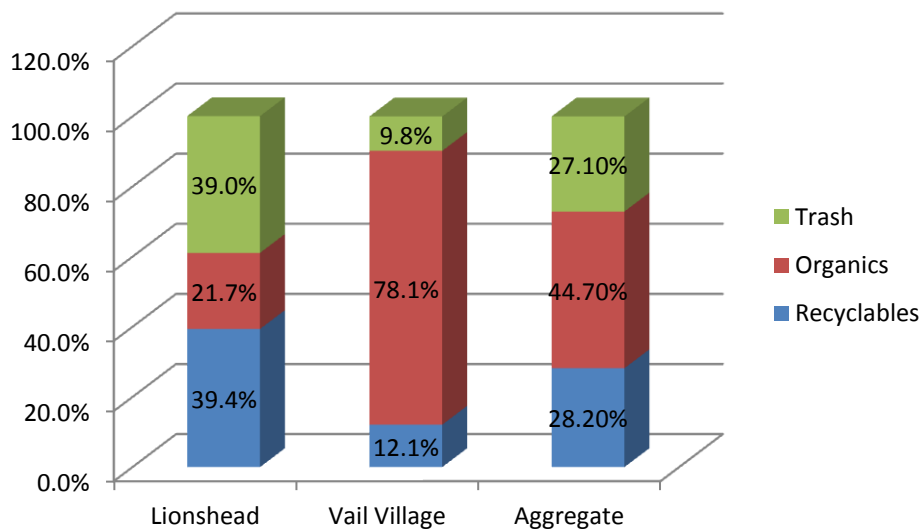


FIGURE 3-3
WASTE AUDIT RESULTS FOR LODGING BUSINESSES
(4 businesses/9 samples - % by weight)



- The retail business trash showed an elevated recyclables composition due primarily to mixed paper (lower levels of cardboard indicated recycling activity for this material)
- The professional & service businesses trash contained a higher than expected organic content (from paper towels observed in the Howard Head Sports and VVMC lobby samples) - this was also a relatively small sample size and may not be fully representative of average waste composition from these generators

FIGURE 3-4
WASTE AUDIT RESULTS FOR RETAIL BUSINESSES (9 businesses/15 samples - % by weight)

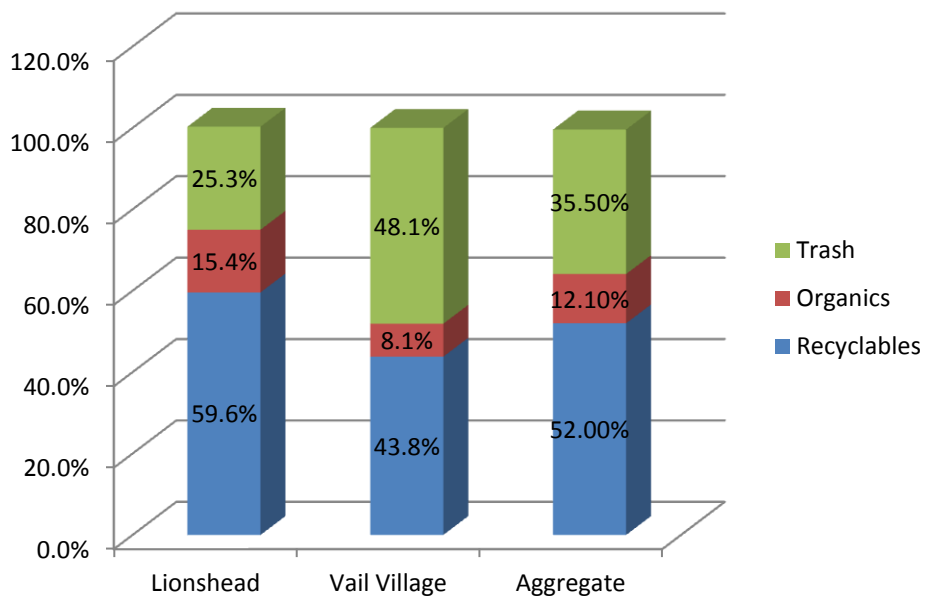
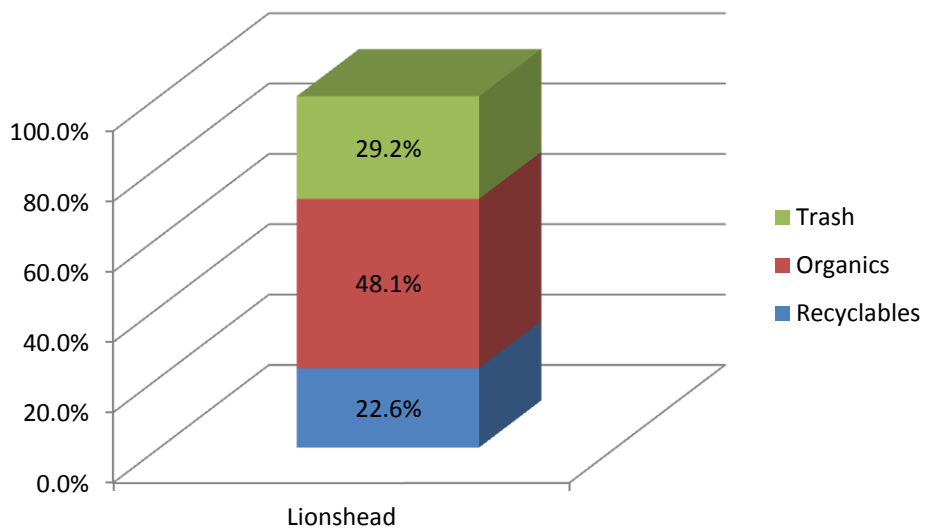


FIGURE 3-5
WASTE AUDIT RESULTS FOR PROFESSIONAL & SERVICE BUSINESSES (4 businesses/5 samples - % by weight)



3.2 Future Diversion Potential

The aggregated waste audit results in Figure 3-1 showed that as much as 87% of materials currently disposed by village businesses could be diverted, including both recyclables (22%) and organics (65%). This represents a

significant opportunity to increase the diversion of recyclables and (especially) organics from the commercial waste stream in Lionshead and Vail Villages.

To more specifically quantify this potential, the audit percentages were applied to the estimated trash generation levels in Table 3-2 (Appendix D includes data⁶ and assumptions used to completed this analysis). This analysis is a rough approximation only - the absence of actual trash data by business and the significant variability between businesses evaluated requires numerous assumptions that may skew the results. The analysis does provide an indication, however, of the future potential diversion from the Town of Vail's commercial waste stream. For example, if trash estimates based on hauler data are high, estimated recycling and organics quantities will also be high - but the relative percents diverted still indicate the potential rate of diversion.

As shown in Table 3-2, recyclables may be disposed of by all village businesses at a rate of 6,700 to 22,400 ton/year (based on the 2011 data analyzed above). Similarly, organics may be disposed of at a rate of 16,300 to 62,200 tons/year. These values represent that quantities could be diverted through improved recycling and organics recovery programs in the future. They are *in addition to* the cardboard, mixed paper and containers that are already being recycled by Lionshead and Vail Village businesses⁷.

Even though these estimates are approximate, their sheer magnitude warrants the serious evaluation of future infrastructure, program and policy improvements necessary to increase diversion from Vail's commercial waste generators.

TABLE 3-2
POTENTIAL DIVERSION LEVELS in 2011 TRASH (rounded to nearest 100 tons)

CATEGORY (no of total businesses in category)	% Divertable Material by Weight*	RANGE OF TRASH GENERATION** (aggregate, nearest 10 tpy)	RANGE OF POTENTIALLY DIVERTED MATERIALS (nearest 100 tpy)
Food & Beverage (102)	Recyclables - 15.3%	120-460 tpy	1,900-7,200 tpy
	Organics - 79.2%		9,700-37,200 tpy
Lodging (59)	Recyclables - 28.2%	220-500	3,700-8,300 tpy
	Organics - 44.7%		5,800-13,200 tpy
Retail (156)	Recyclables - 52.0%	10-20	800-1,600 tpy
	Organics - 12.1%		200-400 tpy
Professional & Service (118)	Recyclables - 22.6%	10-200	300-5,300 tpy
	Organics - 48.1%		600-11,400-tpy
Total	Recyclables		6,700-22,400 tpy
	Organics		16,300-62,200 tpy

* From Figures 3-2 through 3-5

** From Appendix D

⁶ Data provided by Vail Resorts, Vail Honeywagon & Waste Management - haulers were only able to provide data for one (at most two) businesses in each category. Better hauler data will be required to better assess these values accurately.

⁷ Although recycling estimates for 2011 are even more difficult to assess, it is likely that the collective food & beverage businesses in the two villages diverted in the range of 3,300 to 24,800 tons (based on subscription data provided by Vail Honeywagon & Waste Management for 3 example businesses). Estimates for other categories are not available.

4.0 STAKEHOLDER INPUT

Representative businesses convened in late March to discuss waste diversion obstacles and opportunities in Lionshead and Vail Villages. Input provided included:

- Most businesses feels it is the Town's responsibility to facilitate increased diversion in a practical, low- (or no-) cost manner for businesses
- Some businesses worry that a mandate won't be feasible unless recycling options increase
- Importance of making recycling accessible, affordable and easy for small businesses
- Inability to collect restaurant/bar samples in the early morning hours may have led to an under-estimation of recyclables (containers) in the trash
- Town Design Review Board presents obstacles to the development of recycling areas
- Condominiums in some buildings do not support recycling activities by their organizations or the businesses below them (a large percentage of businesses belong to the condominium associations in their building) - this is perceived to be a significant obstacle
- Some businesses are not able to collect cardboard with existing building configurations and hauler vehicles in use
- There can be significant time lost when sending employees to the DOC - both for legitimate (cardboard compactor jams, queues are long) and questionable reasons (easy for staff to "goof off")
- Businesses who encourage employees not to drive to work have no way to transport materials to DOC
- It can months to train staff to recycle efficiently (and there can be high turnover)
- Recycling in individual lodging rooms is a challenge (need to rely on housekeeping staff)
- Haulers won't collect recyclables more than once per week without charging extra
- So-called "variable rates" inherent in commercial trash billing does not translate to an incentive to recycle
- Organics will be a challenge that varies - different for restaurants with/without servers (without relies on customers to recycle) and for different types of kitchens (prep versus service)

Input obtained from haulers included:

- Biggest collection issue is storage space within business locations and in collection areas
- Haulers may be willing to report data if the playing field is completely level for all (data will need to be based on subscription levels for the majority of accounts)
- Haulers have seen significant increases in recycling when dual-stream programs have switched to single stream
- Lack of rebates for recyclables at the Eagle County MRF makes recycling a tough proposition for small haulers
- Organics will be very difficult (especially if this translates to three separate routes)

Input obtained from Town Council Members and the public during an early May council meeting included:

- Town could take over daily collection of recyclables or pay private haulers to do
- Remove obstacles in the DRB regulations
- Implement the bottle bill

- Improve use of loading docks/delivery areas for recycling
- Increase the number of DOCs
- Promote a holistic approach similar to national parks (leave no footprint, haul out what you haul in, etc.)
- Have vendors (food, supply vendors) back-haul diverted materials

5.0 RECOMMENDATIONS

Based on the study findings and input from the project stakeholders, LBA makes the following waste diversion recommendations for the Town of Vail's future consideration at the Lionshead and Vail Villages. These recommendations have not yet been evaluated in terms of measured feasibility, conceptual design, cost or operation.

Short-Term (2012-2014)

1. The TOV is constrained by state statute in terms of controlling commercial collections and needs to continue to work with existing and future private haulers to find creative solutions to facilitate and increase diversion. In the meantime, the Town should implement a data reporting requirement that requires annual reporting of trash, recyclables, organics, C&D and special waste quantities collected - the policy should tie compliance tied to licensing status (it will also likely apply to residential haulers who are the same as those who provide commercial service).

Hauler licensing can also be used to require haulers to provide recyclables collection to all trash customers (could specify a minimum number of collections to addresses container overflows & a pricing structure that includes recycling service is no extra cost). This would effectively make recycling mandatory, but may do little more than increase prices for struggling businesses if space and logistics are not improved as well (see suggestions below for addressing these needs first).

Hauler licensing can either be a mandate or implemented in a "rates and dates" format (i.e., make the requirement voluntary for the 2013 and 2014 reporting cycle but if any significant hauler fails to report as requested, a full hauler ordinance would automatically be put in place).

2. Plan to make commercial recycling mandatory by 2015⁸ - and put pre-implementation programs in place during the short-term:
 - a. Notify businesses and solicit their involvement in identifying creative solutions
 - b. Team with at least one building complex each in Lionshead and Vail Villages on a pilot program to evaluate improved/creative logistics for diversion, storage & collection of recyclables that increases convenience, and decreases space & time for generators
 - Program should include right-sizing trash containers over all seasons, educating business employees and residents, improving joint efforts with condominiums & businesses, promoting diversion and creating advocates for future diversion policies
 - Targets should be non-Vail Resorts properties with multiple businesses including small retail, full restaurant, condominium/lodging and bar if possible
 - May expand pilot program to include organics collection in the short- or long-term
 - Funding options to operate pilot program or other activities - RREO grants, foundations, etc.

⁸ Recycling mandate could include combination of drop-site and curbside collection (note that mandating curbside recyclables collection needs to consider that curbside trash collection is not currently required).

- c. Move current DOC to Lionshead parking garage area – provide more access & parking, a second cardboard compactor and part-time staffing to assist businesses with unloading & control contamination
 - d. Develop TOV diversion marketing & outreach program
 - Develop town-wide brand & key messaging – may benefit from professional marketing assistance
 - Promote in residential, commercial & public areas with signage, banners, media ads, vehicle signage, internet, etc.
 - Develop award program that provides substantial visibility & promotion of green business partners
 - Reward green businesses with free recyclables collection provided by the TOV
 - "Tell the story" that educates residents, businesses & public/tourist about myths & opportunities associated with waste diversion in Vail
 - Develop a volunteer "green team" to assist with promotion and education
 - Implement/update/promote on on-going basis
 - e. Develop TOV diversion education program targeted to business employees – a training DVD, on-line delivery or combination (produced in at least Spanish and English)
 - f. Work with TOV Design Review Board – to allow the development of enclosures, storage & access by haulers for recyclables in commercial areas
 - g. Improve public trash/recycling containers – which are used by some businesses as well as the public (TOV may want to prohibit businesses from using in the future) – always pair trash & recycling containers, provide more pairs (consider self-compacting, solar units), and update signage on containers to focus on diversion (not cigarette butts) and convey messaging
3. Work with Eagle County MRF to create incentives valley-wide that drive the ability to reasonably recycle as many recyclables as possible, make recycling easy for generators and maximize diversion levels:
 - Promoting acceptance of "fringe" materials – plastics #1-#7, paperboard, etc.
 - Seriously evaluating single-stream conversion – TOV could be a financial contributor in exchange for minimum guaranteed rebates for haulers of TOV recyclables
 - Glass will continue to be an issue for single-stream – village businesses do not have the room to separate out an extra material
 - Seriously pushing for operations that support ability to rebate haulers for at least source-separated materials (like cardboard)

Long-Term (2015 & beyond)

4. Add at least one additional DOC (Vail Village) – to maintain multiple options for business recycling.
5. Evaluate ability to research & support organics processing opportunities in valley – may include composting, anaerobic digestion, conversion technology or a combination.

6. Evaluate expansion of Vail Resorts' trash & recycling collection role for non-resort generators

Additional considerations:

- It is unlikely that any one option will be the silver bullet - multiple options will probably be necessary to notably increase commercial waste diversion
- Existing ordinance requiring space for recycling is an excellent start - this will help ease (albeit very slowly) some of the storage issues over the long term
- The TOV's commercial sector needs to divert at levels >>25% to balance out a residential sector that is diverting <<25% in order to meet the Town's overall 25% MSW diversion goal

APPENDIX A
COMMERCIAL BUSINESS SURVEY INSTRUMENT

GENERAL	
Business Name	
Location (village, building, any other clarification)	
Landlord and/or Property Manager (provide contact info)	
How many employees during current ski season? Non-ski season?	
TRASH COLLECTION	
Do you arrange directly for trash collection? Or is this done by your property manager or landlord?	
Do you share trash containers with other businesses?	
Which hauler do you use (if known)?	
How much trash do you generate every day (number of bags, containers)?	
IF YOU ARE RECYCLING (if no, see below)	
Why do you recycle?	
Which materials do you recycle? (cardboard, paper, containers, grease?)	
If collected, do you use the same trash hauler or other?	
If not collected, where/how are recyclables going? (staff haul to Town drop site in the village or other - please specify)	
Do you use document destruction / shredding within your business?	
Who provides shredding / document destruction to you?	
What is your best guess about how much of the business' total waste is recycled - 25%, 50%, 75%, other?	
IF YOU ARE NOT RECYCLING	
Why not? (lack of space, inconvenient, hauler issues - please specify)	
What changes would cause you to recycle more?	
If recycling became mandatory, how would you make it work?	
TRASH/RECYCLING COST	
Do you know what you pay for trash - or trash & recycling? (period?)	
If there was a way for your total trash-plus-recycling bill to be reduced if you recycle more, would this cause you to recycle more?	
FOOD WASTE FROM RESTAURANTS, BARS, FOOD RETAIL, CAFETERIAS	
What is your best guess about how much of your total waste is kitchen prep waste? Post-consumer scrap/paper? (by %)	
If food waste could be collected, what would you need to do to recycle it (containers, space, collection frequency)?	
LASTLY . . .	
How important is recycling to your customers? (scale of 1-10)	
How important is recycling to management/owners & staff? (1-10)	
Other comments	

APPENDIX B
COMMERCIAL BUSINESS SURVEY RESULTS

FOOD BEVERAGE BUSINESS SURVEY RESULTS

	BART & YETI'S	BILLY'S ISLAND GRILL	BLUE MOOSE PIZZA VAIL
Name & Title of Person Contacted	Robert, One of the Owners	Bill, Owner	Meg, Manager
GENERAL			
Location	Lionshead	Lionshead	Lionshead
Employees ski season	None	None	None
Employees non-ski season			
Other comments	None	None	None
TRASH COLLECTION			
Arrange directly for trash service?	Yes	Through Condo Association	No
Property owner/manager?	No	Landmark	Arrabelle
Share trash containers with others?	Shared w Montauk Seafood Grill	Yes	Yes
If no, where are your containers?	Behind The Lighthouse in parking space	West end of building, underground	Loading Dock
Size?	4-foot by 6-foot	Roll-Off	Don't Know (Roll-Off)
How many?	2	3	1
Emptied how often by hauler?	Daily ski season/EOD off season	No	N/A
Which hauler services?	Vail Honeywagon	Either WM or Vail Honeywagon	N/A
Amount of trash generated daily?	Bins are full daily when serviced	10 to 12 Bags	Avg 3 trash runs/day; up to 20 bags
Other comments	None	None	None
IF YOU ARE RECYCLING			
Do you recycle?	No	Yes	Yes
Materials?	N/A	Glass, Plastic, Paper	OCC, glass, paper, grease, crayons
Collected by same trash hauler?	N/A	No	Arrabelle bins
Document destruction/shredding?	N/A	N/A	N/A
Who does document destruction?	N/A	N/A	N/A
If no collection, how managed?	N/A	Take to town drop site	Arrabelle loading dock
How much total waste is recycled?	N/A	Minimal - it's not convenient	25%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	Shared \$10k/yr costs with Montauk	No, included in general monthly costs	Don't know.
Recycle more if reduced trash cost?	Yes if financial incentive	No	Don't know.
Other comments	None	None	None
FOOD WASTE			
How much of total is organics?	80% FW between both restaurants	90% kitchen prep/10% post-consumer	5% food prep/20% for post-consumer
Need for organics collection?	No	Bin on site would be helpful	Container for un-used food
Other comments	None	Most of food waste is kitchen prep	None
LASTLY . . .			
Recycling value to customers?		2.5	5
Recycling value to owners/staff?	5	2.5	6

FOOD BEVERAGE BUSINESS SURVEY RESULTS

	GARFINKEL'S	HAAGEN-DAZS	LIONSHEAD LIQUOR STORE
Name & Title of Person Contacted	Mike, Owner	Jeff, Shift Manager	Tim Robbins, Owner
GENERAL			
Location	Lionshead	Lionshead	Lionshead
Employees ski season	51	5	5
Employees non-ski season	Slightly lower than ski season	5	2
Other comments	No longer hires seasonal employees	Based on volume of what they sell	
TRASH COLLECTION			
Arrange directly for trash service?	No	Through Arrabelle	No, through condominium
Property owner/manager?	Lionshead Condo	Arrabelle	Resort Company is property manager
Share trash containers with others?	Yes - w/ Double Diamond	Yes - all those w/in Arrabelle	Yes
If no, where are your containers?	In Parking Area	Arrabelle Loading Dock	
Size?	10-yard Containers	Roll-Off	
How many?	3	1	
Emptied how often by hauler?	Daily	Don't Know	
Which hauler services?	Vail Honeywagon	Don't Know	Vail Honewagon
Amount of trash generated daily?	3 10-yard containers	3 bags	4 large bags
Other comments	None	None	
IF YOU ARE RECYCLING			
Do you recycle?	No	Yes	Yes
Materials?	Recycle OCC when they can	OCC	All paper/plastic/OCC allowed by recycler
Collected by same trash hauler?	N/A	Yes	Yes
Document destruction/shredding?	N/A	N/A	
Who does document destruction?	N/A	N/A	
If no collection, how managed?	Put OCC at resid recycling/could fill daily	N/A	
How much total waste is recycled?	N/A	Small - 8 boxes/wk peak/1-2 slow times	75%. Mostly cardboard
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No - built into their condo fees	No. Included in rent	No
Recycle more if reduced trash cost?	No	No	Yes
Other comments	None	None	
FOOD WASTE			
How much of total is organics?	1/2 kitchen waste	0 kitchen prep/most post-consumer	
Need for organics collection?	More space, help to do it.	Yes, if bin could be provided	
Other comments	Would like to recycle, it's just hard to do so	Hard to tell customers which container to use - trash verses food waste	
LASTLY . . .			
Recycling value to customers?	0	3	3
Recycling value to owners/staff?	5	8	7

FOOD BEVERAGE BUSINESS SURVEY RESULTS

	LITTLE DINER,THE	MOE'S ORIGINAL BBQ	MONTAUK SEAFOOD GRILL
Name & Title of Person Contacted	Brian Little, Owner	Joslyn, Bartender / Jen, Hostess	Tom, Owner
GENERAL			
Location	Lionshead	Lionshead	Lionshead
Employees ski season	7	40	35
Employees non-ski season	5	40	Slightly lower than ski season
Other comments	None	None	None
TRASH COLLECTION			
Arrange directly for trash service?	No	Don't Know	Yes
Property owner/manager?	Shared containers for building	Don't Know	N/A
Share trash containers with others?	Shared containers for building	Yes	Yes (with Bart & Yeti's)
If no, where are your containers?	Around corner by bus-stop	Around corner by bus-stop	Behind the restaurant in a parking space
Size?	Roll Off (10 by 10 by 7)	Regular sized dumpster	Don't Know (See Bart & Yeti's)
How many?	1	1	2
Emptied how often by hauler?	Serviced Mon/Wed/Fri	No	3 times per week
Which hauler services?	Vail Honeywagon	Town of Vail	Vail Honeywagon
Amount of trash generated daily?	2 23-gallon bags a day; 40 boxes per week	12 bags	Don't Know
Other comments	None	None	None
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	No
Materials?	OCC; Glass; Tin; Grease	Clear cans, boxes	N/A
Collected by same trash hauler?	Yes (cardboard)	Per The Little Dinner - Yes, Cardboard	N/A
Document destruction/shredding?	N/A	N/A	N/A
Who does document destruction?	N/A	N/A	N/A
If no collection, how managed?	Moe's take containers to Town DOC	Moe's takes to Vail DOC (Little Diner too)	N/A
How much total waste is recycled?	30%		N/A
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No. Included in rent	Per The Little Dinner, Included in Rent	Too much
Recycle more if reduced trash cost?	Yes		May if cost reduction in cost
Other comments	None	None	None
FOOD WASTE			
How much of total is organics?	1/2 of one bag per day is food waste		Don't know - lots of fish.
Need for organics collection?	Animal-proof bin/50-gallon bins used for oil		Container - need cost effective space use
Other comments	None	I'll	None
LASTLY . . .			
Recycling value to customers?	5		3
Recycling value to owners/staff?	6		8

FOOD BEVERAGE BUSINESS SURVEY RESULTS

	OLD FORGE PIZZA	RITZ CARLTON CLUB & RESID	STARBUCK'S
Name & Title of Person Contacted	Craig, Manager	J Chettam/F&B Mgr, T Eubank/Engr	Shelby, Lead Supervisor
GENERAL			
Location	Lionshead	Lionshead	Lionshead
Employees ski season	8	8	10
Employees non-ski season	5	7	Don't know
Other comments	None	None	None
TRASH COLLECTION			
Arrange directly for trash service?	No	Yes	No
Property owner/manager?	Lionshead Condos	N/A	Arrabelle
Share trash containers with others?	Yes	No	Yes
If no, where are your containers?	Under Lionshead Condos	Loading Dock	Arrabelle Loading Dock
Size?	Don't Know	Roll-off, didn't know size	Don't Know
How many?	1	1	Many
Emptied how often by hauler?	Don't Know	As needed, they call for pick up	N/A
Which hauler services?	Waste Management	Waste Management	N/A
Amount of trash generated daily?	2 to 3 bags	6 50-gallon bags a day	Minimum of 5 bags per day
Other comments	None	Floor trash chutes with R containers	None
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	Yes
Materials?	OCC, plastic bottles, cans	OCC	OCC, Plastics
Collected by same trash hauler?	Cardboard - in loading dock for Lionshead Condos	Yes	Arrabelle Dock
Document destruction/shredding?	N/A	N/A	N/A
Who does document destruction?	N/A	N/A	N/A
If no collection, how managed?	Plastic bottles & cans taken to the Town drop-off	N/A	N/A
How much total waste is recycled?	15%	Don't Know	Don't Know
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No	No	No - part of general fee
Recycle more if reduced trash cost?	Don't Know	Yes	Maybe
Other comments	None	None	None
FOOD WASTE			
How much of total is organics?	Don't Know; not high	4 to 6 bags	Don't Know
Need for organics collection?	Don't know; if they could separate kitchen prep v	Could accommodate	Don't Know
Other comments	None	Having additional recycling item would	Dictated by Arrabelle
LASTLY . . .			
Recycling value to customers?	8.5	5	2
Recycling value to owners/staff?	8.5	7	1

FOOD BEVERAGE BUSINESS SURVEY RESULTS

	TAVERN ON SQUARE	VAIL CHOPHOUSE	VAIL MARRIOTT AVALANCHE PUB
Name & Title of Person Contacted	Kevin, Supervisor	Marvin, General Manager	Elizabeth, Administrative Assistant for Engine
GENERAL			
Location	Lionshead	Lionshead	Lionshead
Employees ski season	150	65	Don't Know
Employees non-ski season	80	30	
Other comments	None	None	None
TRASH COLLECTION			
Arrange directly for trash service?	Through Arrabelle	Utilize Rock Resort Dumpster	Yes
Property owner/manager?	Arrabelle	Rock Resorts	No
Share trash containers with others?	Yes	Yes	No - Just all divisions within Marriott
If no, where are your containers?	Loading Dock	Loading Dock	
Size?	Roll-Off	Roll-Offs	20-yard compactor; 1 20-yard roll-off
How many?	One	2	1
Emptied how often by hauler?	Don't Know	Daily	Compactor - Weekly; Roll-Off
Which hauler services?	Don't Know	No	Waste Management
Amount of trash generated daily?	20 bags out of both Tavern & In Room Dining	5 to 6	Don't Know
Other comments	None	1 RO for Mtn; 1 for hotels/restaurants	None
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	Yes
Materials?	Plastics, beer bottles, milk jugs, OCC, grease (No t	OCC, Glass, Grease	OCC/OP/ONP/cont/tin/bulb/batt/ball/grease
Collected by same trash hauler?	Don't Know	Through Rock Resorts	Yes
Document destruction/shredding?	N/A	N/A	Yes - In Accounting
Who does document destruction?	N/A	N/A	Puts w/ paper recycling
If no collection, how managed?	N/A	N/A	Bulbs/batts/ballasts go to Grainger
How much total waste is recycled?	15 to 20%	50%	Don't know - get WM report each mo
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	Don't Know	Don't know - it is included in rent	See Attached Spreadsheet
Recycle more if reduced trash cost?	Don't Know	Possibly	If bulbs picked up, easier - Vail Res issue
Other comments	None	None	None
FOOD WASTE			
How much of total is organics?	25% kitchen prep; 25% Post Consumer	FW 30 to 40%; 1/2 prep, 1/2 post-consumer	Don't Know
Need for organics collection?	Only if containers & composting available	If containers& composting maybe possible.	Yes
Other comments	Kitchen won't wash/clean tin cans.	None	Containers , as well as employee training
LASTLY . . .			
Recycling value to customers?	5.5	5	5
Recycling value to owners/staff?	5.5	9	7

FOOD BEVERAGE BUSINESS SURVEY RESULTS

	BLU'S	CLUB, THE	ELWAY'S
Name & Title of Person Contacted	Tom Armstrong, Owner	Zach	Property Manager
GENERAL			
Location	Vail Village	Vail Village	Vail Village
Employees ski season	40 Ski Season	17	70
Employees non-ski season		12	40
Other comments	None		None
TRASH COLLECTION			
Arrange directly for trash service?	Through Landlord (Shiffer Management)	No	No
Property owner/manager?	Gore Creek Properties		Don't Know
Share trash containers with others?	N/A	Yes	Lodge at Vail / Vail Mountain Club
If no, where are your containers?	N/A		N/A
Size?	N/A		N/A
How many?	N/A		N/A
Emptied how often by hauler?	N/A		N/A
Which hauler services?	BFI or Vail Honeywagon	Vail Honeywagon	Vail Mtn. Ops
Amount of trash generated daily?	Don't know	15 large bags	Approx 250 covers per day in ski season
Other comments	Didn't know (asked about BFI)		
IF YOU ARE RECYCLING			
Do you recycle?	Yes	No	Yes
Materials?	OCC, grease	Cardboard	Cardboard, paper, glass, grease, containers
Collected by same trash hauler?	Yes (grease separate)	Yes	Yes
Document destruction/shredding?	N/A		N/A
Who does document destruction?	N/A		N/A
If no collection, how managed?	N/A		N/A
How much total waste is recycled?	10%		10%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	In common costs, changes during year.	No.	Pay 33% of loading dock allocation Lodge gets
Recycle more if reduced trash cost?	Yes		Yes
Other comments	None		None
FOOD WASTE			
How much of total is organics?	Would estimate as 80% or more		90%
Need for organics collection?	Feasible to collect; need processing		Need containers/loading dock space
Other comments	None		
LASTLY . . .			
Recycling value to customers?	Don't Know	2	8
Recycling value to owners/staff?	1	8	8

FOOD BEVERAGE BUSINESS SURVEY RESULTS

	GASTHOF GRAMSHAMMER FOOD	GRAPPA FINE WINE AND SPIR	JOE'S FAMOUS DELI
Name & Title of Person Contacted	Kara, Restaurant Manager	Jeanne, AM Manager	Shane (manager)
GENERAL			
Location	Vail Village	Vail Village	Vail Village
Employees ski season	50	8	15
Employees non-ski season	50	6	8
Other comments	None		mthly biz rental \$10k/mth
TRASH COLLECTION			
Arrange directly for trash service?	No	No	Yes (used to use Vendetta's space can't now)
Property owner/manager?	Through Hotel - Gasthof Gramshammer	Slyfer Smith & Frampton/Sypher Mgmt	NA
Share trash containers with others?	Yes	Yes	No
If no, where are your containers?	Inside Trash Room		lower level below deli (very cramped)
Size?	Big - standard size (est. 4-foot by 4-foot)		toters (~95 gal)
How many?	1		3
Emptied how often by hauler?	Daily		daily
Which hauler services?	Vail Honeywagon	Don't know	Waste Management
Amount of trash generated daily?	Don't know	1 large bag	Fill/overflow toters daily
Other comments	None		
IF YOU ARE RECYCLING			
Do you recycle?	No	Yes	See below
Materials?	N/A	All plastics/boxes/cans/etc accepted	Separate OCC to save space, bundle/trashes
Collected by same trash hauler?	N/A	Don't know	See below
Document destruction/shredding?	N/A		
Who does document destruction?	N/A		
If no collection, how managed?	N/A	Flatten boxes/take to City drop-off.	See above
How much total waste is recycled?	N/A	85%	0%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	Don't know - part of hotel's costs	No.	Don't know
Recycle more if reduced trash cost?	Maybe	Sure.	Absolutely
Other comments	None		
FOOD WASTE			
How much of total is organics?	No idea - Not much		Not as much as paper
Need for organics collection?	Space		Yes if space
Other comments	None		
LASTLY . . .			
Recycling value to customers?	5	6	7.5
Recycling value to owners/staff?	5	10	7.5

FOOD BEVERAGE BUSINESS SURVEY RESULTS

	LA BOTTEGA, INC	LARKSPUR	LOS AMIGO'S
Name & Title of Person Contacted	Steve, Owner	Zack (kitchen mgr)	Mike, Owner (Also owns Russell's)
GENERAL			
Location	Vail Village	Golden Peak Lodge/VR property	Vail Village
Employees ski season	45	80-100	40
Employees non-ski season	Fewer	40	30
Other comments	None		None
TRASH COLLECTION			
Arrange directly for trash service?	No	Vail Resorts	Yes
Property owner/manager?	Sebastian	Adam Bybliw	Bridge Street Lodge
Share trash containers with others?	Yes - with all retail in the Sebastian building	yes	With their building and the building next door
If no, where are your containers?	Delivery / Truck Bay		In basement
Size?	Don't Know		4-yard
How many?	Don't Know		3
Emptied how often by hauler?	Don't Know		Daily
Which hauler services?	WM	VR contracts w Waste Management	Don't Know
Amount of trash generated daily?	25 to 30 bags	15 high, <10 low	8 bags in winter; less in summer
Other comments	None		Had compactor at one time
IF YOU ARE RECYCLING			
Do you recycle?	No	Yes	Yes
Materials?	OCC, on occasion	OCC, paper, containers	OCC, Glass
Collected by same trash hauler?	N/A	Yes	N/A
Document destruction/shredding?	N/A		N/A
Who does document destruction?	N/A		N/A
If no collection, how managed?	N/A		Employees reqd to haul to DOC 50 yds away
How much total waste is recycled?	N/A	20%	20%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No - Through HOA	In lease	No - Built into their condo dues
Recycle more if reduced trash cost?	Don't Know - Through HOA	Don't see directly (lease)	Don't Know
Other comments	None		None
FOOD WASTE			
How much of total is organics?	Don't Know	High levels	25% kitchen prep; 25% post-consumer
Need for organics collection?	No facility / space to do so	Have collected before, would do again	Where to take at 11pm?
Other comments	None		Kitchen is smal, employee habits
LASTLY . . .			
Recycling value to customers?	3	7	
Recycling value to owners/staff?	1	5	

FOOD BEVERAGE BUSINESS SURVEY RESULTS

	MARKETPLACE RESTAURANT	PAZZO'S PIZZERIA	RED LION, THE
Name & Title of Person Contacted	Mike McNichols		Jerry, Bar Manager
GENERAL			
Location	VV - 1 Willow Bridge Bldg	122 E Meadow Bldg	Vail Village
Employees ski season	45		70-100
Employees non-ski season	30		25
Other comments			None
TRASH COLLECTION			
Arrange directly for trash service?	Dock used by all tenants + 2 businesses	No - Bldg	Yes
Property owner/manager?		Don't have	N/A
Share trash containers with others?	Yes	Yes	Yes -3 to 4 others
If no, where are your containers?			Corner of 304
Size?			Big 16 by 20
How many?			3
Emptied how often by hauler?			Daily
Which hauler services?	Waste Management	Don't know	Vail Honeywagon
Amount of trash generated daily?	25 total trash & recyclables	A lot	Don't Know - A lot
Other comments		T/R locations not convenient	None
IF YOU ARE RECYCLING			
Do you recycle?	Stopped this year - too expensive/inconvenient	Yes	N/A
Materials?	Previously OCC & containers	OCC	N/A
Collected by same trash hauler?	No	Don't know	N/A
Document destruction/shredding?		NA	N/A
Who does document destruction?			N/A
If no collection, how managed?	Used to haul to DOC but congested/bins full		N/A
How much total waste is recycled?	Previously 60%	15%	N/A
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	Didn't pay for recycling - hauled to DOC	Don't know	Don't Know
Recycle more if reduced trash cost?	Can't see haulers doing this	Probably	Don't Know - up to the owners
Other comments			None
FOOD WASTE			
How much of total is organics?	50% with compostable paper & cups	> 50%	Do best to minimize waste
Need for organics collection?	If town pays would do -1 Willow Bridge dock	Find space for new containers	Would be up to the owners
Other comments	Compostables for public percep/degrade faster		None
LASTLY . . .			
Recycling value to customers?		7 2 to 5	Don't Know
Recycling value to owners/staff?		5 Staff don't know anything about it	Don't Know

FOOD BEVERAGE BUSINESS SURVEY RESULTS

	RESTAURANT KELLY LIKEN	RUSSELL'S	SEBASTIAN VAIL F & B / BLOCK 16
Name & Title of Person Contacted	Oli, General Manager	Mike, Owner (Also owns Los Amigos)	Steve, Director of Engineering
GENERAL			
Location	Vail Village	Vail Village	Vail Village
Employees ski season	25	34	200
Employees non-ski season	20	30	120
Other comments	None	None	None
TRASH COLLECTION			
Arrange directly for trash service?	No	Yes	Yes
Property owner/manager?	Gateway Building	N/A	N/A
Share trash containers with others?	Yes	Trash Compactors for 4 bldgs handled by one	Yes - with retail within hotel
If no, where are your containers?	N/A	N/A	Back dock, located off main frontage road
Size?	Don't Know	N/A	40 yard trash compactor
How many?	N/A	1	1
Emptied how often by hauler?	N/A	As needed	1 time per week
Which hauler services?	Waste Management or Honeywagon	Waste Management	Waste Management
Amount of trash generated daily?	6 to 10 bags	6 to 8 bags in the winter	F&B does ~ 1/6 of the trash (kitchen waste)
Other comments	None	None	None
IF YOU ARE RECYCLING			
Do you recycle?	No	No	Yes
Materials?	N/A	N/A	Paper, cans, co-mingled
Collected by same trash hauler?	N/A	N/A	2 collections/week; have 15 30yard toters
Document destruction/shredding?	N/A	N/A	Yes
Who does document destruction?	N/A	N/A	Deskside shredders - sent in w/ paper
If no collection, how managed?	N/A	N/A	N/A
How much total waste is recycled?	N/A	N/A	20% or less
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	Don't Know	Yes	No - estimate \$100,000 per year
Recycle more if reduced trash cost?	Don't Know	Sure	Absolutely
Other comments	None	WM bills 2 bldgs directly/biz in 2 bldgs sep	None
FOOD WASTE			
How much of total is organics?	1 bag a day kitchen prep	5 bags food waste	10% is kitchen prep
Need for organics collection?	Limited space/employee separation difficult	Space, recycling center too far away.	Space and logistics
Other comments	Multiple containers for recycling/compost/OCC	None	None
LASTLY . . .			
Recycling value to customers?	2	Don't know	7.5
Recycling value to owners/staff?	8.5	7.5	10

FOOD BEVERAGE BUSINESS SURVEY RESULTS

	STARBUCKS -VAIL VILLAGE	SWEET BASIL	TAP ROOM / SANCTUARY
Name & Title of Person Contacted	Ashley	Kyle, Kitchen Manager	Steve Kaufman (mgr)
GENERAL			
Location	Vail Village	Vail Village	Vista Bahn bldg
Employees ski season	7	60	40
Employees non-ski season	Don't know	30	20
Other comments	None	None	
TRASH COLLECTION			
Arrange directly for trash service?	No	No - Through building	No - Bldg
Property owner/manager?	Austria Haus Hotel	Don't Know	
Share trash containers with others?	Yes	Yes	Yes
If no, where are your containers?	Basement of Austria Haus		
Size?	Large		
How many?	2		
Emptied how often by hauler?	Don't Know		
Which hauler services?	Waste Management ???	Vail Honeywagon	Don't know
Amount of trash generated daily?	4 to 6	10 bags min; 5 in the summer	
Other comments	None	None	
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	Yes
Materials?	OCC, co-mingled containers, paper	OCC, glass, plastic, aluminum	OCC
Collected by same trash hauler?	Bin in basement	Yes	Yes
Document destruction/shredding?	N/A	N/A	
Who does document destruction?	N/A	N/A	
If no collection, how managed?	N/A	N/A	
How much total waste is recycled?	50%	30%	
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No	No	
Recycle more if reduced trash cost?	Yes	Yes, Absolutely	See above
Other comments	None	None	Thinks glass crusher would help
FOOD WASTE			
How much of total is organics?	<3% kitchen waste/most is post-consumer	Not sure	Use waste catchers instead of disposal
Need for organics collection?	Don't know	Better recycling bins; source-separation	Need space
Other comments	Minimize by reusing all baked goods (employ	None	Food waste real issue-OCC/cups covered
LASTLY . . .			
Recycling value to customers?	6.5	9	1.5
Recycling value to owners/staff?	8.5	10	

FOOD BEVERAGE BUSINESS SURVEY RESULTS

	VAIL FINE WINES	VAIL MOUNTAIN LODGE & SPA	VENDETTA'S
Name & Title of Person Contacted	Alan	Jim, Restaurant Manager	Bone, Owner
GENERAL			
Location	Vail Village	Vail Village	Vail Village
Employees ski season	3	50	70
Employees non-ski season	2	30	
Other comments		None	None
TRASH COLLECTION			
Arrange directly for trash service?	No	No - Through Hotel Management	No
Property owner/manager?	Lodge at Vail	N/A	Through Plaza Lodge bldg
Share trash containers with others?	Yes	Hotel & restaurant share container	Yes
If no, where are your containers?		Basement / garage	Outside, under the deck
Size?		6-foot by 8-foot by 6-foot	Don't Know
How many?		Don't Know	Don't Know
Emptied how often by hauler?		Don't Know	Don't Know
Which hauler services?	Waste Management	Don't Know	Don't Know
Amount of trash generated daily?	1/4 large bag	Don't Know	8 to 10
Other comments		None	None
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	No
Materials?	ONP, commingled, OCC	Glass, OCC, paper	
Collected by same trash hauler?	Yes	Don't Know	
Document destruction/shredding?		N/A	
Who does document destruction?		N/A	
If no collection, how managed?		N/A	
How much total waste is recycled?	90%	Don't Know	
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No. In HOA dues.		Don't Know
Recycle more if reduced trash cost?	Yes		N/A
Other comments			None
FOOD WASTE			
How much of total is organics?			1/2 & 1/2
Need for organics collection?			
Other comments			
LASTLY . . .			
Recycling value to customers?	6		Don't Know
Recycling value to owners/staff?	10		5

LODGING BUSINESS SURVEY RESULTS

	ARRABELLE AT VAIL SQUARE	LION SQUARE LODGE	MONTANEROS
Name & Title of Person Contacted	John, Hotel Manager	Matt Park, Maintenance Director	Carey, General Manager
GENERAL			
Location	Lionshead	Lionshead	Lionshead
Employees ski season	170	30	15
Employees non-ski season	140	20	10-15
Other comments	None	None	Work to keep employees year round
TRASH COLLECTION			
Arrange directly for trash service?	Yes - through Adam	Yes	Yes
Property owner/manager?	Vail Resorts	Resort manages w housekeeping	No
Share trash containers with others?	All businesses use the Arrabelle	No	All "owners" in bldg use containers
If no, where are your containers?	Loading Dock	N tower has own/S&E use Arrabelle	Within the garage of the property
Size?	30-yard Roll-off	North 3-yard. South & East Roll-Offs	4 to 6 yd containers (small dumpsters)
How many?	2	1 North Tower. 2 South & East Tower.	2
Emptied how often by hauler?	2 /week winter; 1/week summer	3x/week	Varies by season and occupancy
Which hauler services?	Waste Management	North - Honeywagon. South&East WM	Vail Honeywagon
Amount of trash generated daily?	Has no idea	3x/week	37 units, can have 37 bags of trash
Other comments	1 RO for Mtn, 1 for Arrabelle/retail	None	None
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	Yes
Materials?	OCC, Paper, Plastics	OCC/ONP/OP/Can/Bottle co-mingled	OCC; Co-mingled containers & paper
Collected by same trash hauler?	Don't know - Adam manages	Yes	Yes - Vail Honeywagon
Document destruction/shredding?	N/A	N/A	No shredding
Who does document destruction?	N/A	N/A	N/A
If no collection, how managed?	Arrabelle Dock & picked up by WM	N/A	N/A
How much total waste is recycled?	None	25%	5%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	Don't know - Adam manages	\$12,000 budget for the 3 Towers	Don't know
Recycle more if reduced trash cost?	Don't know - Adam manages	Don't know	Goal is to recycle
Other comments	None	None	None
FOOD WASTE			
How much of total is organics?	N/A	Condo kitchen FW, leased restaurant	Waste from individual units
Need for organics collection?	N/A	No impact, residential	Residential application w/outreach
Other comments	Only food fm Tavern mgd by Arrabelle	None	None
LASTLY . . .			
Recycling value to customers?	7	4	7
Recycling value to owners/staff?	8	8	7

LODGING BUSINESS SURVEY RESULTS

	VAIL SPA CONDOMINIUM ASSO	AUSTRIA HAUS HOTEL	EVERGREEN LODGE AT VAIL
Name & Title of Person Contacted	Jeff Andrews, General Manager	Laura Warren	Juan, Engineer
GENERAL			
Location	Lionshead	Vail Village	Vail Village
Employees ski season	20	35	50
Employees non-ski season	15	33	30
Other comments	None	Mgd by Exec/GM for Lodge at Vail	None
TRASH COLLECTION			
Arrange directly for trash service?	Yes - on behalf prop mgmt company	Yes	Yes
Property owner/manager?	East / West Residences	Building manages for all tenants	No
Share trash containers with others?	Yes - with all tenants in the building	Yes	No
If no, where are your containers?	New trash area off south frontage rd	Garage	Behind kitchen backdoor
Size?	6 -yard	5-yard	Roll-off/compactor (4-foot by 20-foot)
How many?	1	2	1
Emptied how often by hauler?	3 / week	Varies - at least 3-4 times per week	Every 1 - 1 1/2 mos; 2 mos in summer
Which hauler services?	Waste Management	Vail Honeywagon	Waste Management
Amount of trash generated daily?	3 bags fm office; 4 fm common areas	Varies based on occupancy	15 bags
Other comments	8-yard container too big for area.	None	None
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	Yes
Materials?	Singlestream, excluding OCC	OCC/cont/ONP/batt/bulbs/ewaste	OCC/alum/paper/plastic/glass/batt
Collected by same trash hauler?	Yes	Yes	Yes, for everything but batteries
Document destruction/shredding?	Yes - via desk side shredders	Yes, desk side shredders (no service)	Don't know, maybe in accounting
Who does document destruction?	Recycled with their single stream	Put shredded paper w other recycling	N/A
If no collection, how managed?	Cardboard to Town drop-off	Batt to recycler, ewaste picked up	N/A
How much total waste is recycled?	30 to 40 %	Don't know	Don't know
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	\$900-\$1,000/mo high, lower off	Avg \$900 to \$1,000/mo for both	\$1,200-\$1,500/mo w/pick up; \$200 w/o
Recycle more if reduced trash cost?	Yes	Yes	Suppose this would be good
Other comments	None	Reduced costs by paying attn. to waste	Recycling costs - \$175 per month
FOOD WASTE			
How much of total is organics?	N/A	Trash from continental breakfast	No estimate
Need for organics collection?	N/A	Yes - containers helpful	N/A
Other comments	None	Starbuck's/Marble Slab would benefit	None
LASTLY . . .			
Recycling value to customers?	7.5	7	10
Recycling value to owners/staff?	7.5	7.5	10

LODGING BUSINESS SURVEY RESULTS

	INSPIRATO SOLARIS	LODGE AT VAIL, THE	LODGE TOWER, THE
Name & Title of Person Contacted	Bill Marshall, General Manager	Stephen Nicolas, General Manager	Mike, Facilities Manager
GENERAL			
Location	Vail Village	Vail Village	Vail Village
Employees ski season	50	220	30
Employees non-ski season	25	100	10
Other comments	None	None	Privately owned; w/BOD
TRASH COLLECTION			
Arrange directly for trash service?	Yes	No, through dock / Mountain Ops	Yes
Property owner/manager?	No	N/A	N/A
Share trash containers with others?	Yes	Yes - Elway's / Vail Mountain Club	No
If no, where are your containers?	Loading Dock	Loading Dock	Dock / garage area
Size?	6-yard container	N/A	3-yard, possibly 5
How many?	4	N/A	1 Compactor; 2 Dumpsters
Emptied how often by hauler?	Don't Know	N/A	1 to 2 times per week, as needed
Which hauler services?	Don't Know	Vail Mountain Ops	Vail Honeywagon
Amount of trash generated daily?	Don't Know	This is not tracked	Varies
Other comments	Reduced container size this year	None	
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	Yes
Materials?	OCC, Glass, Plastic	OCC, paper, glass, grease, containers	OCC - paper; glass; plastic
Collected by same trash hauler?	Don't Know	Use recycle dumpster in loading dock	Yes
Document destruction/shredding?	N/A	N/A	No; desk shreds put in trash
Who does document destruction?	N/A	N/A	N/A
If no collection, how managed?	N/A	N/A	N/A
How much total waste is recycled?	Don't Know	20%	25%; paper/newspaper, glass recycled
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No	Yes - Pay 67% of loading dock allocation	Don't know, varies
Recycle more if reduced trash cost?	Yes	Yes	Yes/no incentive but right thing to do
Other comments	None	None	None
FOOD WASTE			
How much of total is organics?	None	30%	Negligible
Need for organics collection?	N/A	Containers and space on dock	No, not enough volume
Other comments	Don't know if grease recycled	None	
LASTLY . . .			
Recycling value to customers?	3	8	3.5
Recycling value to owners/staff?	5.5	10	8

LODGING BUSINESS SURVEY RESULTS

	MOUNTAIN HAUS CONDOMINIUM	SITZMARK LODGE, THE	TIVOLI LODGE, THE
Name & Title of Person Contacted	Matt, Sales & Marketing Director	Jeanne Fritz, General Manager	Jim Promo, General Manager
GENERAL			
Location	Vail Village	Vail Village	Vail Village
Employees ski season	45	12	33
Employees non-ski season	35	11	20-22
Other comments	None	None	None
TRASH COLLECTION			
Arrange directly for trash service?	Yes	No	Yes
Property owner/manager?	No	Shiffer	N/A
Share trash containers with others?	No, but used by residents, restaurants	Yes - with Blues, Sweet Basel	No
If no, where are your containers?	Basement	N/A	Entrance to the basement / garage
Size?	4-yard (4-foot by 4- or 6-foot)	Big - est. >4 foot, < 8	Don't Know
How many?	3	2	1
Emptied how often by hauler?	Daily	Not provided	Winter - 3-4x week; Summer 2x week
Which hauler services?	Vail Honeywagon	Vail Honeywagon	Vail Honeywagon
Amount of trash generated daily?	12-Cubic Yds/Day (3 containers daily)	6-10 gallon (big trash bags) per day	25 to 30 bags
Other comments	None		None
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	No
Materials?	OCC, Co-mingled containers / paper	Yes - OCC	N/A
Collected by same trash hauler?	Yes - Co-Mingled	Yes - for Cardboard	N/A
Document destruction/shredding?	N/A	1/yr Paperwise shreds lg volume	N/A
Who does document destruction?	N/A	Paperwise	N/A
If no collection, how managed?	Cardboard to Town Drop-Site	Cans/plastic taken to Town drop-off	N/A
How much total waste is recycled?	33% to 50%	14% (one to two bags per day)	N/A
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No	No, part of rental fees	\$600/mo. Winter; \$300/mo. Summer
Recycle more if reduced trash cost?	No, would pay to recycle, important	N/A	Yes
Other comments	None	None	None
FOOD WASTE			
How much of total is organics?	Cmpstble utensils for 350 guests/day	Small percentage	20%
Need for organics collection?	Would separate & take to town site	N/A	Yes, incorporate collection, training
Other comments	Comp prod in trash anyways	Any food waste goes into trash	None
LASTLY . . .			
Recycling value to customers?	9	5	5
Recycling value to owners/staff?	9	8	7

RETAIL BUSINESS SURVEY RESULTS

	ARRIESGADO CLOTHING CO. LTD	BOOT LAB,THE	BURTON @ ARRABELLE
Name & Title of Person Contacted	Eva, Store Manager	Dave	MacKenzie, Sales/Cashier
GENERAL			
Location	Lionshead	Lionshead	Lionshead
Employees ski season	Don't know	4	15
Employees non-ski season		0	5
Other comments	None	Winter = 1 fFT/3 PT closed summer	
TRASH COLLECTION			
Arrange directly for trash service?	No - Through property manager	No	Yes
Property owner/manager?	Arrabelle	Don't know	
Share trash containers with others?	Yes	Yes	Store bins hauled to the Arrabelle.
If no, where are your containers?	Loading Dock		
Size?	N/A		
How many?	N/A		
Emptied how often by hauler?	N/A		
Which hauler services?	Don't Know	Vail Honeywagon	Vail Resorts
Amount of trash generated daily?	2 bags	1 large bag	1
Other comments	None		
IF YOU ARE RECYCLING			
Do you recycle?	Yes	No	Yes
Materials?	OCC		Cardboard, plastic, glass
Collected by same trash hauler?	Take cardboard to a bin in the basement		Don't know
Document destruction/shredding?	N/A		
Who does document destruction?	N/A		
If no collection, how managed?	N/A		
How much total waste is recycled?	Don't Know		20%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No - included in their building fees	No	
Recycle more if reduced trash cost?	Yes	Yes	
Other comments	None		
FOOD WASTE			
How much of total is organics?	N/A		
Need for organics collection?	N/A		
Other comments	None		
LASTLY . . .			
Recycling value to customers?	6.5	7.5	8
Recycling value to owners/staff?	6.5	7.5	8

RETAIL BUSINESS SURVEY RESULTS

	CHARLIE'S SHIRTS	CHARTER SPORTS-MARRIOTT	DOUBLE DIAMOND SKI & SPOR
Name & Title of Person Contacted	Boulder, Owner	Chelsey, Employee	Bill, Sales Associate
GENERAL			
Location	Lionshead	Lionshead	Lionshead
Employees ski season	35	20	30
Employees non-ski season	25	20	10
Other comments			
TRASH COLLECTION			
Arrange directly for trash service?	No. Arrangmnts made by Mountaineros.	No	Yes
Property owner/manager?		Marriott	
Share trash containers with others?	Yes	No. One large bin for the Marriott.	Yes
If no, where are your containers?			
Size?		Regular large container.	
How many?		1	
Emptied how often by hauler?		No	
Which hauler services?	Vail Honeywagon	Don't know	Waste Management
Amount of trash generated daily?	2 large bags	3 large bags	3 large bags
Other comments			
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	Yes
Materials?	Cardboard, some casns/bottles	Cardboard, paper	Cardboard and paper
Collected by same trash hauler?	Yes	Yes	Yes
Document destruction/shredding?			
Who does document destruction?			
If no collection, how managed?			
How much total waste is recycled?	Depends on how busy.	25%	60%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No. Talk to accountant.	No	No
Recycle more if reduced trash cost?		Yes	Yes
Other comments			
FOOD WASTE			
How much of total is organics?			
Need for organics collection?			
Other comments			
LASTLY . . .			
Recycling value to customers?	10	8	6
Recycling value to owners/staff?	10	9	10

RETAIL BUSINESS SURVEY RESULTS

	JEANNIE THOREN'S WOMEN'S	LIONSHEAD TICKET OFFICE	NORTH FACE VAIL LANDMARK
Name & Title of Person Contacted	Jeannie Thorne, Owner	Ferrell, Pass Office Supervisor	Brian, Assistant Manager (seasonal)
GENERAL			
Location	Lionshead	Lionshead	Lionshead
Employees ski season	2	30	6
Employees non-ski season	2	12	3
Other comments	None		
TRASH COLLECTION			
Arrange directly for trash service?	No. Through property manager	No	Yes
Property owner/manager?	N/A	Vail Resorts	
Share trash containers with others?	Yes	Yes	Yes
If no, where are your containers?	Basement of building		Arrabelle
Size?	N/A		
How many?	N/A		
Emptied how often by hauler?	N/A		
Which hauler services?	Don't Know	Don't know	Don't know
Amount of trash generated daily?	1 bag	1 large bag	1 large bag
Other comments	None		
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	Yes
Materials?	OCC, whatever recycled by bldg	Paper, cardboard, plastic, aluminum	Aluminum, paper, cardboard, plastic.
Collected by same trash hauler?	Take cardboard to bin in basement	Vail Resorts	Don't know
Document destruction/shredding?	N/A		
Who does document destruction?	N/A		
If no collection, how managed?	N/A		Take all recycling to Arabelle
How much total waste is recycled?	Don't know - varies	50-75%	25%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No. Included in building fees	No	No
Recycle more if reduced trash cost?	Yes		
Other comments	None		
FOOD WASTE			
How much of total is organics?	N/A		
Need for organics collection?	N/A		
Other comments			
LASTLY . . .			
Recycling value to customers?	Don't Know	5	3
Recycling value to owners/staff?	10	10	10

RETAIL BUSINESS SURVEY RESULTS

	PATAGONIA @ ARRABELLE	QUIKSILVER @ ARRABELLE	VAIL SPORTS/VAIL 21 #711
Name & Title of Person Contacted	Jeff Seme, Supervisor	Brian, Sales Manager	Nick, Manager
GENERAL			
Location	Lionshead	Lionshead	Lionshead
Employees ski season	9	5	30-40
Employees non-ski season	3-4	3	20
Other comments			
TRASH COLLECTION			
Arrange directly for trash service?	No	No	No
Property owner/manager?		Part of Arrabelle.	Don't know
Share trash containers with others?	Yes	Yes	Yes
If no, where are your containers?			
Size?			
How many?			
Emptied how often by hauler?			
Which hauler services?	Don't know	Don't know	Don't know
Amount of trash generated daily?	1 on average; heavy days or 2-3	1/2 large bag	8 to 10 large bags
Other comments			
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	Yes
Materials?	Mixed containers, cardboard	Cans, bottles, paper, cardboard, plastic	Cardboard
Collected by same trash hauler?	Don't know	Don't know	Not collected.
Document destruction/shredding?			
Who does document destruction?			
If no collection, how managed?	Flourescent lightbulbs to Home Depot	Part of Arrabelle.	Staff takes cardboard to Town's center
How much total waste is recycled?	50%	75-80%	10-20%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No	No. Arranged through corporate.	No
Recycle more if reduced trash cost?			
Other comments			
FOOD WASTE			
How much of total is organics?			
Need for organics collection?			
Other comments			
LASTLY . . .			
Recycling value to customers?	4	7	7
Recycling value to owners/staff?	10	10	7

RETAIL BUSINESS SURVEY RESULTS

	A SECRET GARDEN INC	BAG & PACK SHOP, THE	BELLA ITALIA
Name & Title of Person Contacted	Susan, Owner	JT Thompson, Owner	
GENERAL			
Location	Vail Village	Vail Village	Vail Village
Employees ski season	5	7	2
Employees non-ski season	4	4	2
Other comments			
TRASH COLLECTION			
Arrange directly for trash service?	No	No	No
Property owner/manager?	Joe Staufford	Fred Hibbard, in WY	Lodge at Vail
Share trash containers with others?	Yes	Yes	Yes
If no, where are your containers?			
Size?			
How many?			
Emptied how often by hauler?			
Which hauler services?	No	Vail Honeywagon	Vail Honeywagon
Amount of trash generated daily?	1 39 gallon bag	About 1	1/3 large bag
Other comments			
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	Yes
Materials?	Cardboard, glass, paper (lots)	Cardboard, paper, plastic, cans, bottle.	Cardboard, plastics
Collected by same trash hauler?	Not collected.	Cardboard is collected.	Yes. For cardboard.
Document destruction/shredding?			
Who does document destruction?			
If no collection, how managed?	Taken to comm. center every day	Taken to town drop-off site	Bottles, other recyclables to town bins.
How much total waste is recycled?	50%	60%	90%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No	No	No
Recycle more if reduced trash cost?			Yes
Other comments			
FOOD WASTE			
How much of total is organics?	50% is plant waste, not food waste.		
Need for organics collection?	Container size determines frequency.		
Other comments			
LASTLY . . .			
Recycling value to customers?	8	5	3
Recycling value to owners/staff?	9.5	10	10

RETAIL BUSINESS SURVEY RESULTS

	BLITZ	BURTON @ VAIL #704	CHARM SCHOOL BOUTIQUE
Name & Title of Person Contacted	Barbara Smith, Owner	Steph	Tasha, Sales Person
GENERAL			
Location	Vail Village	Vail Village	Vail Village
Employees ski season	4	6	3
Employees non-ski season	3	3	3
Other comments			
TRASH COLLECTION			
Arrange directly for trash service?	No	No	No
Property owner/manager?	Johannes Hessler	Vail Resorts	
Share trash containers with others?	Yes	Yes	Yes
If no, where are your containers?			
Size?			
How many?			
Emptied how often by hauler?			
Which hauler services?	Don't know	Vail Honeywagon	Don't know
Amount of trash generated daily?	1-2 large bags	1 large bag	1/4 large bag
Other comments			
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	Yes
Materials?	Plastic and cardboard.	Cardboard, have a lot of boxes.	Cardboard.
Collected by same trash hauler?	No		Don't know.
Document destruction/shredding?			
Who does document destruction?			
If no collection, how managed?		Also ONP, plastics normally collected.	
How much total waste is recycled?	25%	30%	60%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No	No	No
Recycle more if reduced trash cost?	Yes	Yes	Yes
Other comments			
FOOD WASTE			
How much of total is organics?		35%	
Need for organics collection?			
Other comments			
LASTLY . . .			
Recycling value to customers?	9	7.5	8
Recycling value to owners/staff?	10	8.5	8

RETAIL BUSINESS SURVEY RESULTS

	CLAGGETT/REY GALLERY, LLC	COLORADO FOOTWEAR	COS BAR OF VAIL
Name & Title of Person Contacted	Laura, Associate	Robin	Laura, Store manager
GENERAL			
Location	Vail Village	Vail Village	Vail Village
Employees ski season	4		6
Employees non-ski season	4		4
Other comments			
TRASH COLLECTION			
Arrange directly for trash service?	No	No	No
Property owner/manager?	Vail Village Association	Don't know	Lodge at Vail
Share trash containers with others?	Yes	Yes	Yes
If no, where are your containers?			
Size?			
How many?			
Emptied how often by hauler?			
Which hauler services?	Don't know	Don't know	Vail Honeywagon
Amount of trash generated daily?	2 large bags	2 large bags	2 large bags
Other comments			
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	Yes
Materials?	Paper and cardboard	Cardboard	Cans, bottles, newspapers, boxes
Collected by same trash hauler?		Don't know	Don't know. Recycling bins near garbage
Document destruction/shredding?			
Who does document destruction?			
If no collection, how managed?	Take it ot the Vail recycling bin.		
How much total waste is recycled?	15%	No answer.	75%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No	No	No
Recycle more if reduced trash cost?	Yes		
Other comments			
FOOD WASTE			
How much of total is organics?			
Need for organics collection?			
Other comments			
LASTLY . . .			
Recycling value to customers?	5	Don't know	4
Recycling value to owners/staff?	8		3

RETAIL BUSINESS SURVEY RESULTS

	DESIGNER FURS	ELEGANT ILLUSION CREATED	GILDED SPRUCE,THE
Name & Title of Person Contacted	Juan	Linda, Owner	Dena
GENERAL			
Location	Vail Village	Vail Village	Vail Village
Employees ski season	3	1	4
Employees non-ski season	2	1	3-4
Other comments			
TRASH COLLECTION			
Arrange directly for trash service?	No	No	No
Property owner/manager?	Bridgestreet Building	Lodge at Vail	Landlord
Share trash containers with others?	No	Yes	Yes
If no, where are your containers?	Inside the building, as soon as walk in		
Size?	Regular dumpster containers		
How many?	2 or 3		
Emptied how often by hauler?	No		
Which hauler services?	Don't know	Don't know. Green truck.	Vail Honeywagon
Amount of trash generated daily?	1/3 large bag	None. One bag of trash per week.	1 large bag
Other comments			
IF YOU ARE RECYCLING			
Do you recycle?	No	Yes	Yes
Materials?		Water bottles	Cardboard, newspapers, bottles.
Collected by same trash hauler?			Yes
Document destruction/shredding?			
Who does document destruction?			
If no collection, how managed?		Take them to bin by check-point charlie.	
How much total waste is recycled?		Don't know	75%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No	No	No. Part of rent.
Recycle more if reduced trash cost?	Yes	Yes	
Other comments			
FOOD WASTE			
How much of total is organics?			
Need for organics collection?			
Other comments			
LASTLY . . .			
Recycling value to customers?	10		1
Recycling value to owners/staff?	10		9

RETAIL BUSINESS SURVEY RESULTS

	GOLDEN BEAR,THE	INFUSION FINE GIFTS	KARATS
Name & Title of Person Contacted	Lacy, Sales Associate	George	L-i-e-v
GENERAL			
Location	Vail Village	Vail Village	Vail Village
Employees ski season	7	3	5
Employees non-ski season	7	3	5
Other comments			
TRASH COLLECTION			
Arrange directly for trash service?	No	No	No
Property owner/manager?			Landlord
Share trash containers with others?	Yes	Yes	Yes
If no, where are your containers?			
Size?			
How many?			
Emptied how often by hauler?			
Which hauler services?	Don't know.	Waste Management	Vail Honeywagon
Amount of trash generated daily?	1 bag	Less than 1 large bag	1 large bag
Other comments			
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	Yes
Materials?	Commingled and newspapers.	Cardboard	OCC/ONP/cont - separate for OCC
Collected by same trash hauler?			Yes
Document destruction/shredding?			
Who does document destruction?			
If no collection, how managed?	Staff takes to bins located on the street.		Cont/ONP to Town bins.
How much total waste is recycled?	25%	50%	20%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No	No. Part of rent.	No. Part of rent.
Recycle more if reduced trash cost?	Yes		
Other comments			
FOOD WASTE			
How much of total is organics?			
Need for organics collection?			
Other comments			
LASTLY . . .			
Recycling value to customers?	6	4	3
Recycling value to owners/staff?	10	4	7

RETAIL BUSINESS SURVEY RESULTS

	KIDSPORT	LUCA BRUNO	MASTERS GALLERY AT VAIL,
Name & Title of Person Contacted	Bree, Sales Associate	Luca, Owner	Rayla Kundol, Director
GENERAL			
Location	Vail Village	Vail Village	Vail Village
Employees ski season	6	3	5
Employees non-ski season	6	3	5
Other comments			
TRASH COLLECTION			
Arrange directly for trash service?	No	No. Included in building rent.	No
Property owner/manager?	Doesn't know		Vail Plaza/Sebastian
Share trash containers with others?	Yes	Yes	Yes
If no, where are your containers?			
Size?			
How many?			
Emptied how often by hauler?			
Which hauler services?	Vail Honeywagon	Vail Honeywagon	Vail Honeywagon
Amount of trash generated daily?	2 large bags	1 8-gallon bag	1/2 large bag
Other comments			
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	Yes
Materials?	Plastic and cardboard	Cardboard and plastic.	Newspapers, paper, cardboard.
Collected by same trash hauler?	Yes		Thinks same hauler; all bins same color
Document destruction/shredding?			
Who does document destruction?			
If no collection, how managed?		Taken to recycling bin at Solaris.	Newspapers walked to Town bins, Sebas
How much total waste is recycled?	75%	70%	75%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No	No	No
Recycle more if reduced trash cost?		Yes	
Other comments			
FOOD WASTE			
How much of total is organics?			
Need for organics collection?			
Other comments			
LASTLY . . .			
Recycling value to customers?	Don't know	Don't know	1
Recycling value to owners/staff?	8	10	7

RETAIL BUSINESS SURVEY RESULTS

	MOOSE'S CABOOSE, THE	NORTH FACE-SOLARIS	PISMO GALLERY AT VAIL
Name & Title of Person Contacted	Stacy Knox	Bryan (manager)	Eliza (staffer)
GENERAL			
Location	Vail Village	Vail Village - Solaris	122 E Meadow Bldg
Employees ski season	4		
Employees non-ski season	3		
Other comments			
TRASH COLLECTION			
Arrange directly for trash service?	No	No	No
Property owner/manager?	Building Manager	Solaris	Building
Share trash containers with others?	Yes	Yes	Yes
If no, where are your containers?			
Size?			
How many?			
Emptied how often by hauler?			
Which hauler services?	No	No	Don't know
Amount of trash generated daily?	1/2 large bag	Don't know	2 small bags
Other comments		Part of VR Green pgm	Trash/recycling convenient as Pismo's ha
IF YOU ARE RECYCLING			
Do you recycle?	No	Yes	Yes
Materials?		OCC, some plastic pkg	OCC, ONP, mixed paper
Collected by same trash hauler?		Don't know	Don't know
Document destruction/shredding?		NA	NA
Who does document destruction?			
If no collection, how managed?	ian bins for cardboard. Sometimes take recycling to Solaris.		
How much total waste is recycled?		>50% by volume (unflattened OCC)	10% at store, more at warehouse
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No	No	No
Recycle more if reduced trash cost?		Probably	Probably
Other comments			
FOOD WASTE			
How much of total is organics?		NA	NA
Need for organics collection?		NA	NA
Other comments			
LASTLY . . .			
Recycling value to customers?	Don't know		3-Jan 5 to 10
Recycling value to owners/staff?	7	Don't know	9

RETAIL BUSINESS SURVEY RESULTS

	SQUASH BLOSSOM, THE	TOY STORE, THE	VAIL GEAR
Name & Title of Person Contacted	Megan	Stacy, Clerkette	Mandy
GENERAL			
Location	Vail Village	Vail Village	Vail Village
Employees ski season	4	3	5
Employees non-ski season	4	3	3
Other comments			
TRASH COLLECTION			
Arrange directly for trash service?	No	No	No
Property owner/manager?		Plaza Building	
Share trash containers with others?	Yes	Yes	Yes
If no, where are your containers?			
Size?			
How many?			
Emptied how often by hauler?			
Which hauler services?	Vail Honeywagon	Vail Honeywagon	Don't know
Amount of trash generated daily?	1/2 large bag	Several bags	1/2 large bag
Other comments	s storage space		
IF YOU ARE RECYCLING			
Do you recycle?	Yes	No	No
Materials?	Cardboard, paper, whatever accepted		
Collected by same trash hauler?	Take recycling to the bins at The Lodge.		
Document destruction/shredding?			
Who does document destruction?			
If no collection, how managed?			
How much total waste is recycled?	25%		
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No	No	No
Recycle more if reduced trash cost?			Yes
Other comments		Cost part of "common" fees.	
FOOD WASTE			
How much of total is organics?			
Need for organics collection?			
Other comments			
LASTLY . . .			
Recycling value to customers?	Don't know	Don't know	2
Recycling value to owners/staff?	7	5	9

RETAIL BUSINESS SURVEY RESULTS

	VAIL SPORTS MOUNTAIN PLAZ	VAIL VILLAGE ARTS	VAIL MOUNTAIN CLUB
Name & Title of Person Contacted	Emily, Manager	Kate, Assistant Manager	Jane Ivy, Director
GENERAL			
Location	Vail Village	Vail Village	Vail Village
Employees ski season	25		645
Employees non-ski season	0		615
Other comments			Vail Resorts Property
TRASH COLLECTION			
Arrange directly for trash service?	No	No	No
Property owner/manager?	Mountain Plaza Building	Yes	Through Vail Resorts International
Share trash containers with others?	Yes	Yes	Yes
If no, where are your containers?			N/A
Size?			N/A
How many?			N/A
Emptied how often by hauler?			N/A
Which hauler services?	Vail Honeywagon	Don't know	Vail Mountain Operations
Amount of trash generated daily?	3 to 7 large bags	1 large bag per week	5 bags
Other comments			
IF YOU ARE RECYCLING			
Do you recycle?	No	Yes	Yes
Materials?		Cardboard	OCC, paper, plastic, glass
Collected by same trash hauler?		Don't know	Same
Document destruction/shredding?			Yes
Who does document destruction?			Internal
If no collection, how managed?			N/A
How much total waste is recycled?			50% 50 - 75%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No	No	No
Recycle more if reduced trash cost?	Yes	Yes	Yes
Other comments			
FOOD WASTE			
How much of total is organics?			N/A
Need for organics collection?			We would like to compost.
Other comments			
LASTLY . . .			
Recycling value to customers?	7		79
Recycling value to owners/staff?	9.5		510

PROFESSIONAL BUSINESS SURVEY RESULTS

	ANTLERS AT VAIL R.E., LLC	DESTINATION RESORTS	FIRSTBANK LIONSHEAD
Name & Title of Person Contacted	Tom Schlader, Dir Pres/Engring	Aubrey, Receptionist	Sherry
GENERAL			
Location	Lionshead	Lionshead	Lionshead
Employees ski season	40	8	3
Employees non-ski season	30	4	2
Other comments		3 associations/many properties	N/A
TRASH COLLECTION			
Arrange directly for trash service?	Yes	No - Housekeeping takes trash to bins	No
Property owner/manager?	No. Work for HOA	The Landmark	The Lifthouse
Share trash containers with others?	No	Yes	Yes - other businesses in The Lifthouse
If no, where are your containers?	Compactor, containers good access	In the garage	N/A
Size?	10 90-g carts/OCC dump/4-cy comp	Don't Know	Big Bin (Didn't know size)
How many?		4 to 5	Don't know
Emptied how often by hauler?	Trash 3 days/wk - recycling 1/wk	Don't Know	Don't know
Which hauler services?	Waste Management	Waste Management	Don't know
Amount of trash generated daily?	Probably 1 yard to 1 1/2	1 bag	6 small bags per week
Other comments		None	Cleaning service moves trash
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	Yes
Materials?	OCC/paper/containers single-stream	OCC, paper, plastic, cans	Newspapers and drink containers
Collected by same trash hauler?	Yes	Yes	Waste Mgmt (Vail Village location)
Document destruction/shredding?		Yes	Yes
Who does document destruction?		Bins in garage; shred 1/yr	Cintas
If no collection, how managed?	Battery/light bulb recycle to vendor	Take to the bins in the garage	ONP, containers to town DOC
How much total waste is recycled?	25%	Don't Know - Majority	20%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	\$400/mo. recycling, \$900 for trash.	No - Housekeeping does	No - same as Vail Village location
Recycle more if reduced trash cost?	I think so.	Yes	Already recycling all they can.
Other comments		None	None
FOOD WASTE			
How much of total is organics?	Very minimal, not like a restaurant.	N/A	Food waste fm employee lunches
Need for organics collection?	Space.	N/A	N/A
Other comments		None	None
LASTLY . . .			
Recycling value to customers?	5	6.5	7.5
Recycling value to owners/staff?	8	8	8

PROFESSIONAL BUSINESS SURVEY RESULTS

	LIONSHEAD ADULT SKI SCHOOL	SKI VALET/BIKE VALET	COLORADO MOUNTAIN MEDICAL
Name & Title of Person Contacted	Mike	Rob	Darrell (Ops); Stephanie (Dir or Security)
GENERAL			
Location	Lionshead	Lionshead	Vail Village
Employees ski season	35	6	700
Employees non-ski season	15	4	700
Other comments	None	None	None
TRASH COLLECTION			
Arrange directly for trash service?	Don't Know - Cleaning crew picks up	No	Yes - mges trash & recycling for VVMC
Property owner/manager?	Don't Know	Rob Dale, building property manager	N/A
Share trash containers with others?	Yes	Yes	Just with hospital complex
If no, where are your containers?	N/A	Downstairs in the garage	Outside off of street
Size?	N/A	N/A	Trash comp/40-cy for construction
How many?	N/A	Have 1 bin for cardboard, another for alur	1 of each
Emptied how often by hauler?	N/A	N/A	MWF; captures FW/trash/medical
Which hauler services?	N/A	Vail Honeywagon	Vail Honeywagon
Amount of trash generated daily?	35 sm bags/1 can per window	1 bag every few days	A lot
Other comments	None	None	Staff takes trash/recycling to hospital
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	Yes
Materials?	OCC, aluminum, plastic	OCC, whatever recycled by bldg	OCC/ONP/containers/grease, bio/haz
Collected by same trash hauler?	Picked up every few days by Vail Resorts	Take cardboard to a bin in the basement	Yes
Document destruction/shredding?	N/A	N/A	Yes
Who does document destruction?	N/A	N/A	Shred-It 1/wk - Summit Grease 1/mo
If no collection, how managed?	N/A	N/A	SteriCycle 2/wk, Clean Harbors (1/mo
How much total waste is recycled?	Don't Know	Very little	15%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No	No - Included in their building fees	\$4K/month
Recycle more if reduced trash cost?	Yes	Yes	Yes
Other comments		None	None
FOOD WASTE			
How much of total is organics?	Minimal food waste; less than 1%	N/A	15 bags - vary from 12 to 16 per day
Need for organics collection?	N/A	N/A	Don't know
Other comments	None	None	None
LASTLY . . .			
Recycling value to customers?	3.5	2	Varies based on customers
Recycling value to owners/staff?	7	7	8

PROFESSIONAL BUSINESS SURVEY RESULTS

	FIRSTBANK VAIL VILLAGE	GREENAUER DESIGN GROUP	LAW OFFICE OF NANCY ADAM, LLC
Name & Title of Person Contacted	Maxine, Office Manager	Liz, Designer	Nancy Adams, Lawyer
GENERAL			
Location	Vail Village	Vail Village	Vail Village
Employees ski season	40		21
Employees non-ski season	40		2
Other comments	N/A		Website: www.nancyadam.com
TRASH COLLECTION			
Arrange directly for trash service?	Yes	No.	No
Property owner/manager?	Not Provided		Property Mngr of HOA: Ross Graves
Share trash containers with others?	Yes - with 2 others	Yes.	Yes
If no, where are your containers?	N/A		N/A
Size?	Big Bin, est. 4 foot (6-yard container)		N/A
How many?	1		N/A
Emptied how often by hauler?	Not Provided		N/A
Which hauler services?	Vail Honeywagon	Waste Management	Don't know
Amount of trash generated daily?	at least 4-60 gallon bags per day	1/4 large bag	1 bag per week
Other comments			
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes.	Yes
Materials?	OCC, paper, newspaper, plastics	Cardboard, plastic, bottles, cans, paper	Cardboard, containers, cans
Collected by same trash hauler?	No		No - OCC taken to Town DOC
Document destruction/shredding?	Yes		No - taken to Town DOC
Who does document destruction?	Cintas		Self
If no collection, how managed?	N/A	Taken to town drop site.	Town of Vail Recycling Center
How much total waste is recycled?	Don't know		25%
		50%	
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	T \$525/month; R \$80; shred \$50-70/mo	No	No
Recycle more if reduced trash cost?	Already recycling all they can.	Yes	No
Other comments	Hard to recycle in general in Vail		None
FOOD WASTE			
How much of total is organics?	Food waste from employee lunches		N/A
Need for organics collection?	N/A		N/A
Other comments	None		None
LASTLY . . .			
Recycling value to customers?	6.5		51
Recycling value to owners/staff?	10		79

PROFESSIONAL BUSINESS SURVEY RESULTS

	LAW OFFICES OF MARGARET HAMLIN	ONE WILLOW BRIDGE ROAD	SPA at FOUR SEASONS RESORT
Name & Title of Person Contacted	Margaret Hamlen	Oliver, General Manager	Craig Newton, Spa Director
GENERAL			
Location	Vail Village	Vail Village	Vail Village
Employees ski season	3	18	27
Employees non-ski season		16	15
Other comments	None	None	
TRASH COLLECTION			
Arrange directly for trash service?	No	Yes	Four Seasons pick-up for entire hotel
Property owner/manager?	Candice Reality, condo association	N/A	Don't know
Share trash containers with others?	Yes	All HOAs/Condos by housekeeping	Yes - Four Seasons
If no, where are your containers?	Exterior common area west of bldg	Loading Dock	Loading dock.
Size?	Approximately 4-foot by 6-foot	15-yard Compactor	
How many?	1	1	
Emptied how often by hauler?	Daily	1 time per month	
Which hauler services?	Vail Honeywagon	Waste Management	No
Amount of trash generated daily?	1 bag	1 1/2 60 gallon bag per day	1 or 2 large bags
Other comments	None	None	
IF YOU ARE RECYCLING			
Do you recycle?	Yes	Yes	Yes
Materials?	Paper; Bottles	OCC/OP/cont/batt/bulbs/wood/bldg	ONP/OP/cont- recycle biodegrad cups
Collected by same trash hauler?	No	Cardboard - WM with neighbor bldg	
Document destruction/shredding?	Yes	Desk shred/combine w neighbor 1/yr	
Who does document destruction?	Self - Use for packing material	Don't Know	
If no collection, how managed?	Take bottles, recyclables to the Town Drop	Cont/OP/batt/bulbs/wood to DOC	Everything picked up on property.
How much total waste is recycled?	30%	50%	50%
TRASH/RECYCLING COST			
Trash/trash & recycling costs?	No - Part of common expense	No	No
Recycle more if reduced trash cost?	Yes	Yes - definitely	
Other comments	None	None	
FOOD WASTE			
How much of total is organics?	Minimal	FW thru leased restaurants only	lin-room dining but not significant.
Need for organics collection?	N/A	N/A	
Other comments	None	None	
LASTLY . . .			
Recycling value to customers?	7	9	7
Recycling value to owners/staff?	7	9.5	10

PROFESSIONAL BUSINESS SURVEY RESULTS

VAIL ATHLETIC CLUB	
Name & Title of Person Contacted	Andy, Head Housekeeper
GENERAL	
Location	Vail Village
Employees ski season	120
Employees non-ski season	50
Other comments	
TRASH COLLECTION	
Arrange directly for trash service?	Yes
Property owner/manager?	
Share trash containers with others?	No
If no, where are your containers?	Small parking garage under hotel.
Size?	2 T dump/1 R dump/6 R bins
How many?	
Emptied how often by hauler?	Every other day/recycling 2x week.
Which hauler services?	Vail Honeywagon
Amount of trash generated daily?	4 large bags
Other comments	
IF YOU ARE RECYCLING	
Do you recycle?	Yes
Materials?	Bottles, newspapers, cardboard
Collected by same trash hauler?	Vail Honeywagon
Document destruction/shredding?	
Who does document destruction?	
If no collection, how managed?	
How much total waste is recycled?	10%
TRASH/RECYCLING COST	
Trash/trash & recycling costs?	No
Recycle more if reduced trash cost?	Yes
Other comments	
FOOD WASTE	
How much of total is organics?	
Need for organics collection?	
Other comments	
LASTLY . . .	
Recycling value to customers?	7
Recycling value to owners/staff?	8

APPENDIX C
WASTE AUDIT RESULTS

TOWN OF VAIL COMMERCIAL WASTE AUDIT

	BUSINESS NAME	SAMPLE #1 WEIGHTS				COMMENTS
		Sorted Recyclables	Sorted Organics	Sorted/Calculated Trash	Total Sample Weight	
Bin Weight Adjustment:		1.75 pounds				
FOOD & BEVERAGE						
Lionshead						
1	Bart & Yeti's	1.50	2.83	0.00	4.33	kitchen prep
2	Bart & Yeti's	0.00	13.05	0.00	13.05	kitchen prep (total adjusted)
3	Garfinkel	0.20	15.80	0.70	16.7	kitchen prep
4	Garfinkel	5.75	2.05	0.30	8.10	rental desk
5	The Little Diner	2.05	18.30	1.55	21.90	mixed kitchen prep & post-consumer
6	Moe's Original BBQ	1.45	22.20	1.60	25.25	kitchen prep
7	Old Forge Pizze	1.35	7.40	0.25	9.00	kitchen prep
8	Old Forge Pizze	2.10	4.75	0.35	7.20	post-consumer
9	Tavern on Square	0.40	8.15	2.20	10.75	kitchen prep
10	Tavern on Square	0.30	45.45	0.00	45.75	kitchen prep
11	Vail Marriott Avalance Pub	0.60	1.85	0.00	2.45	(total adjusted)
12	Vail Marriott Avalance Pub	0.60	0.10	0.00	0.7	(total adjusted)
13	VVMC/Sodexo America	0.20	3.35	0.20	3.75	cafeteria waste
	subtotal	16.50	145.28	7.15	168.93	
Vail Village						
14	Gasthof Gramshammer/Pepi's	0.80	9.35	1.90	12.05	kitchen prep
15	Gasthof Gramshammer/Pepi's	0.40	1.80	0.05	2.25	kitchen prep
16	La Bottega Inc	5.55	0.10	0.35	6.00	
17	La Bottega Inc	1.05	4.70	0.65	6.40	
18	Pazzo's Pizzeria	2.45	7.85	0.25	10.55	kitchen prep
19	The Red Lion	1.95	5.25	1.45	8.65	kitchen prep
20	The Red Lion	2.15	2.70	0.10	4.95	kitchen prep
21	Sebastian Vail	0.45	1.40	0.05	1.90	housekeeping
22	Sebastian Vail	0.55	6.30	2.05	8.90	general
23	Starbucks	1.75	21.45	0.00	23.20	behind counter (total adjusted)
24	Starbucks	0.20	3.20	0.00	3.40	post-consumer
25	Vendetta's	0.15	0.70	0.10	0.95	kitchen prep (total adjusted)
26	Vendetta's	6.85	1.35	0.55	8.75	behind bar
	subtotal	24.3	66.15	7.5	97.95	
	Food & Beverage Total	40.80	211.43	14.65	266.88	
	Percent by Weight	15%	79%	5%		
LODGING						
Lionshead						
27	Arrabelle at Vail Square	4.70	1.45	1.05	7.20	housekeeping
28	Arrabelle at Vail Square	3.10	0.75	0.60	4.45	housekeeping
29	Arrabelle at Vail Square	3.05	1.70	11.70	16.45	Vail Resort's engineering office
30	Montaneros	2.85	0.95	0.20	4.00	guest room 1
31	Montaneros	0.55	3.00	0.55	4.10	guest room 2

TOWN OF VAIL COMMERCIAL WASTE AUDIT

	subtotal	14.25	7.85	14.10	36.20	
Vail Village						
32	Austria Haus Hotel	1.30	2.00	1.20	4.50	housekeeping
33	Austria Haus Hotel	0.25	14.55	0.35	15.15	kitchen prep
34	The Sitzmark Lodge	1.15	2.05	0.10	3.30	kitchen waste
35	The Sitzmark Lodge	0.30	0.83	0.80	1.93	lobby waste
	subtotal	3.00	19.43	2.45	24.88	
	Lodging Total	17.25	27.28	16.55	61.08	
	Percent by Weight	28%	45%	27%		
RETAIL						
Lionshead						
36	Burton at Arrabelle	0.05	0.05	0.70	0.80	
37	Lionshead Liquor Store	12.85	0	0.90	13.75	back office
38	Mariott Charter Sports	0.15	0.95	1.30	2.40	
39	Mariott Charter Sports	0.75	1.75	2.65	5.15	
40	Double Diamond Ski & Sport	0.83	0.55	0.65	2.03	repair counter
41	Double Diamond Ski & Sport	0.10	0.50	0.05	0.6	rental counter
	subtotal	14.73	3.80	6.25	24.73	
Vail Village						
42	American Ski Exchange	1.45	0.10	0.35	1.90	
43	American Ski Exchange	0.25	0.225	1.40	1.88	
44	Annie's	0.55	0	0	0.55	
45	Burton at Vail	0.95	0.15	1.35	2.45	
46	Burton at Vail	1.20	0.15	0.55	1.90	
47	Colorado Footwear	2.25	0.10	4.30	6.65	
48	Colorado Footwear	0.90	0.05	0.15	1.10	
49	Gorsuch Ltd	1.00	0.60	0.80	2.40	
50	Gorsuch Ltd	0.20	0.25	0.70	1.15	
	subtotal	8.75	1.63	9.60	19.98	
	Retail Total	23.48	5.43	15.85	44.70	
	Percent by Weight	53%	12%	35%		
PROFESSIONAL/SERVICE						
Lionshead						
51	Howard Head Sports	0.65	0.65	0.20	1.50	physical therapy area
52	Lionshead Adult Ski School	0.10	0.30	0.00	0.40	(total adjusted)
53	Lionshead Adult Ski School	0.25	0.40	0.95	1.60	
54	VVMC Pharmacy	0.00	0.05	0.20	0.25	non-patient waste
55	VVMC Lobby	0.20	1.15	0.20	1.55	medical center lobby
	subtotal	1.20	2.55	1.55	5.30	
	Professional/Service Total	1.20	2.55	1.55	5.30	
	Percent by Weight	23%	48%	29%		
TOTALS		82.73	246.68	48.60	377.95	
TOTAL PERCENT BY WEIGHT		22%	65%	13%		

Sort Dates: Wed & Thurs 2/22 & 2/23 2012

Sort Location: Arrabelle Green Dock/Lionshead & Mountain Plaza Dock/Vail Village

**APPENDIX D
COMMERCIAL TRASH SUBSCRIPTION LEVEL & POTENTIAL DIVERSION ANALYSIS**

Waste audit percentages were applied to the estimated trash generation levels by representative businesses in each commercial category. The following table includes the information and assumptions used to create this estimate - 2011 subscription-level data provided by the haulers and/or pro-rated actual data were used (the haulers do not yet track trash or recyclables quantities specific to every business).

**TABLE D-1
BUSINESS TRASH QUANTITIES (2011 data, rounded to nearest 10 tons)**

BUSINESS	CATEGORY	MAXIMUM ANNUAL TRASH TONS	ASSUMPTIONS (75% fill level applied to all estimates)
Gasthof Grammshammer	Food & Beverage	160tons/year	500 lbs/cy density
Montaneros	Food & Beverage	120 tons/year	500 lbs/cy density
Vail Marriott Avalanche Pub	Food & Beverage	460 tons/year	Assumes 95% of Pub/Sports combined load (750 lbs/cy compacted density) based on January 2012 data
Vail Mountain Lodge & Spa	Food & Beverage	190 tons/year	500 lbs/cy density
<i>range of Food & Beverage annual trash generation</i>		<i>120-460 tons/year</i>	
Arrabelle	Lodging	220 tons/year	Actual data - assumes 55% of Arrabelle trash compactor actual data
Sebastian Vail	Lodging	500 tons/year	750 lbs/cy compacted density
<i>range of Lodging annual trash generation</i>		<i>220-500 tons/year</i>	
Burton at Arrabelle	Retail	10 tons/year	Actual data - assumes 3% of Arrabelle trash compactor actual data
Charter Sports - Marriott	Retail	20 tons/year	Assumes 5% of Pub/Sports combined load (750 lbs/cy compacted density)
<i>range of Retail annual trash generation</i>		<i>10 - 20 tons/year</i>	
Lionshead Adult Ski School	Professional & Service	10 tons/year	Actual data - assumes 2% of Arrabelle trash compactor actual data
CMMC	Professional & Service	200 tons/year	Actual data from on-call compactor (excludes remodel/C&D debris)
<i>range of Professional & Service annual trash generation</i>		<i>10-200 tons/year</i>	

Subscription & actual data provided by Vail Resorts, Vail Honeywagon & Waste Management - data provided for only one (two at most) businesses in each category. This required numerous assumptions that may skew the results - better hauler data will be required to assess these values more accurately..

Using the trash data provided by haulers in Table D-1 and the generation ranges estimated diversion levels estimated by businesses in Figure D-1¹, we can draw some loose assumptions about the overall commercial diversion rate in Lionshead and Vail Villages. Table D-2 below shows that the average appears to be approximately 23%.

¹ It should be noted that the responses in the figure are not based on measured data and only reflect the off-the-cuff impression of one representative interviewed at each business. It is likely that these levels are over-estimated.

If the Town can develop a diversion estimate for the residential sector, a Town-wide rate for municipal solid waste may be determined (this would provide a basis for measuring the Environmental Sustainability Strategic Plan's landfill reduction goal)².

FIGURE D-2
 REPORTED DIVERSION LEVELS BY INTERVIEWED BUSINESSES
 (one survey response/business)

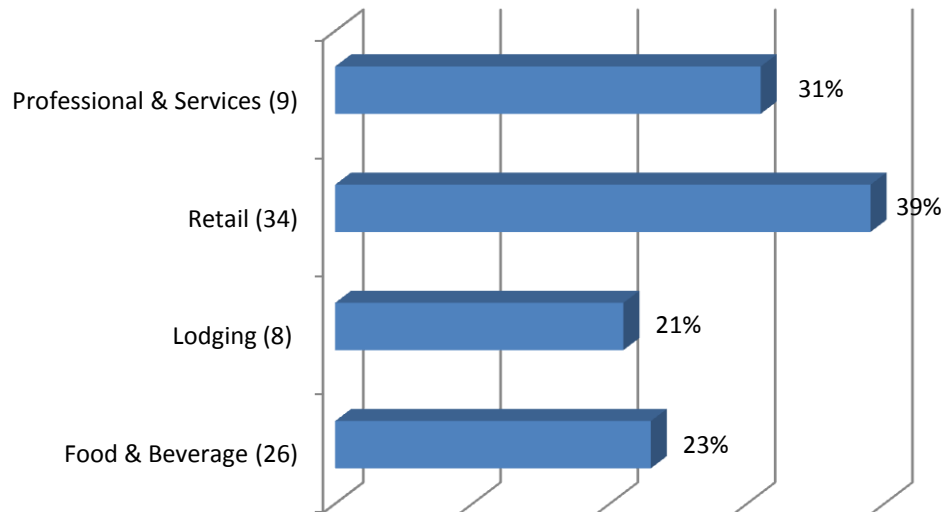


TABLE D-2
 ESTIMATED DIVERSION RATES IN 2011 (rounded to nearest 10 tpy)

	Trash (tpy)	Recyclables* (tpy)	Total (tpy)	% Diverted
Food & Beverage	120 to 460	22% 30 to 130	150 to 590	21%
Lodging	220 to 500	21% 60 to 130	280 to 630	21%
Retail	10 to 20	39% 10	20 to 30	42%
Professional & Services	10 to 200	31% 0 to 90	10 to 290	16%
TOTAL	360 to 1,180	100 to 360	460 to 1,540	23%

* Diversion percentages as reported by interviewed businesses (Figure D-1)

² It should also be noted that the commercial sector should have a higher diversion rate as their waste streams are more homogenous than residential waste and include higher levels of recyclables.