
SUITE SUCCESS WASTE AUDIT REPORT 2018



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Introduction

Suite Success Located at 411 Huronia Rd #5 in Barrie, ON obtained two employees from Busch Systems to perform a solid, non-hazardous waste audit at the main office. The audit was performed within the office with the primary goals of...

- Identify, quantify and analyze the following values to compare the accuracy of the RC generated statistics
 - Diversion Rates
 - Contamination Rates
 - Stream Composition
- Identify problematic areas in the waste management system
- Provide potential solutions to help increase diversion rates, while reducing stream contamination
- Gaining a better understanding of the process involved in utilizing the Resource Center from start to finish

Methodology

During the morning of April 12th, 2018 refuse samples were collected from each refuse station within the different areas (divisions) within the office. These areas were...

- Event Room 1
- Event Room 2
- Tenant Area
- Lunch Room

Bins were manually emptied and brought to the event room for identification and separation. Afterwards all contents of each stream in a station were emptied one by one and separated into identified sub-material categories resulting in a further breakdown showing stream composition. These sub-material categories were then measured using a digital scale, ensuring to separate out stream contamination.

Additionally, a large quantity of commingled and stored recyclables were analyzed as a composition audit for the recycling stream for a 5-day period.

Current Waste Handling Processes and Containers

- ESS staff perform daily collection of refuse and manually deposit the material into available waste containers at the rear of the building which are serviced on separate fixed day schedules.
 - There is an 8-cubic yard front-end waste container which is shared by other members of the plaza and is emptied by a private contractor
 - Additionally, another 8-cubic yard front end container for mixed recycling.
- Inside the office varying different styles and capacities of bins are utilized
 - In the event room one closest to the ESS staff rooms there is a triple aristata station with a capacity of 15 Gallons per stream for a total of 45 Gallon available capacity. The collected streams are labelled as Cans & Bottles, Paper and Waste Only. The containers are placed in along the wall opposite the two entrances of the room, and the bins themselves have no restrictive openings.



Figure 1- Event Room One Triple Aristata Station

- Event room two just off the kitchen has a triple Aristata Station with a capacity of 15 gallons per stream for a total capacity of 45 gallons. The collected streams are labelled as “Trash Only”, “Paper Only” and “Cans, Glass & Plastic”. The container is placed against the wall immediately exiting the kitchen area and each stream has a restrictive opening.

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Figure 2- Event Room Two Triple Arisitata Station

- By the Tenant offices there is a triple stream Spectrum Cube Slim station with a stream capacity of 10 Gallons, and total capacity of 30 Gallons. The labelling on the containers indicate A Waste, Mixed and Organics stream collection. The signage above the containers indicate a Plastic, Waste and Paper stream collection.



Figure 3- Tenant Station three Cube Slim Spectrums



Figure 4- Signage located above the Tenant Spectrums

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- The Lunch Room collected three streams at time of sampling “Waste”, “Paper”, “Cans & Plastic”. The capacities of these containers were not measured at the time of auditing. They were of varying shapes and sizes. Waste container was without labelling or signage, while the paper stream was nicely labelled with a restrictive opening. The Cans and plastic stream had a circular opening and was labelled with as “Paper & Plastic” on the upper ridge and “Cans & Plastic” on the lower.



Current Recycling and Diversion Programs

- Suite Success current diversion program includes
 - Cans, Plastic, Bottles, Glass
 - Paper and Cardboard
 - Waste
- Cans, Plastic, Bottles and Glass are deposited into various bins throughout the office and emptied into the 8-cubic yard containers. This stream of refuse originates primarily from Event Rooms, with some contribution found from Tenants and Lunch Room
- Paper and Cardboard is separated from the waste stream and its primarily a result of office functions from Suite Success Staff and Tenants.

Summary of Findings

This section analyzes the waste refuse generation during the time period of the audit. It will be split into two sections, the first highlighting the data gathered during the audit of the stations, and the second looking at the information gathered from the stored mixed recycling bags. Because the stored recycling bags were not labelled with a date, time and location gathered from the data can only give information related to the composition of the materials collected at that time and will not be able to provide information in relation to the point of generation.

For the sake of consistency when auditing containers with inconsistent labelling, Cans, Bottles and Plastic have been combined into a “Mixed Recycling” Stream

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Suite Success: ALL Divisions

The total amount of solid- non-hazardous waste generated at Suite Success during the course of the audit was 59.1 pounds (lbs). The amount of recycled materials was 10.6 lbs, generating an overall diversion rate for the sample period of 18%. Of the total analyzed collected stream weights “Waste” represents 76%; “Mixed Recycling” represents 13% and “Paper” 11%. Of the 76% of “Waste” 65% of it was organic material. Across all stations the total contamination rate was observed to be 5.6% with the biggest offender being the cans and bottles stream with a 44% contamination rate.

Table 1- Summary information for Suite Success

Division	Weight (lbs)	Percent (%)	Diversion (lbs)	Diversion Rate (%)
Kitchen	41.7	71	2.8	6.7%
Event Rooms	10.3	18	1.8	17.5%
Tenants	7.1	11	6	84.5
TOTAL	59.1	100	10.6	18%

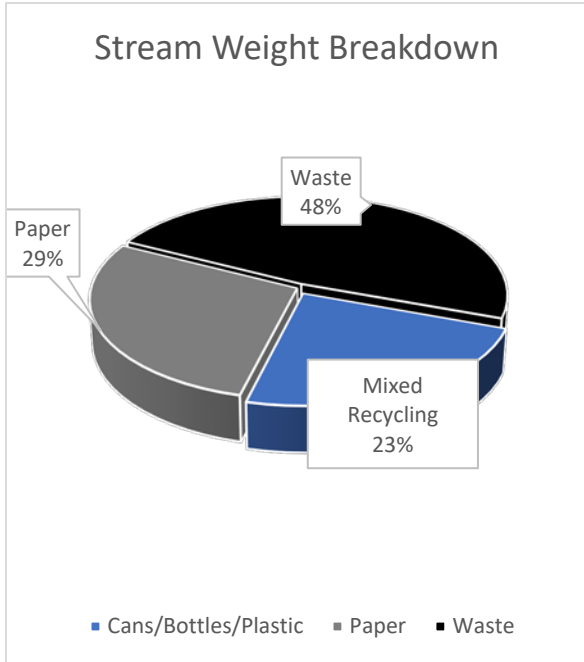


Figure 7- Represents the refuse breakdown by stream during the sample period, the largest of which was "Waste" (78%).

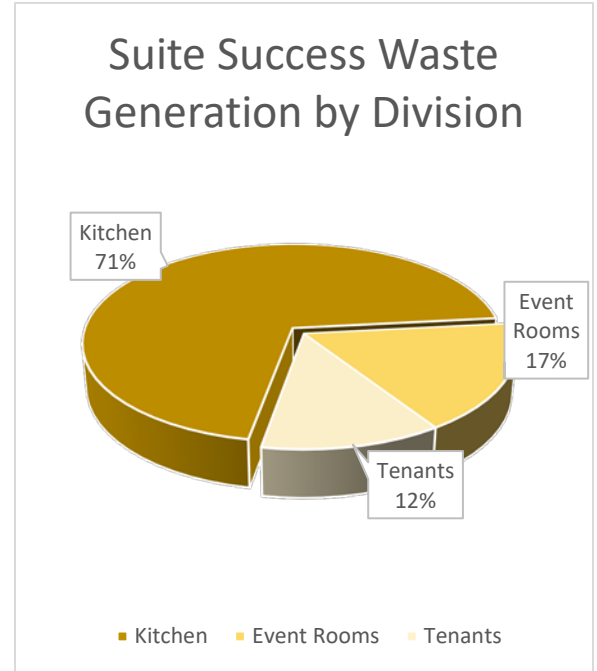


Figure 8 - Shows the breakdown of waste generation as a percentage by division.

Suite Success: Kitchen

The total amount of solid- non-hazardous waste generated in Busch Systems Warehouse Division during the course of the audit was 41.7 pounds (lbs). The amount of recycled materials was 2.8 lbs, generating a Kitchen Division diversion rate for the sample period of 6.71%. Of the analyzed Kitchen Weight Waste represents 93%.

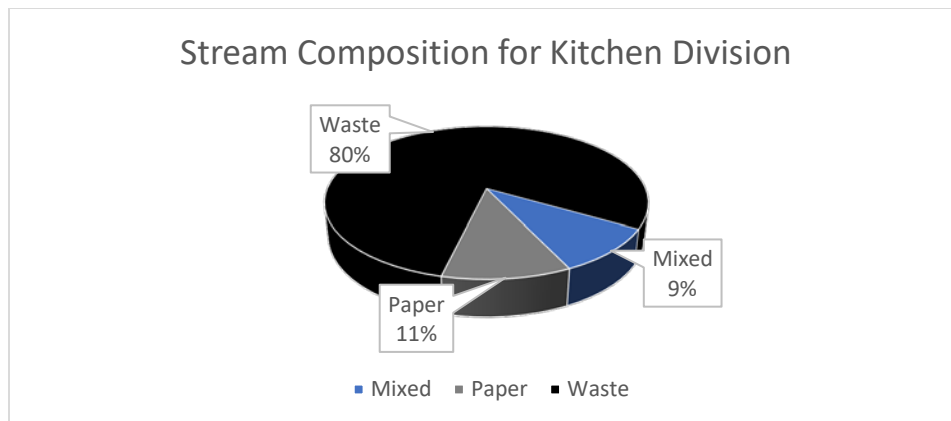


Figure 9- Shows the breakdown of each stream weight in the Kitchen Division during the audit. Waste is responsible for 93%

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The kitchen within Suite Success has a three-stream system to capture all refuse discarded. With the absence of an implemented organic collection system, the kitchen diversion rate by weight takes a hard hit. If organics were removed from the waste stream and captured separately, the composition breakdown would look more like the following chart, with a diversion rate for the Division of 72% (up from 7%), bringing the total office diversion rate to 76% (up from 18%)

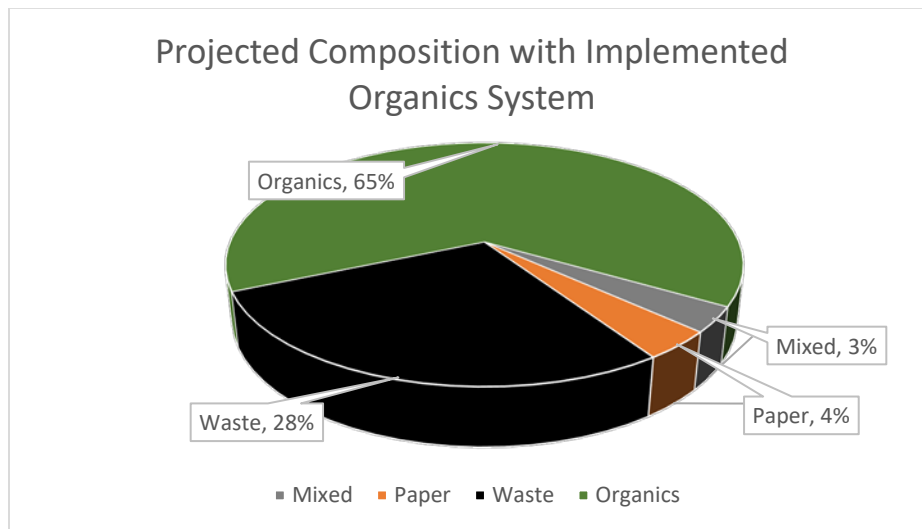


Figure 10- Shows the breakdown of each stream weight in the Kitchen Division should an organics stream have been present during auditing implemented. Waste would be responsible for 28% (down from 80%)

Suite Success: Event Rooms

The total amount of solid- non-hazardous waste generated in Suite Success Event Rooms during the course of the audit was 10.3 pounds (lbs). The amount of recycled materials was 1.8 lbs, generating an Event Room Division diversion rate for the sample period of 18%. Of the analyzed Event Room weights Waste represents 76%; Mixed Recycling 15% and Paper 9%.

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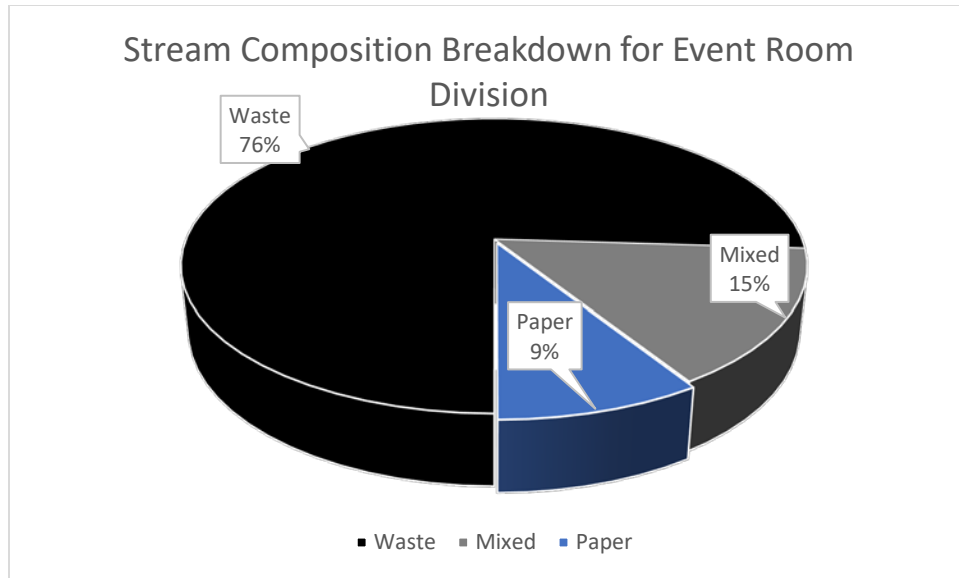


Figure 11- Shows the breakdown of each stream weight in the Event Rooms Division during the audit. Waste is responsible for 76%

Suite Success Event Rooms have some inefficiencies in its collection system, in particular with inconsistent signage, labelling and restrictive openings on containers leading to confusion and less-than-ideal diversion rates. While the "Mixed" stream only makes up 15% of the overall weight, the volume taken up by the materials is extensive. By far the biggest offender of which was the plastic packaging of catered events.

Suite Success: Tenant Division

The total amount of solid- non-hazardous waste generated in Suite Success Tenant Division during the course of the audit was 7.1 pounds (lbs). The amount of recycled materials was 6 lbs, generating an Tenant Division diversion rate for the sample period of 84.5%. Of the analyzed Event Room weights Waste represents 13%; Mixed Recycling 20% and Paper 67%.

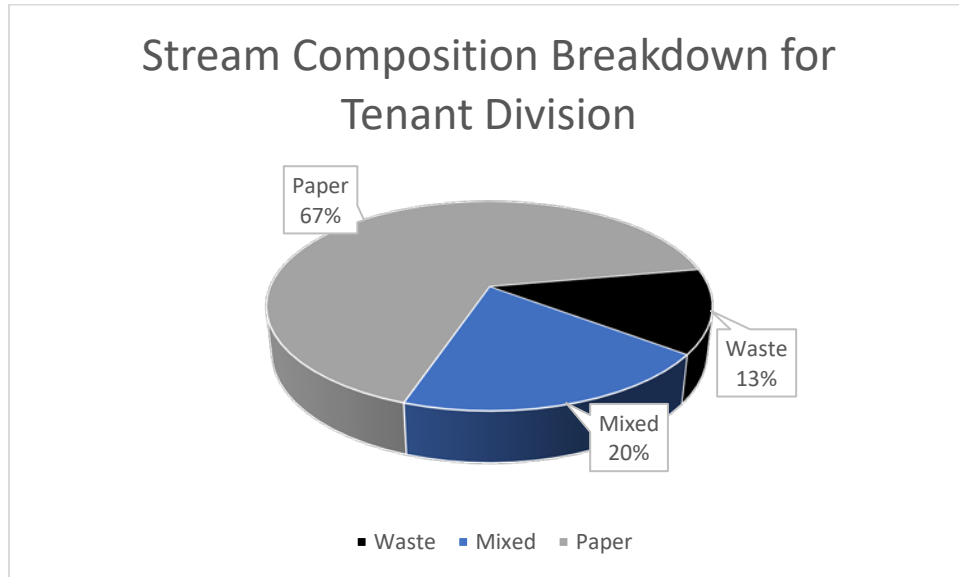


Figure 12-Shows the breakdown of each stream weight in the Event Rooms Division during the audit. Paper is responsible for 67%

Suite Success Tenant Division is by far the best performing division in terms of not only diversion rate, But also in contamination (after adjusting Kitchen Division for organic waste) with a 2.8% contamination rate. This is largely due to the large quantities of paper being disposed of, which is quite heavy in density.

Composition of Stored Recycling

The analysis of the stored recycling bags revealed a composition of a weeks' worth of Mixed Recyclables. Because the stored recycling bags were not labelled with a date, time and location gathered from the data can only give information related to the composition of the materials collected at that time and will not be able to provide information in relation to the point of generation.

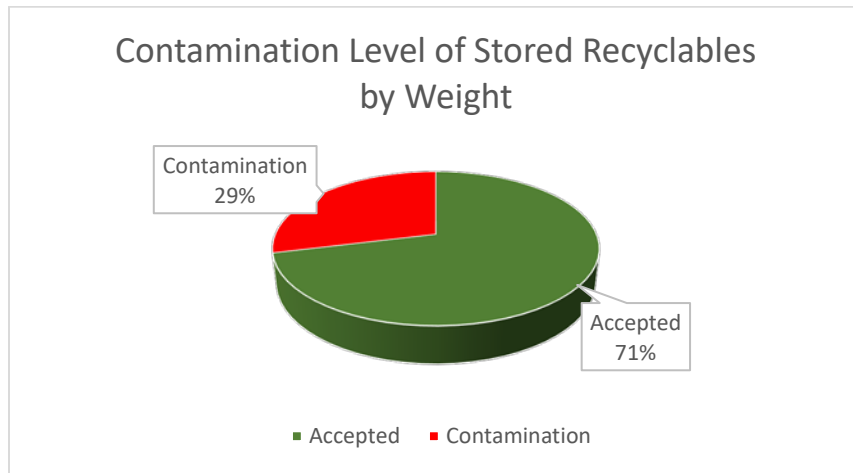


Figure 13- Shows the contamination level of the materials found in the Mixed Recycling bags that were stored over a weeks period.

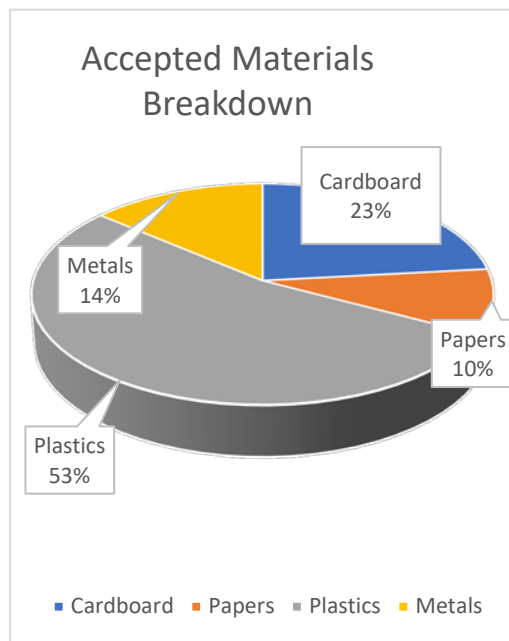


Figure 14- Shows the composition of materials that were accepted within the Mixed Recyclables stream, the highest of which was plastics (53%)

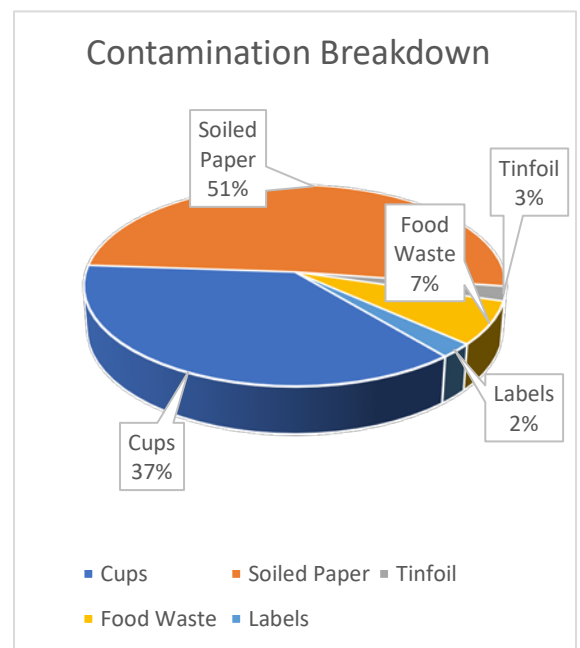


Figure 15- Shows the composition of materials that were considered contamination within the Mixed Recyclables stream, the highest of which was soiled paper (51%)

Recommendations

Based on the information gathered during the auditing process the following list of recommendations can be made to help improve diversion rates, and the collection system as a whole...

- Organic waste is responsible for 56% of Suite Success disposed items. By implementing an organic collection program that captures and removes these materials from the waste stream, the office diversion rate would increase to around to 76% (up from 18%).

- After successful implementation of an organics system, consider sourcing for biodegradable, or fully recyclable, napkins, toilet paper and event refreshments/food packaging. Plastic Packaging accounts for approximately 11% of the offices disposed of items. while toilet paper and paper towel account for nearly 75% of the items incorrectly sorted in the mixed recyclable bin.

- Improve signage, labelling and consistency throughout the building. There is inconsistent messaging on many of the containers, specifically the Plastics, Cans and Bottles streams. For example Event Room One says “Cans, Glass & Plastic” and “Trash Only”, while Event Room Two says “Cans & Bottles” and “Waste Only”. Ensuring consistent signage, educational posters and labelling throughout the building will reduce confusion at the bin, enhancing diversion rates and lowering contamination rates

- Promote and encourage a reduction in waste generation. Participation rates in recycling program are fairly high, in order to maximize diversion rates, focus and attention should be placed on source reduction. Consider “Waste-free” days, no water bottle policies and other such strategies to reduce the amount of waste generated on-site.