Great Forest
SUSTAINABILITY SOLUTIONS

Great Forest Waste Infrastructure Scorecard℠

Methodology

March 2021

Scorecard Methodology Paper Outline

I. Introduction

Managing any program effectively requires usable feedback to measure success, and waste programs are no different. Sustainable waste operations can be complicated. A deeper understanding is needed than simply the amount of waste leaving the building. Data on the total waste a building generates and the total waste it diverts from landfill are important for benchmarking, but that information alone does not provide facility managers sufficient context to improve those numbers, satisfy tenant issues, nor ensure local ordinances and legal requirements are met.

Great Forest's Waste Infrastructure Scorecard[SM] addresses this complexity by providing facility managers with a clear picture of their current internal waste infrastructure and recommendations for improvement. The Waste Infrastructure Scorecard[SM] examines each aspect of a facility's waste collection process against both legal requirements and best practice, from education to disposal. This paper provides background on how Great Forest came to create the Waste Infrastructure Scorecard[SM], what it is, and how it works. We also provide an example of how this process has worked in the field.

II. Related Work

Great Forest was founded in the 1990s with a mission to reduce waste and increase diversion from landfills through better program installation and education. After a recycling program was installed, Great Forest consultants would maintain the program through educational sessions and by reviewing program compliance from all segments of the client's facility. Consultants generated detailed reports on visits to client sites, including what was discussed with staff, the facility manager, and building occupants, and next steps needed.

This reporting system was valued by clients, **but did not provide a succinct measure of progress.** Clients wanted to understand, with analytical backing, whether their waste management programs were legally compliant and optimally designed for improved environmental performance. To answer both of these points - quantification and quality - the Waste Infrastructure Scorecard[SM] was born.

III. Implementation

The Waste Infrastructure Scorecard[SM] began as a checklist to ensure all facilities with which we worked were reviewed against consistent standards regarding, for example, waste program communication and signage, waste receptacle set-up, labels, and standardization, janitorial collection procedures, universal waste storage, and loading dock equipment.

To quantify client performance, Great Forest translated the checklist into a scoring system against which a facility can benchmark itself. The score reflects how well each building area

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performs under the corresponding Legal Requirements and Best Practice compliance points. The scoring is based on the proportion of observations that meet Legal Requirements or Best Practice. Each section is given a separate score, allowing the reader to quickly understand which sections of a building need immediate attention. The overall building score takes into account all observations equally, with no weighting by building area.

In addition to the score(s), the Waste Infrastructure Scorecard[SM] highlights the status of compliance points from on-site observations and through discussions with building staff. In this way, the Scorecard denotes whether the Legal Requirements and Best Practice compliance points are being met or not. Each compliance point that is not met is accompanied on the Scorecard with a recommended next step, and confirmation whether that recommendation is legally required or best practice.

Great Forest's team of consultants follow up with clients to provide additional tools and guidance to ensure recommended improvements are implemented. The Waste Infrastructure Scorecard[SM] is optimally done on an annual basis, or at minimum as programs are updated, or as staff and/or building occupants and laws change.

It should be noted that the Waste Infrastructure Scorecard[SM] needs to be tailored to the jurisdiction in which it is performed, to account for local requirements. While initial work has been geared mostly to office buildings, the Waste Infrastructure Scorecard[SM] is generally applicable to all facilities, with slight modification depending on facility type.

IV. Evaluation

In practice, the Waste Infrastructure Scorecard[SM] scoring system provides a way primarily to evaluate (1) compliance with laws and best practices and (2) improvement over time, when annual scorecards are performed, as when a building compares its current score against previous scores. It is important to note that while buildings with similar building areas and programs can be compared to one another using the scores generated by the Waste Infrastructure Scorecard[SM], dissimilar buildings or buildings with dissimilar programs may not be so easily compared.

The major building components remain consistent for all scorecards -- janitorial collection, building policies, loading dock, tenant compliance, and universal and electronic waste storage. To accommodate other areas, such as cafeterias, that are not part of every office building and require specific standards, the score must adjust. A sample of the report sections are listed below alongside a summary of compliance/best practice areas the reviewer looks for.

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Report Section	Observations
Building Policies	Building waste policy; Communications with tenants; Building records; Bulk waste program
Public Areas	Signage and labels; Availability of recycling bins; Waste bin maintenance
Property Management Office	Diversion system; Signage and labels; Waste bin maintenance
Office Tenant Space(s)	Diversion system; Signage and labels; Waste bin maintenance and layout; Waste reduction programs and policies
Cafeteria(s) – Front of House	Diversion system; Signage and labels; Waste bin maintenance; Waste reduction programs and policies
Cafeteria(s) – Back of House	Diversion system; Signage and labels; Waste bin maintenance; Waste reduction programs and policies
Loading Dock - Waste removal staging area	Storage set up; Signage and labels; Waste bin maintenance; Organics; Bulk waste
Janitorial	Waste collection procedures; Janitorial breakroom educational material; Breakroom diversion system; Signage and labels; Waste bin maintenance
Universal Waste Storage	Storage safety; Signage and labels; Storage bin maintenance
Retail (with food waste) – Front of House	Diversion system; Signage and labels; Waste bin maintenance; Waste reduction programs and policies
Retail (with food waste) – Back of House	Diversion system; Signage and labels; Waste bin maintenance; Waste reduction programs and policies
Retail (without food waste)	Diversion system; Signage and labels; Waste bin maintenance; Waste reduction programs and policies

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The result of combining scores with observations by building area highlights specific areas of deficiency and needed improvements. Importantly, the Waste Infrastructure Scorecard[SM] also provides actionable steps to clients on how to improve their waste management program.

To evaluate the efficacy of the report scoring system, we will compare two office buildings, a large complex building, Building A, and a comparatively simple medium size office, Building B. In the case of Building A, 9 areas were observed, providing 68 total observations. This building achieved a total of 55 points out of a possible 68 points for a building-wide score of: 81%. Each observation in this case is valued at 1.4% or 1/68th the total score.

In the case of Building B, 6 areas were observed and a total of 44 observations made. The building achieved a total of 23 points out of a possible 44 points for a building-wide score of: 52%. In this case, each observation is 2.3% or 1/44th of total score.

	Building A	**Building B**
Areas Observed	9	6
Total Observations	68	44
Building-wide Score	55/68 = 81%	23/44 = 52%
Value of each point	1.4% 1/68th	2.3% 1/44th
Subsection Score Example: Universal Waste	70%	20%

Comparing the overall scores between these two buildings is not strictly apples to apples, since there are fewer areas to consider in Building B. With fewer areas, the more important each element of the building's system is in contributing to the overall score.

However, if we look at the comparable areas of each building, we see how specific areas of Building A contributed to this building achieving a much higher score than Building B.

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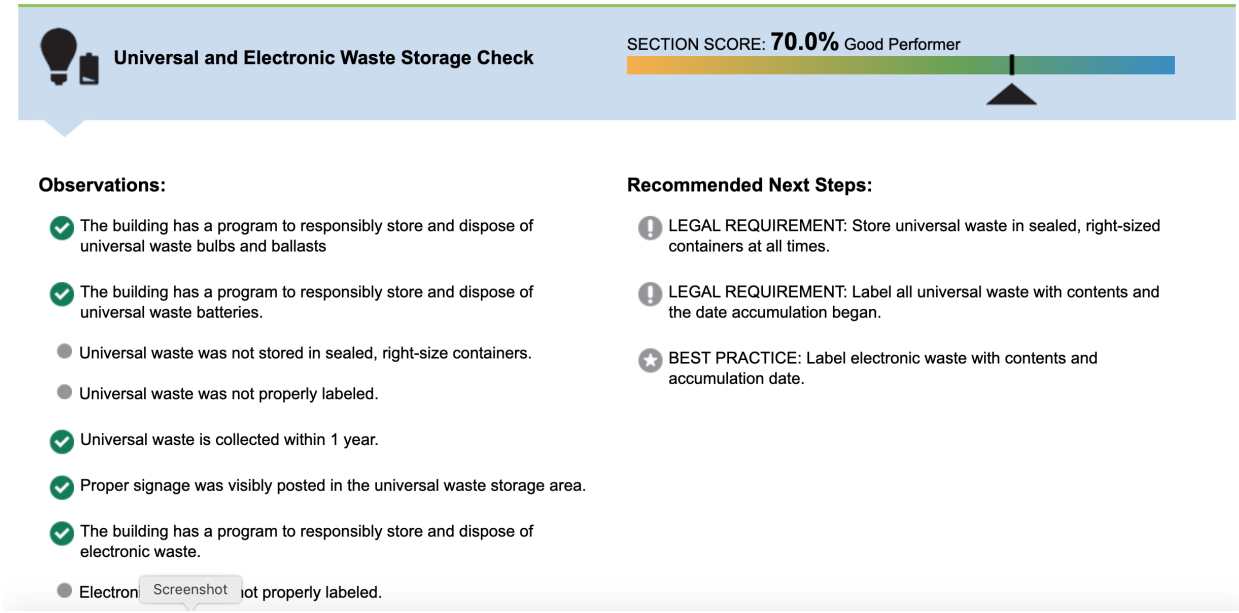
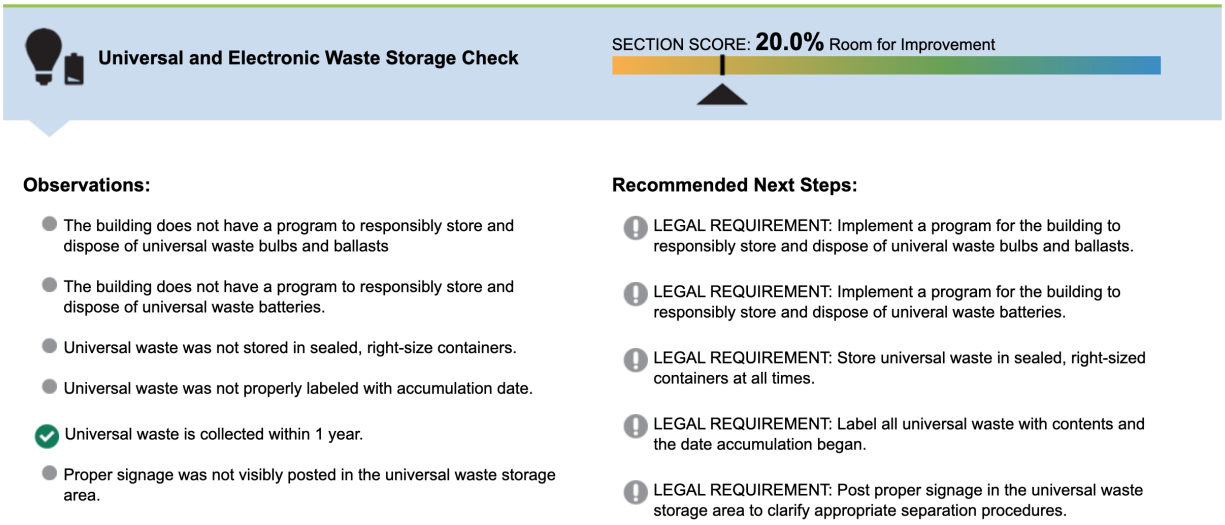


Portion of Universal waste section of Building A.



Portion of Universal waste section of the report for Building B.

From this example, we can see how the scoring system adapts to the specific building profile. At the same time, the scoring system maintains an objective analysis of the building's programs, such that both buildings in our scenario have scores suitable for comparison.

V. Conclusions

A diversion ratio or quantity of waste coming from the facility provides the observer with limited information, without more context. The Waste Infrastructure Scorecard[SM] provides the context for that data. It combines quantitative with qualitative information complementary to a Waste Stream Audit or hauler data to give the full picture of a facility's program. Whereas the diversion

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ratio and metrics data provide feedback on how well a facility is meeting its waste goals, the Waste Infrastructure Scorecard[SM] focuses on providing methods to reach that end.

Great Forest provides much needed insight and a practical approach to further quantifying the success of a waste management program. The Waste Infrastructure Scorecard[SM] quantifies the quality of a waste program, while also providing the framework for next steps. The main objective of most sustainable waste programs is to reduce waste and increase waste diversion. Until now, there has not been a systematic solution to ensure a sustainable waste program is successfully implemented and maintained up to best practice standards and meeting legal compliance. This program provides that systematic solution needed to help improve sustainability and waste performance in any property.

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