Park Maintenance Scoring Methodology Explainer

Last Updated on 11/29/2023

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1. Audience

This is a public-facing document and is an accompanying to the *Annual Report*. This attachment lives in the *Resources* section of the Park Standards website.

2. Maintenance Scores Data Structure

2.1 Standards

Maintenance scores are calculated through a series of groupings. Everything starts with the maintenance **Standard**, which is a specific condition or requirement that must be met. Every three months (a "quarter"), trained staff from the Recreation and Parks Department (RPD) and the Controller's Office (CON) get randomly assigned a "park evaluation." To complete these assignments, evaluators go into the field and assess whether their assigned park meet a series of concrete, specific, and clear maintenance requirements called **Standards**. There are 295 different Standards which evaluators check for. The following are examples of "Standards":

- *Gate does not open fully or cannot be closed enough to latch, or gate latch is missing or not operational*
- *Wood surface has graffiti on it*
- *Crack or hole 2" wide, or larger, going completely through a curb*

- *Floor has filth or spillage on it*
- *Sign text is illegible*

Standards are assessed as either “Pass” or “Fail.” They are written to be explicitly clear—the goal is for no two analysts to come up with their own differing judgements on whether the standards have been met. This objectively forms the basis for the data quality of the program’s reports, deliverables, and data products.

2.2 Elements

Similar Standards are grouped into **Elements**, which are categories of common park maintenance issues like Equipment, Pruning, or Graffiti. The following is a list of all 31 Elements:

- *Cleanliness*
- *Curbs*
- *Drainage*
- *Drinking Fountains*
- *Equipment*
- *Fencing*
- *Free-Standing Walls*
- *Graffiti*
- *Grills*
- *Lighting*
- *Miscellaneous Infrastructure*
- *No Mow Grass*
- *Paint*
- *Parking & Road Signs*
- *Paths & Plazas*
- *Plants*
- *Pruning*
- *Roads & Lots*
- *Sand*
- *Seating*
- *Signage*
- *Stairways*
- *Structures*
- *Supplies*
- *Surface Quality*
- *Tree Condition*
- *Turf Maintenance*
- *Walkway Clearance*
- *Waste Receptacles*
- *Water Feature*
- *Weeds & Vines*

2.3 Features and Instances

Elements are scored as pass/fail based on how their underlying Standards score. An Element will only pass if all its Standards pass—if a single Standard in an Element group fails, the whole Element fails. Elements with fewer standards are weighted the same as elements with more standards. Elements are used to assess the maintenance conditions for **Features**, which are broad categories of amenities that parkgoers use or enjoy like Athletic Fields or Trees. The following is a list of all 12 Features:

- *Athletic Fields*
- *Buildings & General Amenities*
- *Children's Play Areas*
- *Dog Play Areas*
- *Greenspace*
- *Hardscape*
- *Lawns*
- *Ornamental Beds*
- *Outdoor Courts*
- *Restrooms*
- *Table Seating Areas*
- *Trees*

A park can have multiple **Instances** of the same Feature. For example, a large neighborhood park might have a basketball court, a tennis court, and a pickleball court. These would all be different Instances of the Outdoor Court Feature.

These are the components used for park evaluations. They create a hierarchy between Standard, Element, Instance, and Feature. Two other hierarchies are used in the calculation of maintenance scores: geography and time.

2.4 Geography

Some parks are too large for a single evaluator to be assigned to. Large parks are broken up into **Sites**, which are small enough to be manageable for a single evaluator. For example, Golden Gate Park has about ~30 sites. Before a Park score can be calculated, the scores of all the underlying Site scores must be averaged together. Small and medium parks are manageable enough to usually only have a single Site, so the Site score and the Park score are one-in-the-same. Averaging together different Site scores will only change the end-result for large Parks with multiple Sites.

2.5 Time

Maintenance score data is produced quarterly from evaluators completing their assignments. Once the fiscal year is complete (July 1 to June 30), the four quarters of data are averaged together ("annualized") for reporting. Quarterly data is never used for reporting because is can be affected by seasonal maintenance issues (e.g. summer break's impact on playgrounds, or winter storms causing more tree branches to need pruning).

3. Maintenance Scores Calculation

The data structures come together for calculating the final maintenance scores used for public reporting.

3.1 Standards to Features

1. Quarterly Standards are scored as Pass/Fail.
2. Quarterly Standards get grouped into Quarterly Elements. Elements are also Pass/Fail, as all underlying Standards must pass.
3. Quarterly Elements get grouped into Quarterly Features. Often, there are multiples of the same Feature at the same site—these are called Instances. For example: a recreation center could have both a baseball diamond and a soccer pitch, which are both Instances of the Athletic Fields Feature. The Feature Score is calculated as the total number of passing Elements across all Instances divided by the total number of all Elements. This gives more weight in a Feature scores to larger or more complex Instances that have more Standards to consider.
4. Quarterly Features are grouped into Annual Features. It is scored as the average of a Fiscal Year's Quarterly Feature scores.

3.2 Features to Parks

1. Annual Features are grouped into Annual Sites. Most parks only have a single site, but large regional parks like Golden Gate Park are broken into smaller sites for ease of evaluation.
2. Site scores are calculated as the average of all the underlying Feature Scores. If a park only has a single site, this step is essentially skipped.
3. Annual Sites get grouped into Annual Parks. Park Scores are calculated as the average of all underlying Site Scores.

3.3 Parks to Citywide

1. Annual Parks get grouped into the Annual Citywide Score. The Citywide Score is an average of all underlying Park Scores.
2. The Citywide Score is the primary "performance measure" for the city's park maintenance.