

Green Space Categorization as a Function of Run off and Infiltration rates.

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Importance:

It was made known to Paul Bierman that the University of Vermont maintenance department desired a management agenda or map of green spaces that required “fixing” to further improve the aesthetics of the campus and to alleviate any unnecessary run-off issues on campus. The goal of our project would be to identify the green spaces on campus and to then to place the green spaces into a rating system based on health, percent coverage, and run-off/infiltration rates. The classification that we develop will then be used to propose a management strategy and priority list and map of the green spaces on campus.

Hypothesis/Methods:

For this project, we will concentrate on the green space in front of the Cook building on campus, as well as the green between Waterman and Billings. The project will provide a detailed map of the campus green spaces, with percent coverage and a classification system as a product of infiltration rates. The testing sites will be picked at random, providing a statistical analysis to show the relationships between degraded and non-degraded green spaces.

The hypothesis is that the worse case sites will be along areas that foot traffic has formed paths that are the shortest point between two buildings or common destinations, as well as along the edges of paved paths that are frequently used by maintenance vehicles that are too wide for the path. Concurrently these areas will be less than 30

percent of all potential green space areas, and that these sites will have higher rates of run-off or a slower infiltration rate. Also, we will do a comparison between historical and current photographs of the locations specified above to see how the areas have changed over time.

To complete the project we will need the most recent, as well as historical ortho photos of the campus that will be blown up and used to locate degraded green spaces on campus. We will also need historical and current photographs of the campus to show the change over time. Infiltration rates will be determined using a coffee can and predetermined amount of water to determine the amount of time it takes for the cup to empty every time it is filled. We will use a technique that is common for such a measurement.