

Cambridge, Massachusetts Open Space Report

by Green Cambridge, Inc. September 2015

Introduction

In an increasingly urbanizing world, preserving and developing open space in cities is a challenge and an opportunity to make cities more livable for its residents. Open Space not only improves the aesthetics of a neighborhood, it also provides important health and environmental value. As Cambridge continues to develop and evolve, it is important to assess the current condition of our open space as well as compare our open space per capita to similar cities. By doing so, we can determine how Cambridge stacks up in regards to its open space and aspire to developing a community with enough open space to serve our needs.



Moore Street Community Garden

First of all, open space provides space for recreation - both formal and informal. Residents use open space for exercising and sports leagues use fields to host games. In this way, open space serves as a critical resource for the health of a city. Without sufficient and appealing open space, residents are less likely to get outside, exercise, and enjoy nature. Open space also plays an important role in mental health. According to a study conducted in Perth, Australia, citizens living in areas with high quality open space had higher odds of low psychosocial distress than citizens in neighborhoods with low-quality or non-existent open space [1]. This adds credence to the idea that it is not only quantity, but quality of open space that is

important to enhancing the health of a community.

Open Space also serves a critical environmental role in cities. Parks serve as the “lungs” of cities, with trees and plants absorbing CO₂ and cleaning the air. Forests, wetlands and parks also capture stormwater. This can help to lessen the effects of floods during storms, lessen the burden on sewer and stormwater systems, and clean the water that is returned to the groundwater system. Parks also help to decrease the effect of the “urban heat island effect” by providing space not covered in black asphalt and roofing - both of which absorb the sun’s rays and can increase the temperature in a city by several degrees [2]. Lastly, green spaces provide critical habitats for animals including migratory birds, insects, and mammals.

Because of these important health and environmental benefits, parks and open space need to be preserved and expanded in cities like Cambridge. This short report will explain how cities calculate open space, determine the open space per capita in Cambridge, and compare this number with similar cities.

Green Space Definition

According to the US Environmental Protection Agency, “open space is any open piece of land that is undeveloped (has no buildings or other built structures) and is accessible to the public” [3]. This includes green space, schoolyards, playgrounds, public seating areas, and public plazas. Cambridge uses a similar criteria when calculating its open space. Any publically accessible land intended for active or passive recreation, as well as undeveloped land (excluding bodies of water) counts as open space for the purposes of the Cambridge [Green Ribbon Open Space Study](#). This report, published in 2000, determined the existing open space in Cambridge, and developed criteria to guide the city’s future acquisition of open space.

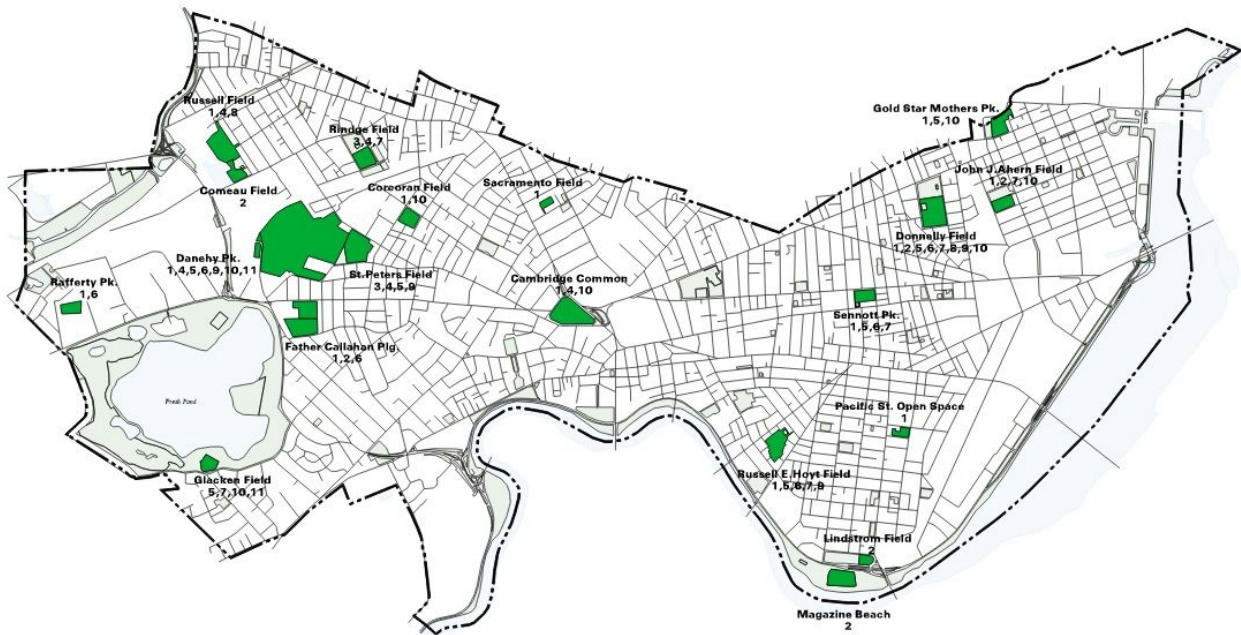
Cambridge’s Per Capita Open Space

According to the Green Ribbon Report, Cambridge has approximately 492 acres of open space used for both active and passive recreation [4]. This accounts for about 11% of the total area of Cambridge. If we take into account the current population of Cambridge - 109,694 [5] in 2014, we get approximately 4.49 acres per 1,000 residents. This is a decrease from the 5.14 acres per 1,000 residents produced by the Green Ribbon Report, as the population growth since 2000 has outpaced the creation of new open space.



North Point Park

According to the [Cambridge Open Space and Recreation Plan](#), two new public open spaces have been added since 2000. These include a 5-acre “central park” in the North Point development. This park is intended for passive use and stormwater retention, as well as providing a connection for the Somerville Community Path and Charles River pathways. This park is legally required to be maintained for the public in perpetuity. The second new open space is a $\frac{3}{4}$ -acre park situated above a new Harvard university parking garage on the corner of Memorial Drive and Western Avenue [6]. These two new parks bring the total acreage in Cambridge to nearly 498, and revise the current open space per capita to approximately **4.54 acres per 1,000 residents**, still below the per capita number from 2000.



Cambridge Open Space: Green Ribbon Report (2000)

This is a useful number when comparing open space to other similar cities. The open space number for Boston is closer to 11 acres per 1,000 people [7] - more than double that of Cambridge. Similar cities nationwide have higher open space per 1,000 residents. Seattle Washington has approximately 9.5 acres per 1,000 residents [8]. Somerville, MA, on the other hand, has about 2.25 acres of open space per 1,000 residents [9].

Conclusions

Knowing how Cambridge stacks up to other cities as far as open space per capita goes is important in helping future development planning. There might not be an “ideal” amount of open space for a city - as quality is just as important as quantity - but benchmarking ourselves can aid advocates pushing for an expansion of open space in Cambridge. The World Health Organization recommends a minimum of ~2.2 acres per 1,000 people in urban areas, but acknowledges that a more optimal number would be between 2.5 and 3.7 [10]. This recommendation puts Cambridge just over the “ideal” acreage per person, but is still clear that Cambridge lags behind other major US cities, and recommendations meant to inform cities worldwide might not account for the significantly less-dense average US city.

Another standard for open space areas, dating back to the 1960’s, has been one acre of open space per 100 population, or 10 acres per 1,000 residents - closer to the open space

numbers of Boston and Seattle [11]. This recommendation, proposed by the National Recreation Association, is tailored towards American cities, and takes into account the diverse needs of American city residents.

In general, Cambridge's current open space amount does not appear to meet basic standards defined more than 50 years ago. As a city and a community, we can and should do more to promote creation and preservation of open space, including conversion of obsolete land uses to open space.

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