How do cities across the United States vary in their distribution of green space? What are the implications for ecosystem services derived from these green spaces, particularly those related to flooding and heat?

Overview
Vegetated or “green” spaces in cities can potentially provide a wide range of benefits, such as stormwater retention and mitigation of urban heat. The spatial distribution of green space influences both its ecosystem function and the services derived from it, depending on who has access to it.

We aim to evaluate the current distribution of green space in several cities and assess how distribution is similar or different across these cities.

Results
Green space extent

Baltimore Phoenix

NYC has the smallest, most irregular and clustered patches while Syracuse has the greatest % of green space, which is dominated by relatively larger patches.

Implications
--As a desert city, Phoenix has less than a third of the green space of humid cities, and it’s concentrated in moderately developed areas. Highly dev. areas will need to consider how to increase heat mitigation
--NYC and Portland should consider increasing their green space in the 100 year floodplain

Next Steps
--Addition of other cities and ancillary data (e.g. heat) for comparison to green space distribution
--Cross-city comparison of engineered green stormwater infrastructure & vacant lots

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