

Supplemental Table 1: list of urban, soil, and socioeconomic variables measured at each park, along with measured unit, and additional urban ecology literature which utilizes the given metric.

Site Characteristic	Unit	Literature
Population Density	Individuals/km	Grove et al. 2014; Schocat et al. 2006
Impervious Surfaces	%	Shragai and Harrington 2019; O’Riordan et al. 2021; Yu et al. 2021
Median Resident Age	Years	Trammel et al. 2019; Clucas et al. 2014
Median Household Income	\$ USD/household	Shragai and Harrington 2019; Cobley et al. 2018; Avolio et al. 2020
Park Area	m ²	McIntyre and Hobbs 1999; Stewart et al. 2009, Chu et al. 2022
Park Perimeter:Area	ratio	Stewart et al. 2009; Feng et al. 2021
Soil Carbon	%	Trammell et al. 2020; McDonnel et al. 1997; Schwarz and Herrmann 2014
Soil Nitrogen	%	Hermann and Cadenasso 2017; Trammell et al. 2020; Trammell et al. 2016
Soil pH	Unitless	Pouyat et al. 2007; Yu et al. 2021
Soil Texture	% sand, silt, clay	Pouyat et al. 2019
Soil Water Holding Capacity	%	Pouyat et al. 2019; Yang et al. 2015
Soil Moisture	%	Pouyat et al. 2019; Pereira et al. 2021; Yang et al. 2015
Soil Saturation	%	—