

OPEN SPACE MASTER PLAN 2017 UPDATED IMPLEMENTATION STRATEGY

TECHNICAL APPENDIX 4. PROJECTED POPULATION

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Appendix 4. Projected Population

Maintaining the Ratio of 7.3 acres per 1,000 Residents

The City of Alexandria continues to increase in population, with the most recent projections listed in the Table below. Since the adoption of the *2002 Open Space Plan*, the City has focused on meeting or exceeding at ratio of providing 7.3 acres or protected open space per 1,000 residents. As shown in the Table below, if the proposed open space included in the Small Area Plans is excluded the City, without additional acreage acquisition, will be out of compliance in less than ten years (see blue highlighted row). If the SAP acreage is included in the acreage count, and if it is successfully delivered, the City has an additional twenty years (see green highlighted row) before being out of compliance with its goal of 7.3 acres per 1,000 residents. However, a caution is advised. How the current acreage figure

Figure 1. City of Alexandria Population Projections								
Location	Population (per 9.0 MWCOG projections)	Area	Acres (1 sq mile = 639.997 acres)	Ratio of persons per acre	Data Year	Acres of protected open space required to maintain 7.3 acres of public open space per 1,000 residents	Protected Open Space Acreage total as of 2017	Notes
Alexandria	111,183***		10,107.55	11***	1990	812		
Alexandria	128,283***		10,101.02	12.7***	2000	932***		
Alexandria	139,966*	15.0 sq miles*	9,599.96	14.58	2010	1022		
Alexandria	147,646****	427143552.09 sf**	9,805.87		2015 (COG 9.0)	1078		
Alexandria	159,169****				2020	1162		
Alexandria	167,515****				2025	1223		
							1241.23 (see footnote below)	Total Acres without SAP acreage
Alexandria	172,781****				2030	1261		
Alexandria	180,463****				2035	1317		
Alexandria	190,824****				2040	1393		
							1434.96	Total Acres (includes historic easements)
Alexandria	208,451****				2045	1522		

* <http://www.governing.com/gov-data/population-density-land-area-cities-map.html>

** City of Alexandria GIS data

*** Alexandria Open Space Plan, 2002

**** Metropolitan Washington Council of Governments 2016, ROUND 9.0 COOPERATIVE FORECASTING to be reviewed by COG and TPB in November, 2016

Acreage count of 1,246.76 includes all forms of publicly protected open space in the city: City-owned parks; historic or conservation easements; private properties with public access easement; regional jurisdiction; right-of-ways; and shared use sites.

Figure 2. Population Densities and Acres of Parks per 1,000 Residents Benchmarks

Location	Population	Area	Acres (1 sq mile = 639.997 acres)	Ratio of persons per acre 2002 City of Alexandria OS MP	Ratio of persons per acre 2010 census or 2015 or 2016 ProRAGIS data	Acres of parks** per 1,000 residents***	Data Year/Source
Alexandria, VA	139,966*	15.0 sq miles*	9,599.96	11 (1990); 12.7 (2000)	14.58	7.3 (City data)	2010 US Census
Annapolis, MD	38,722	8.1 sq miles	5,183.98		7.47	5.36	2015 ProRAGIS
New York, NY	8,175,133*	302.6 sq miles*	193,663.10	37.3 (1990)	42.21	2.5 recommended	2010 US Census
Arlington County	207,627*	26.0 sq miles*	16,639.92		12.48		2010 US Census
Arlington County	226,908	26.0 sq miles	16,639.92		13.64	4.05	2015 ProRAGIS
Baltimore, MD	620,961*	80.9 sq miles*	51,775.76	13.1 (1990)	11.99		2010 US Census
Bellevue, WA	133,992	32 sq miles	20,479.90		6.54	20.31	2014 ProRAGIS
Berkeley, CA	112,580	10.47 sq miles	6,700.77		16.80		2010 US Census
Boston, MA	617,594*	48.3 sq miles*	30,911.85	18.0 (1990)	19.98		2010 US Census
Brookline, MA	59,000	6 sq miles	3,839.99		15.36	N/A	2015 ProRAGIS
Carlsbad, CA	110,169	39 sq miles	24,959.89		4.41	4.13	2015 ProRAGIS
Chicago, IL	2,695,598	234 sq miles	149,759.30		18	2 recommended	
Fairfax City, VA	23,973	6 sq miles	3,839.99		6.24	10.68	2015 ProRAGIS
Fairfax County, VA	1,137,358	395 sq miles	449,256,410		.003	20.53	2015 ProRAGIS
Falls Church, VA	13,229	2.3 sq miles	1,472		8.99	3.39	2014 ProRAGIS
Herndon, VA	23,591	4.27 sq miles	2,732.79		8.63	5.81	2014 ProRAGIS
Hollywood, FL	146,526	30.8 sq miles	19,711.91		7.43	3.99	2015 ProRAGIS
Miami, FL	399,457*	35.9 sq miles*	22,975.89		17.39		2010 US Census
Miami, FL	430,332	35.87 sq miles	22,956.70		18.75	2.36	2016 ProRAGIS
Norfolk, VA (City of)	242,803 *	54.1 sq miles*	34,623.84		1.46	3.43 2015 ProRAGIS	2010 US Census
Norfolk, VA	246,392	65.98 sq miles	42,227.00		5.83	3.38	2015 ProRAGIS
Philadelphia, PA	1,526,006*	134.1 sq miles*	85,823.60	17.1 (1990)	17.78		2010 US Census
Seattle, WA	608,660*	83.9 sq miles*	53,695.75	9.8 (1990)	11.34		2010 US Census
St. Paul, MN	285,068*	52 sq miles*	33,279.85		8.57		2010 US Census
St. Paul, MN	290,770	25 sq miles	15,999.93		18.17	13.66	2014 ProRAGIS
Sunnyvale, CA	140,081*	22.0 sq miles *	14,079.94		5.02		2010 US Census
Washington, D.C.	601,723*	61.0 sq miles*	39,039.82		15.41		2010 US Census

Population Density Benchmarks: Various data sources, as noted, provide comparative information. Blue highlights indicate communities similar in size, population, or park acres.

* Governing Magazine website, <http://www.governing.com/gov-data/population-density-land-area-cities-map.html> ** 'park' is term provided from data set; this report uses 'protected open space'

*** Data is self reported by jurisdiction without clear criteria or definition of what constitutes 'park' provided as included in report numbers

is formulated will dramatically affect when that target is exceeded, as is demonstrated with the inclusion or exclusion of the Small Area Plan's proposed open space acreage (a large caveat as to which acres are included in the count). It is not clear from the 2002 plan what was included in the acreage total of 932 acres, the origin of the 7.3 ratio.

Current discussion in the park and recreation community is focused on the applicability of using such a simple, one-note measure for a benchmark or measure of success in the provision of public open space in a community. Reviewing other communities and their ratio per 1,000 is fraught with the lack of definition of what type of space constitutes the measured acreage to create the ratio. As shown in Figure 2 to the left, ratios range from 2.36 acres per 1,000 for the City of Miami to 20.53 acres per 1,000 for Fairfax County. Recent discussion at NRPA is summed up in their 2016 Field Report Findings in the sidebar to the right.

Shifting Philosophies

Park planning meetings, list serves and blog entries are wrestling with this topic. As organizations such as Trust for Public Land (TPL) publicize the 'best park systems' in the country based on a self-reported metric, nuances related to the types of experiences that public space provides and the accessibility of these spaces to all residents of the community get lost in the messaging. Size as measured by TPL does not include lands not directly owned by the municipality. As Alexandrians become more creative in ways to protect public open space through the use of shared use agreements or public access easements, those sites are not recognized in the national ranking of park system size to population promulgated by TPL. Other communities, more recently developed, have large swaths of Homeowner Owners Association (HOA) owned and managed quasi-public space. Should these spaces be counted in the public space calculations if they provide a recreational amenity, perhaps in lieu of the municipality having to provide it? How accessible are HOA facilities, if at all, to the general public? Would distance to facility be a better measure, and more in line with TPL's calculations than a raw gross ratio of overall acres to overall population? Should such a metric shift based on the type of protected open space provided, with multiple ratios dependent on whether the parcel is a plaza, or a pocket park, or a greenway? What if the protected open space is well distributed and integrated population-wise and geographically, but barriers such as four lane highways bisect the resident from the site? Did the park and recreation community move to far away from earlier standards that spelled out the amount of playgrounds or dog parks or basketball courts needed per segment of population?

Examples for Consideration and Reflection

The Fairfax County Park Authority has a general ratio of 20.53 acres per 1,000 residents, and yet in its park planning documents it has a range of ratios or targets to supply resources for park types. The World Health Organization (WHO) has suggested that every city should have 9 square

2016 NRPA Field Report Findings

“The typical park and recreation agency has 9.5 acres of park land for every thousand residents in the jurisdiction. So, which agencies offer the most park land acreage per 1,000 residents? The smallest and largest agencies: those serving fewer than 20,000 residents typically have 10.6 acres per 1,000 residents compared to 12.5 acres per 1,000 residents at jurisdictions serving more than 250,000 people. At the same time, agencies serving jurisdictions between 100,000 and 250,000 people have 7.4 acres of park land per 1,000 residents.”

(Key Findings Park Facilities, page 5 NRPA – National Recreation and Park Association. 22377 Belmont Ridge Road, Ashburn, VA 20148-4501)

meters of green space per person with an optimal amount being between 10-15 square meters per person.¹ New York City recommends a ratio of 2.5 acres of open space per 1,000 residents divided into a sub ratio of 1 acre of active open space and 1.5 acres of passive open space.² Chicago recommends providing 2 acres of open space per 1,000 residents.³ New York City and Chicago are obviously much larger than Alexandria, both cities are much more populated and greater in geographic size than the City of Alexandria. But in terms of density measured as persons per acre, Chicago at 18 is fairly similar to that of the City of Alexandria at 14.58. Perhaps the ratio of 7.3 is somewhat arbitrary and should be unpacked to more accurately measure the complex and rich typologies of protected open space found within the City of Alexandria.

¹ *Smart Cities Council*

² *New York City's Open Space Index*

³ *Cityspace, Chicago's Open Space Plan 1998*