Open Space Master Plan 2017 Updated Implementation Strategy

Technical Appendix 5.
Active/Passive and Pervious/Impervious Acres

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Active/Passive Use

Defining the Terms

Identifying defensible measurements for benchmarking park acreage per 1,000 residents as well as the percent of active/passive use of those parks and the amount of impervious surfacing is challenging to complete. There are many acreage figures available from sources ranging from the Trust for Public Land's (TPL) ParkScore project to the National Recreation and Park Association's (NRPA) Park Metrics[1], an industry membership association. However, most if not all of these figures are self-defined and self-reported, making it unclear if there is a consistent composition to which acres are counted as 'park acres.'

Definitions are problematic for terms related to open space and in particular for the terms *active* and *passive* as they are applied to public open space and park lands. Although these two terms are commonly used terms in park planning, there is no national definition for either active or passive use. Scanning entries from various agencies across the country, definitions for active use range from '*structured recreational activities which require specialized parkland development and management which may restrict general use of the parkland or facility*'[2] to Bellevue, Washington's definition of '*facilities for structured or unstructured outdoor and indoor recreation activities such as sports fields, play areas, golf courses, marinas, waterfront, swimming pools, skating rinks, outdoor theaters, gyms, meeting space, or game rooms.*'[3] Other documents freely use the terms, without definition, implying that the meaning is commonly understood.

Many agencies are discussing or moving away from the use of the terms *active* and *passive*. NRPA seems to have replaced that terminology with *developed* and *undeveloped*, with no reference included in their Park Metrics performance resources of the terms active and passive. Other communities use the terms programmed or unprogrammed or substitute the term *actively maintained* for *active use*. During the planning update process for this project, debates ensued as

1 *NRPA Park Metrics (formerly referred to as ProRAGIS when launched in 2009) is billed by NRPA as being 'the most comprehensive source of data standards and insights for park and recreation agencies. Launched in 2009 and previously known as ProRAGIS, these agency performance resources assist park and recreation professionals in effective management and planning of their operating resources and capital facilities.'*

2 *Colorado Springs, CO. 10.0 Parks and Recreation*

3 *City of Bellevue, WA*

Definitions for 2017 Open Space Master Plan Updated Implementation Strategy

Active Use. Active recreational uses of open space land include primarily programmed activities. The mapping was drawn from identified recreation features in the City's GIS data layers and observations from aerial photographs. Designated Active Use includes: athletic fields (baseball, football, soccer, softball, multi-use); court sports (basketball, multi-use, tennis, volleyball); facilities that support such activities (batting cages, press box, spectator seating); fenced dog park, swimming pools (kiddie, full size); performance space; playgrounds (sandbox, tot lot, playground); and skateboard park.

Passive Use. Passive recreation uses of open space include primarily unprogrammed uses and activities. The mapping identifies any area NOT designated as Active Use as Passive Use. Passive Use amenities include gardens or garden plots, picnic shelters, natural areas, trails, and unfenced dog parks.

Impervious Surfaces. Impervious Surfaces are defined by the City of Alexandria's Zoning Code. The passage reads: *Impervious cover. A surface composed of any material that significantly impedes or prevents natural infiltration of water into the soil. Impervious surfaces include, but are not limited to: roofs, buildings, streets, parking areas, and any concrete, asphalt, or compacted gravel surface.*[1]

1 *Definition of Impervious Surfaces, From Municode 090716 ARTICLE XIII. - ENVIRONMENTAL MANAGEMENT [Editor's note—Ord. No. 4865, § 1, adopted March 15, 2014, repealed Art. XIII and enacted a new article as set out herein. The former Art. XIII, §§ 13-100—13-120, pertained to similar subject matter and derived from Ord. No. 4443, § 1, adopted April 22, 2006.]*

Figure 1. Developed/Undeveloped Acres of Parks Benchmarks

Location	Population	Area	Ratio of persons per acre	Acres of parks** per 1,000 residents***	Total Acres of Parks	Developed 'Park' site	Percent Developed	Undeveloped 'Park' site	Percent Undeveloped	Data Year/ Source
Alexandria, VA	139,966*	15.0 sq miles*	14.58	7.3 (City data)	1246.76*****	101.02	8%	1145.74	92%	2010 US Census
Annapolis, MD	38,722	8.1 sq miles	7.47	5.36	207.5	192.5	93%	15	7%	2015 ProRAGIS
New York, NY	8,175,133*	302.6 sq miles*	42.21							2010 US Census
Arlington County	207,627*	26.0 sq miles*	12.48							2010 US Census
Arlington County	226,908	26.0 sq miles	13.64	4.05	918	670	73%	248	27%	2015 ProRAGIS
Baltimore, MD	620,961*	80.9 sq miles*	11.99							2010 US Census
Bellevue, WA	133,992	32 sq miles	6.54	20.31	670	600	90%	70	10%	2014 ProRAGIS
Berkeley, CA	112,580	10.47 sq miles	16.80							2010 US Census
Boston, MA	617,594*	48.3 sq miles*	19.98							2010 US Census
Brookline, MA	59,000	6 sq miles	15.36	N/A						2015 ProRAGIS
Carlsbad, CA	110,169	39 sq miles	4.41	4.13	455	397	87%	58	13%	2015 ProRAGIS
Fairfax City, VA	23,973	6 sq miles	6.24	10.68	256	226	88%	30	12%	2015 ProRAGIS
Fairfax County, VA	1,137,358	395 sq miles	.003	20.53	23352	6303	27%	17043	73%	2015 ProRAGIS
Falls Church, VA	13,229	2.3 sq miles	8.99	3.39						2014 ProRAGIS
Herndon, VA	23,591	4.27 sq miles	8.63	5.81	136.97	43.3		93.6		2014 ProRAGIS
Hollywood, FL	146,526	30.8 sq miles	7.43	3.99	585	500	85%	85	15%	2015 ProRAGIS
Miami, FL	399,457*	35.9 sq miles*	17.39							2010 US Census
Miami, FL	430,332	35.87 sq miles	18.75	2.36	1016	1014				2016 ProRAGIS
Norfolk, VA (City of)	242,803 *	54.1 sq miles*	1.46	3.43 2015 ProRAGIS	834 ProRAGIS	1700 ProRAGIS				2010 US Census
Norfolk, VA	246,392	65.98 sq miles	5.83	3.38						2015 ProRAGIS
Philadelphia, PA	1,526,006*	134.1 sq miles*	17.78							2010 US Census
Seattle, WA	608,660*	83.9 sq miles*	11.34							2010 US Census
St. Paul, MN	285,068*	52 sq miles*	8.57							2010 US Census
St. Paul, MN	290,770	25 sq miles	18.17	13.66						2014 ProRAGIS
Sunnyvale, CA	140,081*	22.0 sq miles *	5.02							2010 US Census
Washington, D.C.	601,723*	61.0 sq miles*	15.41	1.52	1000	932		78	78	2010 US Census 2016 ProRAGIS

to appropriate terminology to use. The City of Alexandria also uses the terms active and passive in relationship to maintenance and operations, further muddying confusing the identification of appropriate terminology.

Alternative Approaches

Having reviewed the NRPA web page and resource links, searched other municipal park systems web pages, and discussed the subject in depth with the planning team, it was determined to revisit how open space and its use is categorized in Alexandria. What is being gleaned from categorizing open space into active and passive use that affects policy-making? As this question was explored over the Summer 2016, another issue arose relating the availability of the resource to the general public. Conceivably, the City could set a percentage of open space target goal and meet it, but if those active areas were restricted to permit users or had limited general public availability hours, then such a percentage provides a false target. The issue becomes one of availability and the distinction between land held by the public and lands that are open to the public for their use. Given the breadth of the spectrum between active and passive uses and the lack of any nationally sanctioned definition, consideration was given to mapping use types under definitions other than using active and passive. One idea was to pair the terms with programmed and unprogrammed, assuming that programmed sites were active and unprogrammed were passive. That works for many sites, but two examples came to mind causing that approach to be dismissed. Dog parks are unprogrammed, yet they are very active spaces. Amphitheaters, when used formally, are heavily programmed, yet they often fall into the category under passive use.

2017 Updated Implementation Strategy Terminology - Active/Passive Use

After much discussion, the 2017 plan will use the terms of active and passive use. Active use is defined very conservatively, resulting in only 8% of the City's protected open space being labeled as active use. Unlike other jurisdictions, with a more broadly defined term that might incorporate mowed turf, free play areas, or higher levels of maintenance, the City's definition was drawn very strictly and includes clearly active uses. For purposes of this plan, the definition of *Active Use/Developed Recreation* is limited to primarily programmed activities, as drawn from the GIS data layers. These include athletic fields (baseball, football, soccer, softball, multi-use); court sports (basketball, multi-use, tennis, volleyball); facilities that support such activities (batting cages, press box, spectator seating); fenced dog park, swimming pools (kiddie, full size); performance space; playgrounds (sandbox, tot lot, playground); and skateboard park. The use of these terms will benefit from further discussion, as pressure and demand increase for additional recreational uses on existing open space in the next decade. Given these pressures, the City must look towards providing more versatile public open space. No longer categorized as a single use activity such as athletic field, the multi-purpose areas may be classified under the current definition as passive use but host active play at times. The terms active and passive will likely become more murky as the decade goes on. The City should continue to consider alternative terms to active and passive, such as developed (related to level of maintenance and investment) and undeveloped and the degree of general public accessibility to the open space resources.

Recommended Goal for Active and Passive Open Space in the Next Decade

Attempting to identify an appropriate goal for active open space as a percentage of overall protected open space requires understanding how the City's total acreage figure has been developed and what elements are included. Given the large number of properties with historic, public, and conservation easements in the City, it is not surprising that even with a strict definition of what comprises active use, the overall percentage of active use is relatively low. Looking towards other communities, as illustrated in

the Table in this Appendix, NRPA self-reported acreage counts of developed (active) and undeveloped (passive) park lands range from a low of 8% (Alexandria) to a high of 90% (Bellevue, WA).

Defining a target percentage for active use must be done in conjunction with the narrow definition used in this plan update. Within the current and narrow definition of active open space, the City should work to maintain a percent of open space between the current 8% and 15% of the overall acreage of protected open space.

Pervious/Impervious

Defining the Terms

The definition of impervious surfaces is drawn from the City of Alexandria's zoning code. Buildings, paved parking lots, paved driveways and amenity areas (playgrounds, batting cages, courts, picnic shelter, performance space, skateboard area, swimming pool, kiddie swimming pool, spectator seating, safety surfaces, press box, and fountain) were mapped and calculated as a part of the updated implementation strategy plan. The City's trails' GIS data has been categorized as impervious with the exception of specifically noted locations of pervious paving materials. Gravel surfaced trails are considered to be impervious as are synthetic turf fields.

Recommended Goal for Pervious and Impervious Open Space in the Next Decade

The City's impervious surfaces currently constitute 13% of the total acreage within the City's protected open space. There are not readily accessible comparable metrics for impervious surfaces found within other open space systems. Instead, it makes sense to look at other land use tools that have defined limitations on impervious surfaces within environmentally sensitive areas and extrapolate a recommended goal for the next decade from these information sources.

Although not related to an open space system, the State of Maryland's Critical Area Commission recently adopted open space lot coverage measurements limiting impervious surfaces to 15% or less of the total lot area when located within 1000 feet of a shoreline. The Commonwealth of Virginia has established standards, adopted and enforced by the localities, for Resource Protection Areas (RPAs) and Resource Management Areas (RMAs) that limit or constrain development. Adhering to these adopted standards as they control the amount of allowed impervious surfaces within an RPA or RMA will maintain a consistent approach within the City. Outside of the RPA and RMA area, the City has requirements for redevelopment and the reduction of impervious surfaces. In addition to meeting the requirements currently in place, the City should look towards maintaining its impervious surfaces within its protected open spaces to less than 25% of the total area. This will be challenging, as many of the proposed open space in the Small Area Plans call for hard surfaced public spaces such as plazas or multi-use facilities with recreational open space located on the rooftop of a building. Balanced with maintenance and operating concerns, the ability to reduce the amount of impervious surfaces will likely be found in parking lot paving, trail surfacing, and playground surfacing.