Appendix E

Example Levels of Service

Example Small Town Standards, Colorado, 2003

Appendix D – Facility Capacity Calculations

The small town parks planning standards equation is expressed using two different sets of units, depending on the two methodologies used to measure demand and capacity:

Activity Session Approach	Total User Approach
Capacity of each park system unit (expressed as *activity sessions per unit*) ÷ Demand per capita per (expressed as *activity sessions per population*) = Population served per park system unit (expressed as *population per unit*)	Capacity of each park system unit (expressed as *participants per unit*) ÷ Demand per capita per month (expressed as *participants per population*) = Population served per park system unit (expressed as *population per unit*)

Appendix E – Detailed Park Land Standards Table

Feature Category	Parks System Feature	Units Needed per 1000 Residents	Sq. Ft. per Unit	Off-Street Parking per Unit	Acres per Unit	Acres per 1000 Residents
Sports Fields	Soccer/Multi-Use Field	0.95	93,100	3,000	2.21	2.10
	Ball Field (Baseball/Softball)	0.61	160,000	4,050	3.77	2.30
Courts	Tennis Court	0.97	7,200	300	0.17	0.17
	Basketball Court	0.91	6,600	450	0.16	0.15
	Volleyball Court	0.13	4,000	450	0.10	0.01
Outdoor Recreation	Small Skatepark (7000 sq. ft. footprint)	0.16	7,000	1,050	0.18	0.03
	Full-Sized Skatepark (17,000+ sq. ft. footprint)	0.06	17,000	4,950	0.50	0.03
	BMX Track (Standard ABA Certified)	0.16	130,700	5,250	3.12	0.50
	Paved Multi-Use Trail (per mile)	1.04	105,600	450	2.43	2.53
	Dirt/Gravel Multi-Use Trail (per mile)	2.33	79,200	300	1.83	4.25
	Fishing Accessible Shoreline (per mile)	0.32	158,400		3.64	1.16
	River Put-In/Take-Out with Boat Ramp (per acre)	0.07	43,560		1.00	0.07
Leisure	Playground (per 3200 sq. ft. of fully developed area)	0.16	3,200	3,000	0.14	0.02
	Family Picnic Area	6.25	225	300	0.01	0.08
	Group Picnic Area (with shelter)	0.36	87,120	2,550	2.06	0.74
	Park Bench	7.69	12		0.00	0.00
Other Recreational Facilities	Swimming Pool (outdoor)	0.12	6,200	8,700	0.34	0.04
	Ice Hockey Rink (full-sized, refrigerated, covered)	0.10		9,000	0.90	0.09
	Outdoor Events Venue (per acre)	0.42	43,560	95,200	3.19	1.34

Other Tables Showing Parks and Recreation Capacity

Figure 5. Capacities for Parks Facility – Expressed in Activity Sessions

Park System Facility	Activity Sessions Accommodated per Month
Tennis Courts	370
Basketball Courts	880
Volleyball Courts	1,180
Paved Multi-Use Trails (per mile)	2,700
Dirt/Gravel Multi-Use Trails (per mile)	1,200
Fishing Accessible Shoreline (per mile)	2,770
River Put-In/Take-Out with Boat Ramp (per acre)	5,460
Playgrounds (per 3200 sq. ft. of fully developed area)	3,760
Family Picnic Areas	300
Group Picnic Areas (with shelter)	600
Park Benches	230
Swimming Pool (outdoor)	15,840

Figure 6. Capacities for Parks Facility – Expressed in Total Players or Users

Park System Facility	Total Players or Users Accommodated
Soccer/Multi-Use Field	169
Ball Field (Baseball/Softball)	327
BMX Track (Standard ABA Certified)	500
Ice Hockey Rink (full-sized, refrigerated, covered)	775
Outdoor Events Venue (per acre)	2,000

Figure 7. Population served per park system facilities

Facility Category	Parks System facility types	Total Population Served by 1 facility	# of facilities Needed per 1000 Residents
Sports Fields	Soccer/Multi-Use Field	1,050	0.95
	Ball Field (Baseball/Softball)	1,640	0.61
Courts	Tennis Court	1,030	0.97
	Basketball Court	1,100	0.91
	Volleyball Court	7,540	0.13
Outdoor Recreation	Small Skatepark (7000 sq. ft. footprint)	6,410	0.16
	Full-Sized Skatepark (17,000+ sq. ft. footprint)	15,560	0.06
	BMX Track (Standard ABA Certified)	6,250	0.16
	Paved Multi-Use Trail (per mile)	960	1.04
	Dirt/Gravel Multi-Use Trail (per mile)	430	2.33
	Fishing Accessible Shoreline (per mile)	3,150	0.32
	River Put-In/Take-Out with Boat Ramp (per acre)	13,650	0.07
Leisure	Playgrounds (per 3200 sq. ft. of fully developed area)	6,270	0.16
	Family Picnic Area	160	6.25
	Group Picnic Area (with shelter)	2,780	0.36
	Park Bench	130	7.69
Other Recreational Facilities	Swimming Pool (outdoor)	8,250	0.12
	Ice Hockey Rink (full-sized, refrigerated, covered)	9,690	0.1
	Outdoor Events Venue (per acre)	2,380	0.42

Figure 8. Small Community Parks LAND Standards

Facility Category	Parks System Facility Types	Number of Facilities Needed per 1000 Residents (demand)	Acres required to accommodate 1 facility	Total acres required per 1000 Residents (park land standard)
Sports Fields	Soccer/Multi-Use Field	0.95	2.21	2.10
	Ball Field (Baseball/Softball)	0.61	3.77	2.30
Courts	Tennis Court	0.97	0.17	0.17
	Basketball Court	0.91	0.16	0.15
	Volleyball Court	0.13	0.10	0.01
Outdoor Recreation	Small Skatepark (7000 sq. ft. footprint)	0.16	0.18	0.03
	Full-Sized Skatepark (17,000+ sq. ft. footprint)	0.06	0.50	0.03
	BMX Track (Standard ABA Certified)	0.16	3.12	0.50
	Paved Multi-Use Trail (per mile)	1.04	2.43	2.53
	Dirt/Gravel Multi-Use Trail (per mile)	2.33	1.83	4.25
	Fishing Accessible Shoreline (per mile)	0.32	3.64	1.16
	River Put-In/Take-Out with Boat Ramp (per acre)	0.07	1.00	0.07
Leisure	Playground (per 3200 sq. ft. of fully developed area)	0.16	0.14	0.02
	Family Picnic Area	6.25	0.01	0.08
	Group Picnic Area (with shelter)	0.36	2.06	0.74
	Park Bench	7.69	0.00	0.00
Other Recreational Facilities	Swimming Pool (outdoor)	0.12	0.34	0.04
	Ice Hockey Rink (full-sized, refrigerated, covered)	0.1	0.90	0.09
	Outdoor Events Venue (per acre)	0.42	3.19	1.34

Recreation, Park, and Open Space Standards and Guidelines

The National Recreation and Park Association (NRPA) recognizes the importance of establishing and using park and recreation standards as:

- A national expression of minimum acceptable facilities for the citizens of urban and rural communities.
- A guideline to determine land requirements for various kinds of park and recreation areas and facilities.
- A basis for relating recreational needs to spatial analysis within a community-wide system of parks and open space areas.
- One of the major structuring elements that can be used to guide and assist regional development.
- A means to justify the need for parks and open space within the overall land-use pattern of a region or community.

The purpose of these guidelines is to present park and recreation space standards that are applicable nationwide for planning, acquisition, and development of park, recreation, and open space lands, primarily at the community level. These standards should be viewed as a guide. They address minimum, not maximum, goals to be achieved. The standards are interpreted according to the particular situation to which they are applied and specific local needs. A variety of standards have been developed by professional and trade associations which are used throughout the country. The standard derived from early studies of park acreages located within metropolitan areas was the expression of acres of park land per unit of population. Over time, the figure of 10 acres per 1,000 population came to be the commonly accepted standard used by a majority of communities. Other standards adopted include the "percent of area" approach, needs determined by user characteristics and participation projections, and area use based on the carrying capacity of the land. The fact that some of the standards have changed substantially is not an indication of their obsolescence. Changes are a measure of the growing awareness and understanding of both participant and resource (land, water, etc.) limitations. Parks are for people. Park, recreation, and planning professionals must integrate the art and science of park management in order to balance such park and open space resource values as water supply, air quality

ACTIVITY/ FACILITY	RECOMMENDED SPACE REQUIREMENTS	RECOMMENDED SIZE AND DIMENSIONS	RECOMMENDED ORIENTATION	NO. OF UNITS PER POPULATION	SERVICE RADIUS	LOCATION NOTES
Badminton	1620 sq. ft.	Singles – 17'x44' Doubles – 20'x44'	Long axis north-south	1 per 5000	¼ -1/2 mile	Usually in school, recreation center or church facility. Safe walking or bike access.

Basketball 1. **Youth** 2. **High School** 3. **Collegiate**	2400-3036 sq. ft. 5040-7280 sq. ft. 5600-7980 sq. ft.	46-50'x84' 50'x84' 50'x94' with 5' unobstructed space on all sides	Long axis north-south	1 per 5000	¼ - ½ mile	Same as badminton. Outdoor courts in neighborhood and community parks, plus active recreation areas in other park settings.
Handball **(3-4 wall)**	800 sq. ft. for 4-wall 1000 for 3-wall	20'x40' – Minimum of 10' to rear of 3-wall court. Minimum 20' overhead clearance	Long axis north-south. Front wall at north end.	1 per 20,000	15-30 minute travel time	4-wall usually indoor as part of multi-purpose facility. 3-wall usually outdoor in park or school setting
Ice Hockey	22,000 sq. ft. including support area	Rink 85'x200' (minimum 85'x185') Additional 5000 sq. ft. support area	Long axis north-south if outdoor	Indoor – 1 per 100,000 Outdoor – depends on climate	½ - 1 hour travel time	Climate important consideration affecting no. of units. Best as part of multi-purpose facility.
Tennis	Minimum of 7,200 sq. ft. single court (2 acres for complex)	36'x78'. 12' clearance on both sides; 21' clearance on both ends.	Long axis north – south	1 court per 2000	¼-1/2 mile	Best in batteries of 2-4. Located in neighborhood/ community park or adjacent to school
Volleyball	Minimum of 4,000 sq. ft.	30'X60'. Minimum 6' clearance on all sides	Long axis north-south	1 per 5000	¼ - ½ mile	Same as other court activities (e.g. badminton)
Baseball 1. **Official** 2. **Little League**	3.0-3.85 A minimum 1.2 A minimum	Baselines – 90' Pitching distance 60 ½' foul lines – min. 320' Center field – 400'+ Baselines – 60' Pitching distance – 46' Foul lines – 200' Center field – 200' – 250'	Locate home plate to pitcher throwing across sun and batter not facing it. Line from home plate through pitchers mound run east-north-east.	1 per 5000 Lighted 1 per 30,000	¼ - ½ mile	Part of neighborhood complex. Lighted fields part of community complex.

Field Hockey	Minimum 1.5 A	180' x 300' with a minimum of 6' clearance on all sides.	Fall season – long axis northwest to southwest. For longer periods north-south	1 per 20,000	15-30 minutes travel time	Usually part of baseball, football, soccer complex in community park or adjacent to high school.
Football	Minimum 1.5 A	160' x 360' with a minimum of 6' clearance on all sides.	Same as field hockey.	1 per 20,000	15-30 minutes travel time	Same as field hockey.
Soccer	1.7 – 2.1 A	195' to 225'x330' to 360' with a minimum 10' clearance all sides.	Same as field hockey.	1 per 10,000	1-2 miles	Number of units depends on popularity. Youth soccer on smaller fields adjacent to schools or neighborhood parks.
Golf-driving Range	13.5 A for minimum of 25 tees	900'x690' wide. Add 12' width for each additional tee.	Long axis south-west-northeast with golfer driving toward northeast.	1 per 50,000	30 minutes travel time.	Part of a golf course complex. As separate unit may be privately owned.
¼ Mile Running Track	4.3 A	Overall width – 276' Length – 600.02' Track width for 8 to 4 lanes is 32'.	Long axis in sector from north to south to north-west-south-east with finish line at northerly end.	1 per 20,000	15-30 minutes travel time	Usually part of high school, or in community park complex in combination with football, soccer, etc.
Softball	1.5 to 2.0 A	Baselines – 60 ' Pitching distance- 46' min. 40' women. Fast pitch field Radius from Plate – 225' Between foul	Same as baseball	1 per 5,000 (if also used for youth baseball)	¼ - ½ mile	Slight differences in dimensions for 16" slow pitch. May also be used for youth baseball.

		Lines. Slow Pitch – 275' (men) 250' (women)				
Multiple Recreation Court (basketball, volleyball, tennis)	9, 840 sq. ft.	120' x 80'	Long axis of courts with *primary* use is north-south	1 per 10,000	1-2 miles.	
Trails	N/A	Well defined head maximum 10' width, maximum average grade is 5% not to exceed 15%. Capacity rural trails – 40 hikers/day/mile. Urban trails – 90 hikers/day/mile.	N/A	1 system per region	N/A	
Archery Range	Minimum 0.65 A	300' Length x Minimum 10' wide between targets. Roped clear space on sides of range minimum 30', clear space behind targets minimum of 90'x45' with bunker.	Archer facing north = or – 45 degrees.	1 per 50,000	30 minutes travel time	Part of regional or metro park complex.
Combination Skeet and Trap Field (8 Stations)	Minimum 30 A	All walks and structures occur within an area approximately 130' wide by 115' deep. Minimum cleared area is contained within 2 superimposed segments with 100-yard radii (4 acres). Shot-fall danger zone is contained within 2 superimposed segments with 300-yard radii (36 acres).	Center line of length runs northeast-southwest with shooter facing northeast.	1 per 50,000	30 minutes travel time	Part of regional/ metro park complex

Golf 1. **Par 3 (18 hole)** 2. **9-hole standard** 3. **18-hole standard**	50-60 A Minimum 50 A Minimum 110 A	Average length vary 600-2700 yd. Average length – 2250 yards Average length 6500 yards	Majority of holes on north-south axis	-- 1/25,000 1/50,000	½ to 1 hour travel time	9 hole course can accommodate 350 people/ day. 18 hole course can accommodate 500-550 people/day. Course may be located in community or district park, but should not be over 20 miles from population center.
Swimming Pools	Varies on size of pool and amenities. Usually ½ to 2 A site.	*Teaching*- minimum of 25 yards x 45' even depth of 3 to 4 ft. *Competitive* – minimum of 25 m x 16 m. Minimum of 27 square feet of water surface per swimmer. Ratios of 2:1 deck vs. water.	None-although care must be taken in siting of lifeguard stations in relation to afternoon sun.	1 per 20,000 (Pools should accommodate 3 to 5% of total population at a time.)	15 to 30 minutes travel time	Pools for general community use should be planned for teaching, competitive and recreational purposes with enough depth (3.4m) to accommodate 1m and 3m diving boards. Located in community park or school site.
Beach Areas	N/A	Beach area should have 50 sq. ft. of land and 50 sq. ft. of water per user. Turnover rate is 3. There should be 3-4 A supporting land per A of beach.	N/A	N/A	N/A	Should have sand bottom with slope maximum of 5 % (flat preferable). Boating areas completely segregated from swimming areas.

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Reference:

Lancaster, R.A. (Ed.). (1990). Recreation, Park, and Open Space Standards and Guidelines. Ashburn, VA: National Recreation and Park Association.