



## RECREATIONAL OPEN SPACE NEEDS ANALYSIS FOR THE DELAWARE VALLEY



Delaware Valley  
Regional Planning  
Commission

MAY 2002



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**Delaware Valley Regional Planning Commission**

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Created in 1965, the Delaware Valley Regional Planning Commission (DVRPC) is an interstate, intercounty and intercity agency that provides continuing, comprehensive and coordinated planning to shape a vision for the future growth of the Delaware Valley region. The region includes Bucks, Chester, Delaware, and Montgomery counties, as well as the City of Philadelphia, in Pennsylvania; and Burlington, Camden, Gloucester and Mercer counties in New Jersey. DVRPC provides technical assistance and services; conducts high priority studies that respond to the requests and demands of member state and local governments; fosters cooperation among various constituents to forge a consensus on diverse regional issues; determines and meets the needs of the private sector; and practices public outreach efforts to promote two-way communication and public awareness of regional issues and the Commission.



Our logo is adapted from the official DVRPC seal, and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole, while the diagonal bar signifies the Delaware River. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey.

DVRPC is funded by a variety of funding sources including federal grants from the U.S. Department of Transportation's Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), the Pennsylvania and New Jersey departments of transportation, as well as by DVRPC's state and local member governments. The authors, however, are solely responsible for its findings and conclusions, which may not represent the official views or policies of the funding agencies.

## **INTRODUCTION**

Assessing future recreational open space needs can be a simple or complex task. There are a variety of methods and approaches that have been used in the past by different agencies to consider the necessary and appropriate amount and type of parkland for a given region. This paper presents three different methods for determining the need for recreational open space, which may be applied to the Delaware Valley. The goal is to quantify the amount of public open space required to meet the region's recreational needs.

With this seemingly straightforward goal in mind, it is important to remember that it is impossible to formulate a single objective standard for calculating recreational open space needs across the region. Ultimately, communities must reach a consensus as to how much parkland is optimal for their recreational needs. Furthermore, reaching such a consensus typically requires a detailed evaluation of a community's needs, resources and land use patterns. No single empirical standard can categorically determine what level of recreational open space is best for all communities. Nevertheless, DVRPC hopes that the following methods for determining recreational open space needs will provide benchmarks that can assist communities in their efforts to set up a diversified and balanced park, recreation and open space system.

The three analyses performed by the Delaware Valley Regional Planning Commission (DVRPC) to determine the need for recreational open space in the Philadelphia nine-county region are as follows: 1) a population-based analysis; 2) an analysis based on New Jersey's Balanced Land Use Guidelines; and 3) an "adjusted" version of the Balanced Land Use Guidelines designed to take into account the considerable amount of existing development in the Delaware Valley. All three analyses are designed to quantify the minimum amount of county, state and federal parkland required to meet the recreation needs of the Delaware Valley's residents.

The primary difference between the three approaches is that the population-based standard sets a goal for a finite period of time, based on the current or forecasted population, while the land use standards set their goals in perpetuity, recognizing that land is finite and any preservation efforts now will benefit all generations to follow. None of the methods, though, relate goals or standards to the natural resources of the area, such as wetlands, stream corridors, wooded areas and wildlife habitats, nor do they establish standards for specific recreation facilities such as swimming pools, tennis courts or ball fields. These assessments are for acres of recreational open space only, with actual uses determined later.

The results of all the needs analyses were compared to the Delaware Valley's current inventory of recreational open space. Within this study, "recreational open space" refers to all publicly owned and accessible lands, including municipal, county, state and federal parks, state forests, state game lands, wildlife preserves, lands in the national park system, and various other publicly owned and accessible lands. An inventory of the Delaware Valley's recreational open space as of July 2000 is presented in Table I. The 2000 Parkland Map shows the spatial distribution of the region's parkland tallied in Table I.

Although the three analyses presented here are incorporated into DVRPC's open space planning process, open space planning as a whole goes far beyond the provision of lands to recreate upon. In addition to recreation, open space is critical for the preservation and protection of the Delaware Valley's valuable and highly threatened natural resources. These resources are the basis for DVRPC's Year 2025 Open Space Network Map and include woodlands, floodplains, wetlands, threatened and endangered species' habitats, and greenway connections between parks and between population centers and parks. In addition, the Delaware Valley's open space shapes the character of the region and creates a sense of place for its residents that is part and parcel of the region's identity. So, it is important to remember that open space planning goes far beyond the "acres of ground" to recreate upon which is the focus of this document.

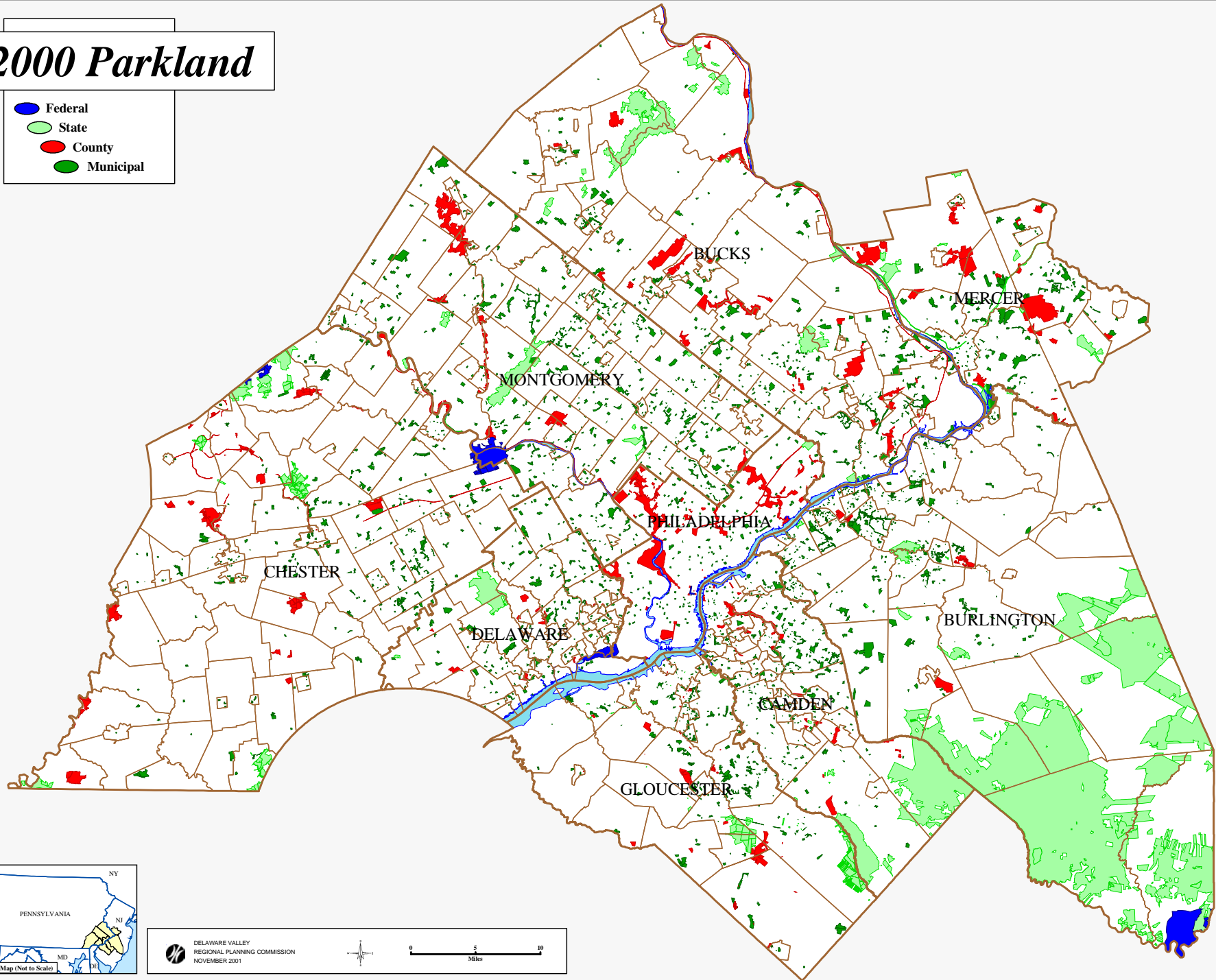
With that in mind, the remainder of this study will present the three recreational open space needs assessments performed by DVRPC followed by a broader discussion of park, recreation and open space planning. The first three sections will explain each assessment's methodology and provide a tabular presentation of each assessment's findings. The fourth section will compare and discuss the results of each analysis, along with their limitations. The final section will discuss the comprehensive vision for regional open space embodied in DVRPC's *Horizons – The 2025 Plan for the Delaware Valley – Open Space Network*.

**TABLE I**  
**YEAR 2000 PUBLIC PROTECTED OPEN SPACE (IN ACRES)**

County	Federal	State	County	Municipal	Total Public Park Area	Percent of Total Area	Park Acreage Per 1,000 Population
Bucks	0	12,156	8,163	7,267	27,586	7.1%	46.9
Chester	1,167	7,223	4,950	5,722	19,062	3.9%	45.2
Delaware	757	3,145	712	3,334	7,948	6.7%	14.6
Montgomery	2,199	4,287	5,564	9,454	21,504	7.0%	29.9
Philadelphia	319	255	9,186	1,352	11,112	12.9%	7.7
<b>PA TOTAL</b>	<b>4,442</b>	<b>27,066</b>	<b>28,575</b>	<b>27,129</b>	<b>87,212</b>	<b>6.3%</b>	<b>23.5</b>
Burlington	4,001	127,565	1,211	5,486	138,263	26.9%	328.9
Camden	0	18,536	1,964	3,276	23,776	16.7%	47.3
Gloucester	0	5,108	1,805	3,599	10,512	5.1%	45.7
Mercer	0	3,450	7,292	5,282	16,024	11.1%	49.2
<b>NJ TOTAL</b>	<b>4,001</b>	<b>154,659</b>	<b>12,272</b>	<b>17,643</b>	<b>188,575</b>	<b>18.7%</b>	<b>125.3</b>
<b>REGION TOTAL</b>	<b>8,443</b>	<b>181,725</b>	<b>40,847</b>	<b>44,772</b>	<b>275,787</b>	<b>11.5%</b>	<b>52.9</b>

# 2000 Parkland

- Federal
- State
- County
- Municipal



DELAWARE VALLEY  
REGIONAL PLANNING COMMISSION  
NOVEMBER 2001



0 5 10  
Miles

## POPULATION-BASED RECREATIONAL OPEN SPACE NEEDS ASSESSMENT

The population-based recreational open space needs assessment grew out of work done by the National Recreation and Park Association (NRPA). Historically, the NRPA calculated the need for recreational open space in terms of acres per 1,000 residents. The original standard developed by the NRPA, and used widely by park planners up through the 1990s, was 10 acres of parkland and open space per 1,000 residents within each city, plus an equal area of large parks and forests either within or immediately adjacent to the city.

Over the past decade, however, the NRPA began to take the view that fixed park and recreational open space “standards” were too crude and rigid to be applied *carte blanche* to something as complicated and variable as park and recreational open space planning. Instead, they opted for a more systematic planning approach that takes into account the unique needs, desires and resources of communities as well as changing environmental, social, economic and demographic trends. In their most recent publication, *Park, Recreation, Open Space and Greenway Guidelines (1995)*, the NRPA points out the limitations of a “one-size-fits-all” standard for park and recreation planning. Instead, they urge park planners to think of the entire community as a “park” and

to balance all land uses into “environmentally harmonious park, recreation and open space land units.”<sup>1</sup>

With this broader framework in mind, the NRPA now takes a different approach to park planning, analyzing the types of parks and facilities required for each individual community, along with the amount of acreage required to site those kinds of parks and facilities. With the adoption of this new approach, the NRPA no longer specifies region-wide standards for recreational open space. It should also be noted that NRPA’s old standard of 10 acres per 1000 population was primarily used to determine the need for space to site mostly active recreational facilities in built-up or developed areas (i.e., cities), not to calculate the overall optimal amount of passive and active recreational open space in a region as large and diverse as the Delaware Valley.

Despite these circumstances, DVRPC has created a population-based recreational open space needs assessment for the Delaware Valley that borrows from past NRPA guidelines. The reason for doing so is to at least provide a basic numerical benchmark for recreational open space that can be compared to the region’s current inventory of parkland and to the other recreational open space needs assessments. The population-based assessment is particularly important because it relates

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<sup>1</sup> *Park, Recreation, Open Space and Greenway Guidelines*, National Recreation and Park Association, 1995

recreational open space to the overall population that the space serves.

In developing its population-based assessment, DVRPC attempted to factor some of the diversity of the region into its calculations. To begin with, two population-based standards were developed, one for county parks and one for state and federal parks. The county parks standard took variations in population density into consideration when calculating the need for county parks. This approach was taken because areas with higher densities require fewer acres per 1000 people due to the way parks are used in different areas, the varied accessibility of parks in areas of varying density, and the likely relative cost and ease of acquiring open space for recreation in areas of different density. To perform the county park standard calculation, the method considers the population forecasts for each municipality to the year 2025 and assigns park standards of acres per 1000 people based on the average population densities in each municipality, summed to the county level (see Table II-A). The end result is that high density areas such as the cities of Philadelphia or Camden require fewer acres per 1000 people than lower density areas found in the more rural parts of the Delaware Valley.

By contrast, the demand for state and federal parks (also referred to as “regional” parks in this analysis) is calculated using a flat standard of 25 acres per 1000 people. The standard is applied to the NJ and PA portions of the region

because state and federal parks generally serve a wider geographic area than county and municipal parks. The figure of 25 acres per 1000 population was chosen to reflect the need for larger open space units to house a variety of passive recreation activities. To further increase the efficacy of the analysis, both NJ and PA must meet their state and federal parkland requirements individually and surpluses in one state do not make up for shortfalls in the other. Likewise, each county must meet the demand for county parkland individually, and surpluses in one county cannot be used to make up for shortfalls in an adjacent county. These criteria insure a more even distribution of parkland throughout the region. Although population-based standards that could be used for municipal park planning are included in Table II-B for reference, at this time the focus is only on parks serving larger areas.

The results of the population-based method are presented in Table II-A. Overall, the table reveals a net deficit of 4,299 acres in Pennsylvania county parkland, mostly in Delaware County, and a deficit of 5,907 acres in New Jersey county parkland, mostly in Burlington and Camden Counties. Pennsylvania has a net deficit of 73,569 acres in state and federal (regional) parklands, while New Jersey exceeds its state and federal parkland requirement by a wide margin. Summed across the region, the population-based method shows a need for an additional 83,775 acres of county, state and federal parkland by the year 2025

**TABLE II - A**  
**PARK REQUIREMENTS TO 2025 (POPULATION-BASED METHOD)**

	POPULATION BY DENSITY CATEGORY								
COUNTY	0 to 499	500 to 4,999	5,000 to 9,999	> 10,000	TOTAL POPULATION 2025	SUB-REGIONAL PARK REQUIREMENT (ACRES)	SUB-REGIONAL DEFICIT/ SURPLUS	REGIONAL PARK REQUIREMENT (ACRES)	REGIONAL DEFICIT/ SURPLUS
Bucks	70,560	651,890	25,670	0	748,120	6,075	2,088		
Chester	116,370	394,970	20,290	18,530	550,160	4,519	431		
Delaware	4,100	305,580	223,994	14,110	547,784	3,886	-3,174		
Montgomery	15,280	742,650	99,100	0	857,030	6,689	-1,125		
Philadelphia	0	0	529,270	970,730	1,500,000	7,059	1,764		
<b>PA TOTAL</b>					<b>4,203,094</b>	<b>28,228</b>	<b>-4,299</b>	<b>105,077</b>	<b>-73,569</b>
Burlington	107,830	385,650	19,970	0	513,450	4,283	-3,072		
Camden	12,490	397,930	103,110	0	513,530	3,927	-1,963		
Gloucester	48,470	274,050	0	0	322,520	2,677	-872		
Mercer	23,050	281,200	14,100	86,500	404,850	2,911	4,381		
<b>NJ TOTAL</b>					<b>1,754,350</b>	<b>13,798</b>	<b>-5,907</b>	<b>43,859</b>	<b>114,801</b>
<b>REGION TOTAL</b>					<b>5,957,444</b>	<b>42,026</b>	<b>-10,206</b>	<b>148,936</b>	<b>-73,569</b>

**TABLE II - B**

STANDARDS FOR PARKS AND RECREATIONAL AREAS (acres/1000 population)					
CATEGORY	DENSITY (persons/square mile)				REGION
	> 10,000	5,000-9,999	500-4,999	0-499	
Regional (State/Federal)	-	-	-	-	25
Sub-Regional (County)	4.0	6.0	8.0	10.0	-
Local (Municipal)	3.08	6.17	8.0	6.0	-

## NEW JERSEY BALANCED LAND USE GUIDELINES

The New Jersey "Balanced Land Use Guidelines", as specified in the 1994 New Jersey State Comprehensive Outdoor Recreation Plan (NJ SCORP), was the second method used to calculate the need for recreational open space in the Delaware Valley. The Balanced Land Use Guidelines define a standard for recreational land to be set aside in perpetuity irrespective of current or forecasted population. In contrast to the population-based method, the Balanced Land Use approach incorporates land as a finite resource for which there are other legitimate competing uses. Basically, the Balanced Land Use requirements represent the recreation open space needs that will result from existing and new development. The acres per population method, on the other hand, generates higher recreation land requirements as the population increases and land becomes more scarce.

The Balanced Land Use Guidelines percentage standards are shown in Table III-A. The goal for county owned parks is seven percent of the *total developable* land of each county, while the goals for state and federally-owned land are ten percent and four percent of the *total area* of the region respectively. Using developable land as the calculation basis for counties takes into account the fact that the demand for county recreation land is generated by development and that the types of active recreation facilities sometimes sited in county parks are not compatible with environmentally

sensitive lands. Within this analysis, developable land is defined as the total area of each county excluding wetlands, and state or federally-owned open space.<sup>2</sup> The recreation responsibilities of the state and federal levels of government are broader, ranging from active day use areas to wilderness oriented activities like hunting and hiking that are generally compatible with environmentally sensitive areas. Reflecting this broader responsibility, the state and federal guidelines are applied to the total land area of the region, and not just to developable land.

**TABLE III-A**

NEW JERSEY BALANCED LAND USE GUIDELINES	
CATEGORY	STANDARD
Federal	4% of the total area of the state (region)
State	10% of the total area of the state (region)
County	7% of the developable area of the county
Municipal	3% of the developable area of the municipality

<sup>2</sup> The NJ SCORP excludes slopes in excess of 12% from developable lands. However, due to lack of accurate data concerning the amount of land covered by steep slopes in excess of 12% throughout the Delaware Valley, this factor was not included in the analysis

Again, as in the population-based analysis, goals for municipal lands are identified, but are not included in the analysis. The guidelines in the NJ SCORP specify that a *minimum* of three percent of the total developable area of each municipality should be set aside as municipal-owned recreational open space.

Applying the New Jersey Balanced Land Use Guidelines to the nine counties of the Delaware Valley yields the results presented in Table III-B. For each county, the amount of current county parkland is subtracted from the county goal to determine the net deficit or surplus. Under this approach, all counties except Philadelphia present a deficit when compared to the seven percent goal.

In total, Pennsylvania requires nearly 67,000 acres of county parkland, over 111,000 acres of state parkland and 51,000 acres of federal parkland. New Jersey requires over 43,000 acres of county parks and 36,000 acres of federal parks. New Jersey easily exceeds its state requirement of 101,000 acres. Summed across the region, the Balanced Land Use Guidelines show a need for an additional 308,000 acres of federal, state and county parkland. Again, as in the population-based method, surpluses in one county or one state do not make up for deficits in another county, state or park category.

TABLE III-B

## NEW JERSEY BALANCED LAND USE GUIDELINES

COUNTY	AREA	FED	STATE	WETLANDS	DEVELOPABLE	7% COUNTY GOAL	COUNTY DEFICIT/ SURPLUS
	A	- F	- S	- W	= D		
Bucks	389,056	0	12,156	18,250	358,650	25,106	-16,943
Chester	483,776	1,167	7,223	7,825	467,561	32,729	-27,779
Delaware	118,080	757	3,145	5,274	108,904	7,623	-6,911
Montgomery	308,992	2,199	4,287	5,625	296,881	20,782	-15,218
Philadelphia	86,464	319	255	5,534	80,356	5,625	3,561
<b>PA TOTAL</b>	<b>1,386,368</b>	<b>4,442</b>	<b>27,066</b>	<b>42,508</b>	<b>1,312,352</b>	<b>91,865</b>	
<b>TOTAL COUNTY DEFICIT</b>							<b>-66,851</b>

Burlington	514,880	4001	127,565	10,432	372,882	26,102	-24,891
Camden	142,272	0	18,536	14,798	108,938	7,626	-5,662
Gloucester	208,064	0	5,108	13,164	189,792	13,285	-11,480
Mercer	144,516	0	3,450	16,045	125,021	8,751	-1,459
<b>NJ TOTAL</b>	<b>1,009,732</b>	<b>4,001</b>	<b>154,659</b>	<b>54,439</b>	<b>796,633</b>	<b>55,764</b>	
<b>TOTAL COUNTY DEFICIT</b>							<b>-43,492</b>

STATE	AREA	10% STATE GOAL	STATE DEFICIT/ SURPLUS	4% FEDERAL GOAL	FEDERAL DEFICIT/ SURPLUS
<b>PA</b>	1,386,368	138,637	<b>-111,571</b>	55,455	<b>-51,013</b>
<b>NJ</b>	1,009,732	100,973	<b>53,686</b>	40,389	<b>-36,388</b>

## ADJUSTED LAND USE GUIDELINES

The Adjusted Land Use Guidelines utilize the county, state and federal standards of the New Jersey Balanced Land Use Guidelines but adjusts the analysis to recognize the existing patterns of land use and development in the region. Thus, in addition to removing state and federal parks and wetlands to yield developable area, the adjusted method further removes all existing developed areas, county and municipal parks, preserved farmlands, and the "*Pinelands Preservation Areas*", as defined by the Pinelands Comprehensive Management Plan.

The remaining land in the region represents that which is, for all practical purposes, still "developable", and is only a fraction of the total developable area determined by the non-adjusted Balanced Land Use Guidelines. Applying the 7% standard to the remaining developable area of each county yields a very different result than the original method. Consequently, the Adjusted Land Use Guidelines approach acknowledges that it may be difficult, if not impossible, in certain counties to meet the ideal standard because of the extensive development that already exists. Adjusting out for existing development or land otherwise preserved allows each county to consider their open space goals from the perspective of remaining available land that could be acquired for recreational open space.

In the adjusted approach, the needs analysis for county, state and federal parks is applied only to the *remaining* developable

land. As a result, the current inventory of open space is not subtracted from the required amount, since that inventory meets the needs of those regions that have already been developed. However, when the current amount of parkland exceeds the percentage specified by the adjusted balanced land use guidelines, this amount is credited towards future goals. For example, over 9% of all developed land in Mercer County is already parkland. Therefore, the county is not expected to acquire 7% of its remaining developable land for public open space. Instead, Mercer County's future requirement is diminished by its current excess of county parkland above the 7% standard.

Table IV presents the results of the Adjusted Land Use Guidelines. In total, Pennsylvania requires almost 50,000 acres of county parkland, 71,000 acres of state parkland and more than 28,000 acres of federal parkland. New Jersey requires over 26,000 acres of county parkland and nearly 16,000 acres of federal parkland. Summed across the region, the Adjusted Balanced Land Use Guidelines show a need for an additional 191,000 acres of county, state and federal parklands by the year 2025. The only counties to at least meet the 7% open space standard of their currently developed areas are Philadelphia and Mercer counties. New Jersey easily exceeded the state standard of 10% for currently developed areas but fell far short of the federal standard. Pennsylvania also came up well short of the state and federal standards for existing developed lands.

**TABLE IV**  
**ADJUSTED LAND USE GUIDELINES**

COUNTY	AREA	EXISTING PARKS, PRESERVATION AREAS AND DEVELOPED LANDS		REMAINING DEVELOPABLE	COUNTY GOAL OF 7% OF REMAINING DEVELOPABLE	COUNTY PARKS AS % OF EXISTING DEVELOPED AND PRESERVED
Bucks	389,056	173,856		215,200	15,064	4.70%
Chester	483,776	159,565		324,211	22,695	3.10%
Delaware	118,080	85,884		32,196	2,254	0.83%
Montgomery	308,992	176,427		132,565	9,280	3.15%
Philadelphia	86,464	80,350		6,114	0	11.43%
PA TOTAL	1,386,368	676,082		710,286		
TOTAL COUNTY DEFICIT					49,292	
Burlington	514,880	357,665		157,215	11,005	0.34%
Camden	142,272	90,331		51,941	3,636	2.17%
Gloucester	208,064	81,496		126,568	8,860	2.21%
Mercer	144,516	80,913		63,603	2,824	9.01%
NJ TOTAL	1,009,732	610,405		399,327		
TOTAL COUNTY DEFICIT					26,325	
STATE	TOTAL PARKLANDS, DEVELOPED AND PRESERVED AREAS	REMAINING DEVELOPABLE	10% STATE GOAL	STATE PARKS AS % OF EXISTING PARKS, DEVELOPED AND PRESERVED LANDS	4% FEDERAL GOAL	FEDERALPARKS AS % OF EXISTING PARKS, DEVELOPED AND PRESERVED LANDS
PA	676,082	710,286	71,029	4.00%	28,411	0.66%
NJ	610,405	399,327	0	25.34%	15,973	0.66%

## ASSESSING FUTURE RECREATIONAL OPEN SPACE NEEDS

Comparing the results of the three different needs analyses illustrates the difficulty of selecting a single, objective "*standard*" as the final recommendation for the region. Mercer County, for example, yields a surplus of 4,381 acres in the year 2025 for the population-based analysis, a deficit of 1,459 acres in the balanced land use analysis, and a deficit of 2,824 acres under the adjusted land use approach. Bucks County moves from a surplus of 2,088 acres in the population-based method to a net deficit of 16,943 acres under the balanced land use guidelines to a need for 15,064 acres using the adjusted guidelines. Chester County, meanwhile, moves from a slight surplus to a need for more than 22,000 acres between the population-based and land use approaches.

The wide variation in the analysis between the three methods begs the question: is one method better than the others? The answer is no for two reasons. First, it is important to remember that the methods themselves are subjective and they are only as good as the assumptions upon which they are based. Changing these assumptions would lead to a much different set of results. For example, one could argue that the acres per population standard in the population-based method should be doubled, tripled or even halved, thereby producing entirely new results. Likewise, the same can be said of the percentage standards set forth in the NJ SCORP. In other

words, these methods, although based on years of practitioner's experience and observations are only as good as the extent to which interested parties agree on their basic premises.

Second, when considering the "correctness" of each method, it may be concluded that each method is appropriate for a different set of circumstances. For example, the population-based method may be more useful as a "short-term" approach to assess recreation area needs, while the land use guidelines may be thought of as presenting an ideal long-term goal for securing recreational spaces independent of changing population forecasts. Accordingly, recreational open space acquisition efforts, particularly at the county and state level, should focus immediately on meeting the population-based deficits but should work over time toward achieving the standards of the balanced or adjusted land use guidelines.

Perhaps even more important than a direct evaluation of the quantitative assessments themselves is an examination of the unique conditions and opportunities present in the Delaware Valley with regard to recreation and open space. Although it is impossible to examine all of the spatial relationships between open space and recreation in the Delaware Valley in the short space allotted here, it will be useful to consider a number of salient points.

First, although existing public parks represent almost 12% of the region's area, an examination of the parkland map shows that this space is not very well distributed. For example, New Jersey's Wharton and Lebanon State Forests in the Pinelands, which are the largest contiguous parcels of parkland in the region, account for almost 50% of the region's parkland inventory. This is problematic because although the Pinelands perform critical natural resource protection functions, they do little to meet the day to day recreation needs of the Delaware Valley's residents. Due to their sensitive ecological nature, topographical character, and associated resource management philosophy, these state forest holdings in the Pinelands are not well suited for active and even some forms of passive recreation. Further, they are relatively remote from most of the region's population centers, clearly laying beyond the fringes of the region's urban and suburban landscapes.

The relationships between parkland and key natural features that provide specific recreational opportunities, like waterfronts, are also important considerations that are not addressed in the recreational open space needs analyses. For example, in the Delaware Valley, there are few large stretches of protected open space on waterfronts, with the Fairmount Park system in Philadelphia being the one notable exception. The Delaware River, which defines the region, could offer a multitude of waterfront recreational opportunities in seven of the region's nine counties, but the Delaware River waterfront

remains largely inaccessible to the bulk of the region's population.

In addition to these considerations, the wider land use context of parkland acreage needs to be regarded when evaluating its recreational adequacy. For example, although some recreational needs in the suburbs and exurbs can be fulfilled by areas that are not public parks per se, such as large school playing fields, private yard areas, and other "open" non-public places, the heavily asphalted landscapes of the region's intensely urbanized areas provide few such opportunities. As a result, greater demands are placed on urban recreation facilities and parks as compared to suburban parks. These types of considerations, along with the subtleties of parkland distribution mentioned earlier, are not captured by the recreation needs analyses.

While the three recreational open space needs analyses presented here can be used as benchmarks, the limitations described above show that additional analysis on parkland distribution, incorporation of key natural and cultural features, and consideration of surrounding land use patterns will result in more appropriate assessments of recreational open space needs.

## 2025 OPEN SPACE NETWORK

The previous chapters focused on open space as a resource for recreation in the Delaware Valley. However, as stated previously, open space planning as a whole must consider much more than just the provision of open spaces for recreation. Indeed, open space is an integral part of the region's land use fabric, and is necessary to maintain environmental quality, community identity, and economic vitality in a context of continuing urban and suburban growth. In response to these realities, DVRPC gave careful consideration to the role open space plays in the region when it created *Horizons, The Year 2025 Regional Land Use Plan for the Delaware Valley*. Together, the elements of this plan present a comprehensive vision to guide the region's changing physical infrastructure, patterns of land use and networks of open space. One of the specific goals of *Horizons* with regard to open space is the preservation of natural resource areas and the creation of new parks and greenways. The plan calls for restricting development from key natural resource areas and preserving them in perpetuity. It also calls for linking together additional recreational and open space facilities in an integrated regional network. To accomplish these goals, the plan recommends protecting an additional 440,000 acres of open space throughout the nine-county region by 2025, an amount of open space that is more than one and one-half times as large as the region's current inventory of parkland.

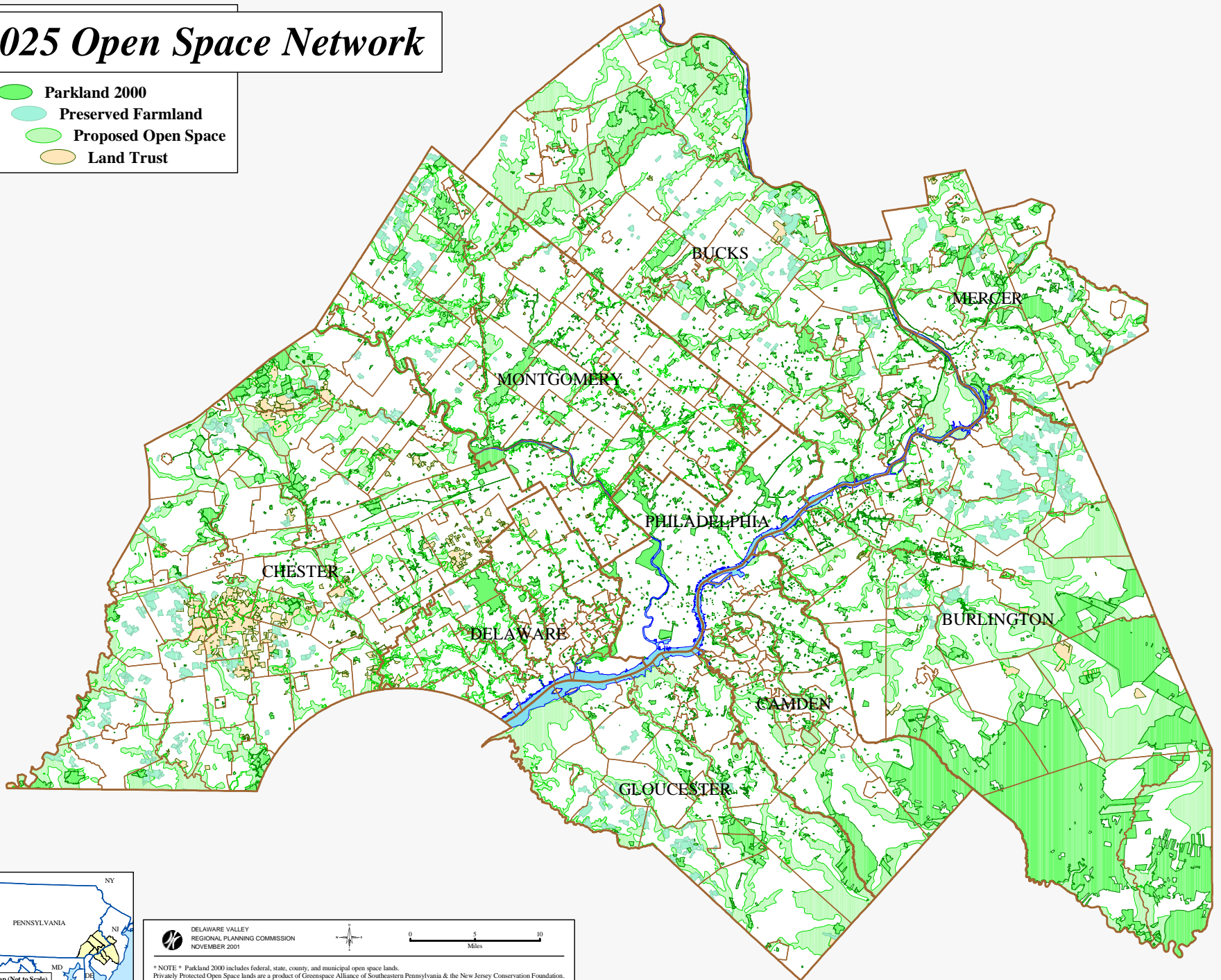
Significantly, the spatial distribution of lands targeted for open space preservation in the 2025 Open Space Network are based on the existing natural resource patterns and land use relationships in the region. Lands that have been identified as future protected open space include sensitive and valuable natural areas (i.e., floodplains, steep slopes, riparian buffers, wetlands, woodlands and special habitat areas), and natural areas that create links between parks and between population centers and parks (i.e., greenways). At the same time, the spatial layout of the open space network is designed to achieve the other core elements of *Horizons*; by defining where urbanization should not occur, open spaces create community buffers, enhance a place's sense of identity, encourage more compact, mixed-use development and protect air and water quality.

The 2025 Open Space Network Map shows DVRPC's vision for future regional open space in the Delaware Valley. In addition to providing sufficient area to meet the recreational open space needs of each county and the entire region as identified by the three recreational open space needs analyses, the open space network aims to achieve the following objectives:

- The protection of woodlands and other upland habitat areas that provide an environment for the diverse plants and animals of the region, particularly those areas identified as containing threatened or endangered species.

# 2025 Open Space Network

- Parkland 2000
- Preserved Farmland
- Proposed Open Space
- Land Trust



- The protection of stream corridors and wetland areas that provide clean water for drinking, habitat for fish, plants and other wildlife, and recreational opportunities.
- The protection of unique natural resource features of the region that may represent a notable ecosystem, geologic formation, or habitat area.
- The creation of connections between existing parks, streams, and woodlands to establish an interconnected network of open space in the nine-county region. These connections may be on paths within protected buffers along streams, through existing wooded areas, or even along protected easements in developed areas. This system of “greenways” and “blueways” can provide access to a variety of different but connected resource areas.
- Creation of connections between existing and emerging population centers to the nearest large park or other open space area and to the regional network of open space. Proposed greenways seek to link not only the larger state and county parks, but also smaller municipal parks as well.
- Provision of additional land for recreational activities, with those recreational activities matched to the appropriate resource. For example, while certain upland areas should be further developed with ball fields, basketball courts or swimming pools, other sensitive area such as stream

valleys should only serve passive recreational goals such as walking or fishing. The most sensitive resource areas in the region should be protected for their ecological value and may not be appropriate at all for recreational use.

- Finally, open space in the region serves a valuable function for its visual aesthetic, the scenic vistas and opportunities for relief from the man made that connect people to the natural environment. In many ways, the ongoing presence of a stream valley, hillside or favorite woods acts as an identifier of home and creates a “sense of place” for the region’s residents and communities.

Open space for both active and passive recreation is a critical need for the Delaware Valley. All of the recreational open space needs analyses presented in the preceding chapters showed a need for more space to serve the region’s recreation needs. The large population of the Delaware Valley and the growing dominance of developed landscapes in this region underscore the immediate need to address these concerns. Fortunately, by implementing the land use vision put forth in *Horizons*, the Delaware Valley can create an extensive, diverse, and well distributed open space system that not only serves the recreational needs of a large metropolitan population, but also maintains the health and integrity of the region’s natural resources, increases its attractiveness to current and future residents, and preserves the region’s cultural identity and heritage.



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## **ABSTRACT**

This report presents three different methods for determining the need for recreational open space in the Delaware Valley. An explanation of each method is given and detailed results are provided in tabular form. Together, the three methods provide a range of perspectives for determining recreational open space needs, all of which may be applicable under different circumstances and planning contexts.

The results of each method, as well as their strengths and limitations, are evaluated and compared. The needs analyses are then considered within the broader spectrum of open space and land use planning in the Delaware Valley. Finally, the report presents DVRPC's comprehensive vision for regional open space, *Horizons – The 2025 Plan for the Delaware Valley – Open Space Network*, and discusses the relationship of this plan to the recreational open space needs analyses.



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