

CHAPTER V NEEDS ANALYSIS

Land Use Trends

A review of land use trends is important in understanding where changes in the land use pattern is occurring to identify where the county may be most threatened by development. When prioritizing land areas for acquisition this data may be used to determine the level of development pressure that the property or region may be under and to identify where additional land areas may be needed to meet the preservation targets.

Table VI, shows land use distribution in the three regions for the years 1986, 1995 and 2002. The data is taken from the New Jersey Department of Environmental Protection digital data coverage. Countywide, the table shows that land in agricultural use declined by 14,060 acres or almost 20% over the 16 year period. While most of the loss is attributed to an increase in urbanized uses (aka new development) a substantial amount of the loss is attributed to the increase in wetlands mapping in the 1995 data set. The conversion of lands to urban use in both periods amounted to about 4000 acres. When factoring out the wetlands, the rate of loss of agriculture land is equivalent in both periods amounting to approximately 4,700 acres. It is probable that wetlands and water areas increased in land area over the 16 year period because of better mapping and interpretation techniques that would make their presence more readily observed. Forested land areas remained stable throughout the 16 year period. In Warren County approximately .8 square miles of mostly agricultural land per year has been converted to development.

Table VII shows that in 2002 15.8% of the county's total area was in urban land use, up from 12.4% in 1986. Regionally, the greatest percentage (21%) of urban land uses are located in the southern portion of the county. The central portion contains 17.5% and the northern contains almost 11%. The land use data also shows that from 1995 to 2002, the percentage of urban uses in the southern portion increased by almost 2.5 percentage points while the central and northern regions increased by almost 2 and 1 percentage points respectively. While the amount of forested lands has remained consistent throughout the county and in each region the amount of agricultural land has been decreasing as a percentage of land use in each region and the county. From 1995 to 2002 agricultural use has declined the most in the southern region, losing 3.8 percentage points. The central region and the northern region lost 2.25 and 1.13 percentage points respectively. Countywide the loss of agricultural land amounted to 2.13 percentage points.

The land distribution figures in Tables VI and VII show that the southern region of the county is being converted to urban land uses at a greater rate than the other regions of the county. The higher conversion rate can be attributed to the existence of public water and sewer, proximity to I-78 that leads to job opportunities in the greater Lehigh Valley in Pennsylvania and the employment sites in Morris, Somerset and Eastern Metropolitan Counties, New Jersey. Because the southern region is under greater development pressure, the need to acquire properties in the targeted areas in this area becomes more acute. Conversely, while the northern region may be experiencing less development pressure, the opportunity to acquire lands at a lower value in this region should be considered as well.

TABLE VI - LAND USE DISTRIBUTION 1986, 1995, 2002 BY REGION (ACRES)

Northern Region	1986	1995/97	# Change 86-95		2002	# Change 95-02		2002	# Change 86-02	
			95	% Change 86-95		95-02	% Change 95-02		86-02	% Change 86-02
Agriculture	18,463	16,627	-1,836	-9.94%	15,626	-1,001	-6.02%	2002	-2,837	-15.37%
Forest	51,898	51,764	-134	-0.26%	51,969	205	0.40%	2002	71	0.14%
Urban	7,807	8,771	964	12.35%	9,474	703	8.02%	2002	1,667	21.35%
Athletic Fields	42	55	13	30.95%	64	9	16.36%	2002	22	52.38%
Recreation	341	546	205	60.12%	609	63	11.54%	2002	268	78.59%
Water	2,556	2,507	-49	-1.92%	2,541	34	1.36%	2002	-15	-0.59%
Wetlands	6,745	7,640	895	13.27%	7,578	-62	-0.81%	2002	833	12.35%
Total North	87,852	87,910	58	0.07%	87,861	-49	-0.06%	2002		

Central Region	1986	1995/97	# Change 86-95		2002	# Change 95-02		2002	# Change 86-02	
			95	% Change 86-95		95-02	% Change 95-02		86-02	% Change 86-02
Agriculture	25,270	20,591	-4,679	-18.52%	18,576	-2,015	-9.79%	2002	-6,694	-26.49%
Forest	40,897	40,987	90	0.22%	41,089	102	0.25%	2002	192	0.47%
Urban	12,677	14,002	1,325	10.45%	15,791	1,789	12.78%	2002	3,114	24.56%
Athletic Fields	153	201	48	31.37%	208	7	3.48%	2002	55	35.95%
Recreation	357	499	142	39.78%	775	276	55.31%	2002	418	117.09%
Water	1,160	1,156	-4	-0.34%	1,265	109	9.43%	2002	105	9.05%
Wetlands	9,570	12,648	3,078	32.16%	12,410	-238	-1.88%	2002	2,840	29.68%
Total Central	90,084	90,084	0	0.00%	90,114	30	0.03%	2002		

Southern Region	1986	1995/97	# Change 86-95		2002	# Change 95-02		2002	# Change 86-02	
			95	% Change 86-95		95-02	% Change 95-02		86-02	% Change 86-02
Agriculture	26,702	23,948	-2,754	-10.31%	22,173	-1,775	-7.41%	2002	-4,529	-16.96%
Forest	16,620	16,094	-526	-3.16%	16,964	870	5.41%	2002	344	2.07%
Urban	8,210	10,023	1,813	22.08%	11,470	1,447	14.44%	2002	3,260	39.71%
Athletic Fields	51	86	35	68.63%	91	5	5.81%	2002	40	78.43%
Recreation	243	354	111	45.68%	512	158	44.63%	2002	269	110.70%
Water	815	1,479	664	81.47%	1,499	20	1.35%	2002	684	83.93%
Wetlands	1,251	1,904	653	52.20%	1,829	-75	-3.94%	2002	578	46.20%
Total South	53,892	53,888	-4	-0.01%	54,538	650	1.21%	2002		

Warren County	1986	1995/97	# Change 86-95		2002	# Change 95-02		2002	# Change 86-02	
			95	% Change 86-95		95-02	% Change 95-02		86-02	% Change 86-02
Agriculture	70,435	61,166	-9,269	-13.16%	56,375	-4,791	-7.83%	2002	-14,060	-19.96%
Forest	109,415	108,845	-570	-0.52%	110,022	1,177	1.08%	2002	607	0.55%
Urban	28,694	32,796	4,102	14.30%	36,735	3,939	12.01%	2002	8,041	28.02%
Athletic Fields	246	342	96	39.02%	363	21	6.14%	2002	117	47.56%
Recreation	941	1,399	458	48.67%	1,896	497	35.53%	2002	955	101.49%
Water	4,531	5,142	611	13.48%	5,305	163	3.17%	2002	774	17.08%
Wetlands	17,566	22,192	4,626	26.33%	21,817	-375	-1.69%	2002	4,251	24.20%
Total Warren County	231,828	231,882	54	0.02%	232,513	631	0.27%	2002		

TABLE VII - LAND USE DISTRIBUTION 1986, 1995, 2002 BY REGION

Northern Region	1986	% of Region	% of County	1995/97	% of Region	% of County	2002	% of Region	% of County
Agriculture	18,463	21.02%	7.96%	16,627	18.91%	7.17%	15,626	17.78%	6.72%
Forest	51,898	59.07%	22.39%	51,764	58.88%	22.32%	51,969	59.15%	22.35%
Urban	7,807	8.89%	3.37%	8,771	9.98%	3.78%	9,474	10.78%	4.07%
Athletic Fields	42	0.05%	0.02%	55	0.06%	0.02%	64	0.07%	0.03%
Recreation	341	0.39%	0.15%	546	0.62%	0.24%	609	0.69%	0.26%
Water	2,556	2.91%	1.10%	2,507	2.85%	1.08%	2,541	2.89%	1.09%
Wetlands	6,745	7.68%	2.91%	7,640	8.69%	3.29%	7,578	8.62%	3.26%
Total North	87,852		37.90%	87,910		37.91%	87,861		37.79%

Central Region	1986	% of Region	% of County	1995/97	% of Region	% of County	2002	% of Region	% of County
Agriculture	25,270	28.05%	10.90%	20,591	22.86%	8.88%	18,576	20.61%	7.99%
Forest	40,897	45.40%	17.64%	40,987	45.50%	17.68%	41,089	45.60%	17.67%
Urban	12,677	14.07%	5.47%	14,002	15.54%	6.04%	15,791	17.52%	6.79%
Athletic Fields	153	0.17%	0.07%	201	0.22%	0.09%	208	0.23%	0.09%
Recreation	357	0.40%	0.15%	499	0.55%	0.22%	775	0.86%	0.33%
Water	1,160	1.29%	0.50%	1,156	1.28%	0.50%	1,265	1.40%	0.54%
Wetlands	9,570	10.62%	4.13%	12,648	14.04%	5.45%	12,410	13.77%	5.34%
Total Central	90,084		38.86%	90,084		38.85%	90,114		38.76%

Southern Region	1986	% of Region	% of County	1995/97	% of Region	% of County	2002	% of Region	% of County
Agriculture	26,702	49.55%	11.52%	23,948	44.44%	10.33%	22,173	40.66%	9.54%
Forest	16,620	30.84%	7.17%	16,094	29.87%	6.94%	16,964	31.10%	7.30%
Urban	8,210	15.23%	3.54%	10,023	18.60%	4.32%	11,470	21.03%	4.93%
Athletic Fields	51	0.09%	0.02%	86	0.16%	0.04%	91	0.17%	0.04%
Recreation	243	0.45%	0.10%	354	0.66%	0.15%	512	0.94%	0.22%
Water	815	1.51%	0.35%	1,479	2.74%	0.64%	1,499	2.75%	0.64%
Wetlands	1,251	2.32%	0.54%	1,904	3.53%	0.82%	1,829	3.35%	0.79%
Total South	53,892		23.25%	53,888		23.24%	54,538		23.46%

Warren County	1986	% of County	1995/97	% of County	2002	% of County
Agriculture	70,435	30.38%	61,166	26.38%	56,375	24.25%
Forest	109,415	47.20%	108,845	46.94%	110,022	47.32%
Urban	28,694	12.38%	32,796	14.14%	36,735	15.80%
Athletic Fields	246	0.11%	342	0.15%	363	0.16%
Recreation	941	0.41%	1,399	0.60%	1,896	0.82%
Water	4,531	1.95%	5,142	2.22%	5,305	2.28%
Wetlands	17,566	7.58%	22,192	9.57%	21,817	9.38%
Total Warren County	231,828	100.00%	231,882	100.00%	232,513	100.00%

Tables VIII and IX show the countywide property assessment changes for 1990, 2000, 2005 based on the MODIV database obtained from the county tax administrator's office. It shows the assessed value, and number of items in each major tax assessment category. Table X shows the changes in assessed values per item.

Table VIII is showing the valuation decrease of the farm and vacant properties since 1990. In 1990, 13.31% of the county's total valuation was assessed as farm and vacant. By 2005, the value had fallen to 8.16%. Conversely, the value of developed land, including industrial, commercial and residential, increased from 86.69% in 1990 to 91.84% in 2005. While the figures indicate that more of the county's valuation is relying on developed properties, the tax burden is falling mostly on the residential and farm regular tax base. As a percentage of the total, industrial and commercial uses comprise of less of the assessment value tax base. This is an indicator suggesting that the added value is attributed mostly to new residential development.

Regionally, the northern region contains the greatest valuation share of farm and vacant lands at 19.33%. The central and southern region's share of farm and vacant uses are 6.64% and 5.88% respectively. In 1990 the central and southern valuation was 10.82% and 11.87% of the regional total and the northern region was 23.94%. This indicates that valuation increases in developed land were more prevalent in the central and southern regions indicating a greater level of development.

Table IX. is showing the number of properties (items) in each assessment category. Again the number of farm and vacant parcels are decreasing over time when in 1990 the number of farm and vacant parcels represented 28.84% of the county total to 22.25% of the county total in 2005. Developed parcels accounted for 71.16% of the properties in 1990 when in 2005 account for 77.75% of the total. The loss occurred in the count of vacant properties. It is likely that the decrease in the number of vacant parcels were due to development, preserved as open space or converted to farmland.

Regionally, the percentage of properties assessed as farm and vacant were the highest in the northern region. The number and percentage of developed properties are highest in the central and southern region as well. The percent change in the total number of properties may suggest that more subdivision activity occurred in the southern region of the county than in the northern or central from 2000 to 2005. The percentage increase in the south is 6.54% vs. 2.99% and 2.03% for the central and northern regions respectively.

Table X provides comparative statistics of assessed valuation and number of properties in 1990, 2000, and 2005. What is apparent in this table is that the assessment on farm regular properties, those with the house and supporting farm structures has increased the most from 2000 to 2005 in percentage. The second highest is residential. It is realized that the Highlands Act may reduce assessment values.

Regionally, on a per item basis, the central and southern regions gained the most in farm regular while second highest was farm qualified lands in the southern region. This is an indicator that the value of farm properties is increasing as they become more scarce. Contrary to countywide trends, on a per item basis, the northern region gained the most percentage wise from industrial properties and then farm regular properties.

Proposed Development Activity

Proposed development activity in each of the planning regions by municipality from January 2000 through February 2008 is shown in the tables below. Maps 3A, 3B, and 3C show the locating of the major development applications filed with the Warren County Planning Board since 2000.

Proposed Subdivision Activity in Warren County by Region, 2000 through 2007							
	# Major Subdivision Applications	# New Lots	Land Area	Ave. Lot Size	# Minor Subdivisions	# New Lots	Total # New Lots
South	46	2,245	2,818	1.25	153	345	2,590
Central	52	2,250	3,569	1.58	189	448	2,698
North	9	79	351	4.4	147	382	461
Total	107	4,574	6,738		489	1,175	5,749

Proposed Site Plan Activity in Warren County by Region, 2000 through 2007						
	# Major Site Plans	New Sq.ft.	Land Area	# New Residential Units	# Minor Site Plans	# Sq. ft.
South	80	3,415,315	1,774	512	110	170,602
Central	75	2,099,163	2,200	1,652	88	155,654
North	26	417,025	1,002	0	48	64,868
Total	181	5,931,503	4,976	2,164	246	391,124

Southern Region

There have been 126 major development applications in the Southern Development Region since 2000. Two thousand - two hundred and forty-five lots have been proposed through 46 major subdivision applications. These applications used approximately 2,818 acres. A density of 1.25 acres per lot. Another 153 applications for minor subdivisions have proposed 345 lots. Major and minor subdivisions have proposed a total of 2,590 lots.

There have been 80 significant site plan applications of 5,000 square feet or more in the Region since 2000. A total of 3,415,315 square feet of industrial, retail and office space was proposed on 1,774 acres. Five hundred and twelve residential dwelling units were proposed in three applications. Another 110 applications under 5,000 square feet each proposed to create 170,602 square feet of industrial, retail and office space.

Total land affected by major development in the Southern Development Region was approximately 4,533 acres.

Alpha Borough

There have been 8 major development applications proposed in Alpha Borough since 2000. One hundred and seventeen lots have been proposed through 2 major subdivision applications.

These applications used approximately 51 acres at a density of .44 acres per new lot created. Another 14 applications for minor subdivisions have proposed 37 lots. Major and minor subdivision applications are proposing a total of 154 lots.

There have been 6 significant site plan applications of 5,000 square feet or more in the Borough since 2000. A total of 149,850 square feet of industrial, retail and office space was proposed on 30 acres. Sixteen residential units were proposed on approximately 1.5 acres. Another 14 applications created 9,692 square feet of industrial, retail and office space.

Total land used by major development was 82.5 acres.

Franklin Township

There have been 25 major development applications proposed in Franklin Township since 2000. One hundred and eighty-one lots have been proposed through 15 major subdivision applications. These applications used approximately 940 acres. It's important to note that one application (M.R.C. at Brandywine, L.L.C.) proposed for 120 units on 59 acres is on hold due to litigation. The density for the proposed development is 5.2 acres per new lot created. Another 18 applications for minor subdivisions have proposed 40 lots. Major and minor subdivision applications are proposing a total of 221 lots.

There have been 10 significant site plan applications of 5,000 square feet or more in the Township since 2000. A total of 422,325 square feet of industrial, retail and office space was proposed on 30 acres. Another 8 applications created 8,300 square feet of industrial, retail and office space.

Total land used by major development was 970 acres.

Greenwich Township

There have been 24 major development applications proposed in Greenwich Township since 2000. One hundred and ninety-three lots have been proposed through 7 major subdivision applications. These applications use approximately 470 acres at a density of 2.4 acres per new lot created. Another 9 applications for minor subdivisions have proposed 20 lots. Major and minor subdivision applications are proposing a total of 213 lots.

There have been 17 significant site plan applications of 5,000 square feet or more in the Township since 2000. A total of 1,363,092 square feet of industrial, retail and office space was proposed on 741 acres. Another 20 application created 27,685 square feet of industrial, retail and office space.

Total land used by major development was 1,211 acres.

Harmony Township

There have been 14 major development applications proposed in Harmony Township since 2000. Three hundred and thirty-three lots have been proposed through 3 major subdivision applications. One application (Centex Homes, LLC) is for 303 lots. This 186 acre lot is proposed to meet the Townships' COAH obligation. It is currently under litigation. The remaining two subdivisions are situated on approximately 75 acres. The density of these newly created lots is one per .78 acres. Another 34 applications for minor subdivisions have proposed 89 lots. Major and minor subdivision applications are proposing a total of 422 lots.

There have been 11 significant site plan applications of 5,000 square feet or more in the Township since 2000. A total of 418,423 square feet of industrial, retail and office space was proposed on 362 acres. It should be noted that one site plan application (Harmony Greenhouses LLC) is for a 201,600 square feet green house. Another 9 applications created 26,960 square feet of industrial, retail and office space.

Total land used by major development was 548 acres.

Lopatcong Township

There have been 24 major development applications proposed in Lopatcong Township since 2000. Six hundred and forty-six lots have been proposed through 11 major subdivision applications. These applications use 679 acres at a density of 1.05 acres per lot. Another 23 applications for minor subdivisions created 51 lots. Major and minor subdivisions are proposing a total of 697 lots.

There have been 13 significant site plan applications of 5,000 square feet or more in the Township since 2000. A total of 765,377 square feet of industrial, retail and office space was proposed on 465 acres. A large amount of this development occurs with the Phillipsburg Board of Education High School proposal. That alone proposes a 350,000 square feet facility on 127 acres. Another site plan (Warren Heights) proposed 414 dwelling units on 20.5 acres. Another 20 site plan applications created 41,083 square feet of industrial, retail and office space.

Total land used by major development was 1,146 acres.

Town of Phillipsburg

There have been 22 major development applications proposed in Phillipsburg since 2000. Forty-one lots have been proposed through 5 major subdivision applications. These applications used approximately 214 acres. Two hundred and six acres was involved with one application (Preferred Real Estate Investments, Inc) an 8 lot subdivision of the Ingersoll Rand site for industrial purposes. This leaves 33 lots dividing up 8 acres at a density of 4.125 lots per acre. There have been 28 minor subdivisions in this time frame proposing 65 lots. Phillipsburg exhibits classic signs of a community nearing build-out with smaller in-fill development taking place and fewer large subdivisions occurring. Major and minor subdivisions are proposing a total of 98 lots.

There have been 17 significant site plan applications of 5,000 square feet or more in the

Town of Phillipsburg since 2000. A total of 168,639 square feet of industrial, retail and office space was proposed on 46 acres. There were two residential site plan applications totaling 496 dwelling units on 35.7 acres. Another 17 site plan applications creating 49,710 square feet of industrial, retail and office space.

Total land used by major development was 295 acres.

Pohatcong Township

There have been 9 major development applications proposed in Pohatcong Township since 2000. Seven hundred and thirty-four lots have been proposed through 3 major subdivisions. These applications use approximately 203 acres at a density of 3.6 dwelling units per acre. Two applications (Regency at Pohatcong and Hamptons at Pohatcong) account for 728 lots and 191 acres. Another 22 applications for minor subdivisions have occurred creating 43 lots. Major and minor subdivisions are proposing a total of 777 lots.

There have been 6 significant site plan applications of 5,000 square feet or more since 2000. A total of 344,432 square feet of industrial, retail and office space was proposed on approximately 100 acres. The Laneco site is proposed to be redeveloped by a new Wal-Mart super store. The new site is proposed to have 220,882 square feet retail on approximately 78 acres. Another 22 site plan applications creating 7,172 square feet of industrial, retail and office space.



Total land used by major development was 281 acres.

Central Region

There have been 127 major development applications in the Central Development Region since 2000. Two thousand – two hundred and fifty lots have been proposed through 52 major subdivision applications. These applications are situated on approximately 3,569 acres. A density of 1.58 acres per lot. Another 189 applications for minor subdivisions have proposed 448 lots. Major and minor subdivisions are proposing a total of 2,698 lots.

There have been 75 site plan applications of 5,000 square feet or more since 2000. A total of 2,099,163 square feet of industrial, retail and office space and 1,652 residential units were proposed on 2,200 acres. Another 88 applications less than 5,000 square feet each proposed to create 155,654 square feet of industrial, retail and office space.

Total land affected by major development in the Central Development Region was 5,769 acres.

Allamuchy Township

There have been 13 major development applications in Allamuchy Township since 2000. Nine hundred and sixty lots have been proposed through 11 major subdivision applications. These applications used approximately 794 acres at a density of .83 acres per lot. The majority of these applications (7) and lots (725) involve development associated with Panther Valley. Another 15 applications for minor subdivisions have proposed 35 lots. Major and minor subdivisions are proposing a total of 995 lots.

There have been 2 significant site plan applications in the Township since 2000. Five hundred and forty-one dwelling units have been proposed on 219 acres all associated with the Panther Valley area of Allamuchy. No large scale industrial, retail and office space applications have been submitted. Another 7 applications under 5,000 square feet each proposed 830 square feet for cellular communications equipment and 7,842 square feet of retail/service space.

Total land used by major development was 1,013 acres.

Town of Belvidere

There were 3 major development applications in the Town of Belvidere since 2000. Twenty lots have been proposed through 2 major subdivision applications. These applications use approximately 15 acres. Another 4 applications for minor subdivisions have proposed 8 lots. However in-fill of existing vacant or under utilized lots will continue. Major and minor subdivisions are proposing a total of 28 lots.

There was one significant site plan application of 5,000 square feet or more in the Town since 2000. Kasson Belvidere has proposed 259 dwelling units on 43 acres. Another 4 site plan applications under 5,000 square feet each, created 2,880 square feet of retail/service space. Belvidere exhibits the characteristics of a mature town that has little land for large development available.

Total land used by major development was 58 acres.

Town of Hackettstown

There were 30 major development applications in the Town of Hackettstown since 2000. Two hundred and seventy-seven lots were proposed through 2 major subdivision applications. These applications use approximately 117 acres. The density for these projects is 2.37 dwelling units per acre. Another 6 applications for minor subdivisions have proposed 13 lots. Major and minor subdivisions are proposing a total of 290 lots.

There have been 28 significant site plan applications of 5,000 square feet or more in the Town since 2000. A total of 1,058,529 square feet of industrial, retail and office space was proposed on 164 acres. Hackettstown Hospital and Centenary College had major additions proposed to their facilities in this time frame. There were three residential site plan applications totaling 117 dwelling units. Another 10 applications for under 5,000 square feet each are proposing 28,176 square feet of

industrial, retail and office space. Total area involved with major site plan activity in the Town was approximately 240 acres

Total land used by major development was 357 acres.

Independence Township

There have been 16 major development applications in Independence Township since 2000. One hundred and sixty-five lots were proposed through 8 major subdivision applications. These applications use approximately 548 acres. The density for these projects is 3.3 acres per lot. Another 25 applications for minor subdivisions have proposed 63 lots. Major and minor subdivisions are proposing a total of 228 lots.

There have been 8 significant site plan applications of 5,000 square feet or more in the Township since 2000. A total of 204,972 square feet of industrial, retail and office space was proposed on 436 acres. Another 9 applications under 5,000 square feet each are proposing a total of 14,704 square feet of industrial, retail and office space.

Total land used by major development was 984 acres.

Liberty Township

There have been 6 major development applications in Liberty Township since 2000. One hundred lots have been proposed through 6 major subdivisions on 410 acres. The density for these projects is 4.1 acres per lot. Another 19 minor subdivision applications have proposed 44 lots. Major and minor subdivisions are proposing a total of 144 lots.

Liberty Township has had no site plan activity since 2000.

Total land used by major development was 410 acres.

Mansfield Township

There have been 21 major development applications in Mansfield Township since 2000. Three hundred and twenty-two lots have been proposed through 7 major subdivision applications on 464 acres. The density for these applications is one lot per 1.4 acres. Another 28 minor subdivision applications have proposed 64 lots. Major and minor subdivisions are proposing a total of 386 lots.

There have been 14 site plan applications of 5,000 square feet or more since 2000. A total of 467,867 square feet of industrial, retail and office space was proposed on 173 acres. Another 17 applications under 5,000 square feet each are proposing 18,755 square feet of industrial, retail and office space. Ten of these applications were for cellular telecommunication towers and equipment sheds.

Total land used by major development was 637 acres.

Oxford Township

There have been 2 major developments in Oxford Township since 2000. Forty-eight lots have been proposed through 2 subdivision applications on 90 acres. The density for these projects is 1.9 acres per lot. Another 16 minor subdivision applications have proposed 35 lots. Major and minor subdivisions are proposing a total of 83 lots.

Oxford Township had one site plan since 2000. It was for a 30 square foot cellular communication shed.

Total land used by major development was 90 acres.

Washington Borough

There have been 8 major development applications proposed in Washington Borough since 2000. Thirty-eight lots have been proposed through 3 major subdivision applications. These applications are situated on approximately 20 acres. The density of these projects is 1.9 lots per acre. Another 6 minor subdivision applications have proposed 11 lots. Major and minor subdivisions are proposing a total of 49 lots.

There have been 5 site plan applications of 5,000 square feet or more since 2000. A total of 34,270 square feet of industrial, retail and office space was proposed on 161 acres. Another 9 applications under 5,000 square feet each are proposing 6,089 square feet of industrial, retail and office space. There were 376 residential units proposed through the site plan process. One application (Baker Residential) had two hundred and twenty-five units on 125 acres. This application was disapproved and no resubmittal of plans by the applicant has been received since 2001.

Total land used by major development was 181 acres.

Washington Township

There have been 17 major developments in Washington Township since 2000. Three hundred lots have been proposed through 9 major subdivision applications. These applications are situated on approximately 956 acres. The density of these projects is 3.2 acres per proposed lot. Another 35 minor subdivision applications are proposing 83 lots. Major and minor subdivisions are proposing a total of 383 lots.

There have been 8 site plan applications of 5,000 square feet or more since 2000. A total of 166,329 square feet of industrial, retail and office space and 10 residential units were proposed on approximately 295 acres. Another 13 applications under 5,000 square feet each are proposing 41,868 square feet of industrial, retail and office space.

Total land used by major development was 1,251 acres.

White Township

There have been 11 major developments in White Township since 2000. Twenty lots have been proposed through two major subdivision applications. These applications are situated on 154 acres. The density of these projects is 7.7 acres per lot. Another 35 minor subdivision applications are proposing 92 lots. Major and minor subdivisions are proposing a total of 112 lots.

There have been 9 site plan applications of 5,000 square feet or more since 2000. A total of 167,196 square feet of industrial, retail and office space and 379 residential units were proposed on 709 acres. Another 18 applications under 5,000 square feet each are proposing 34,480 square feet of industrial, retail and office space.

Total land used by major development was 863 acres.



Under construction is the expansion of the Brookfield complex on Rt 519 in White Township

Northern Region

There have been 35 major development applications in Northern Development Region since 2000. Seventy-nine lots have been proposed through 9 major subdivision applications. These applications are situated on 351 acres. A density of 4.4 acres per lot. Another 147 applications for minor subdivisions have proposed 382 lots. Major and minor subdivisions are proposing a total of 461 lots.

There have been 26 site plan applications of 5,000 square feet or more since 2000. A total of 417,025 square feet of industrial, retail and office space was proposed on 1,002 acres. Another 48 applications under 5,000 square feet each are proposing 64,868 square feet of industrial, retail and office space.

Total land used by major development in the Northern Development Region was 1,302 acres.

Blairstown Township

There have been 15 major development applications in Blairstown Township since 2000. Thirty-one lots have been proposed through two major subdivision applications. These applications used 133 acres at a density of 4.3 acres per lot. Another 37 applications for minor subdivisions have proposed 89 lots. Major and minor subdivisions are proposing a total of 120 lots.

There have been 13 site plan applications of 5,000 square feet or more since 2000. A total of 205,428 square feet of industrial, retail and office space was proposed on 441 acres. Another 14 applications under 5,000 square feet each are proposing 11,238 square feet of industrial, retail and office space.

Total land used by major development was 574 acres.

Frelinghuysen Township

There have been six major development applications in Frelinghuysen Township since 2000. Twenty-three lots have been proposed through 3 major subdivision applications situated on 74 acres near Johnsonburg. A five lot project (North Warren Properties) may be integrated into the Frelinghuysen open space program. Another 51 applications for minor subdivisions have proposed 137 lots. Major and minor subdivisions are proposing a total of 160 lots.

There have been 3 site plan applications of 5,000 square feet or more since 2000. A total of 71,650 square feet of industrial, retail and office space was proposed on 267 acres. The type of business associated with these site plans are not land intensive. Over 200 acres is associated with improvements to a proposed YMCA camp and 50 acres to a riding stable. Another 9 applications under 5,000 square feet each are proposing 10,249 square feet of industrial, retail and office space. Five of these applications deal with wireless communication towers and equipment.

Total land used by major development was 290 acres.

Hardwick Township

There have been 4 major development applications in Hardwick Township since 2000. A five lot subdivision on 21 acres was the only major subdivision. The density for this site is 4.2 acres per lot. Another 15 applications for minor subdivisions have proposed 38 lots. Major and minor subdivisions are proposing a total of 43 lots.

There have been 3 site plan applications of 5,000 square feet or more since 2000. A YMCA camp add to it's facility by 7,488 square feet, and a private foundation added 23,049 square feet to it's facility with two separate application. Three major site plans totaling 30,537 square feet, situated on 130 acres. Another 12 applications under 5,000 square feet each are proposing 16,973 square feet of industrial, retail and office space.

Total land used by major development was 151 acres.

Hope Township

There have been 7 major development applications in Hope Township since 2000. Thirteen lots have been proposed through two major subdivisions. These applications are situated on 82 acres at a density of 6.3 acres per lot. Another 12 applications for minor subdivisions have proposed 29 lots.

There have been 5 site plan applications of 5,000 square feet or more since 2000. A total of 98,620 square feet of industrial, retail and office space was proposed on 141 acres. Another 7

applications under 5,000 square feet each are proposing 13,542 square feet of industrial, retail and office space.

Total land used by major development was 223 acres.

Knowlton Township

There have been 3 major development applications in Knowlton Township since 2000. One subdivision of seven lots on 41 acre. The density of that project is 5.86 acres per lot. And two site plan applications associated with Travel Center of America for a total of 10,790 square feet. This site is 23 acres. Another 32 applications for minor subdivisions have proposed 89 lots. Major and minor subdivisions are proposing a total of 96 lots.

Another 6 applications under 5,000 square feet each are proposing 12,866 square feet of industrial, retail and office space.

Total land used by major development was 64 acres.

Residential Building Permit Activity

Appendix M contains a table and a graph showing the number of residential building permits issued in each municipality from 1999 through 2007. In terms of residential building permits, the highest numbers were issued in Lopatcong, White, Greenwich, and Hackettstown. Countywide, since 1999, the number of permits issued have declined with 2007 representing the fewest number issued since 1991.

TABLE VIII - CHANGE IN ASSESSMENT VALUE BY PROPERTY CLASS AND REGION 1990, 2000, 2005									
	Farm Reg.	Farm Qual.	Vacant	TOTAL FARM REG., FARM QUAL. & VACANT	Industrial	Commercial	Residential	TOTAL INDUSTRIAL, COMMERCIAL & RESIDENTIAL	GRAND TOTAL
2005									
WARREN COUNTY	\$488,899,000	\$39,276,620	\$198,332,890	\$726,508,510	\$664,085,450	\$919,463,503	\$6,594,395,477	\$8,177,944,430	\$8,904,452,940
% of Grand Total	5.49%	0.44%	2.23%	8.16%	7.46%	10.33%	74.06%	91.84%	100.00%
% change 2000-2005	71.94%	29.08%	-8.34%	36.78%	31.44%	41.86%	58.56%	53.94%	52.38%
Northern Region									
Sub-Total	193,917,300	\$10,629,529	\$37,750,150	\$242,296,979	\$7,682,200	\$77,350,803	\$926,357,200	\$1,011,390,203	\$1,253,687,182
% of Region	15.47%	0.85%	3.01%	19.33%	0.61%	6.17%	73.89%	80.67%	100.00%
% change 2000-2005	56.75%	20.54%	-19.10%	35.21%	10.29%	14.25%	28.86%	27.45%	28.88%
Central Region									
Sub-Total	\$179,204,500	\$13,568,915	\$108,295,000	301,068,415	\$263,354,300	\$422,296,300	\$3,548,882,031	\$4,234,532,631	\$4,535,601,046
% of Region	3.95%	0.30%	2.39%	6.64%	5.81%	9.31%	78.25%	93.36%	100.00%
% change 2000-2005	100.73%	21.37%	17.76%	56.47%	27.58%	54.26%	71.91%	66.42%	65.72%
Southern Region									
Sub-Total	\$115,777,200	\$15,078,176	\$52,287,740	\$183,143,116	\$393,048,950	\$419,816,400	\$2,119,156,246	\$2,932,021,596	\$3,115,164,712
% of Region	3.72%	0.48%	1.68%	5.88%	12.62%	13.48%	68.03%	94.12%	100.00%
% change 2000-2005	62.27%	44.56%	-32.76%	14.79%	34.67%	36.89%	54.03%	48.51%	45.99%
2000									
WARREN COUNTY	\$284,340,750	\$30,427,418	\$216,388,133	\$531,156,301	\$505,242,800	\$648,139,772	\$4,159,037,527	\$5,312,420,099	\$5,843,576,400
% of Grand Total	4.87%	0.52%	3.70%	9.09%	8.65%	11.09%	71.17%	90.91%	100.00%
% change 1990-2000	11.27%	17.47%	-40.81%	-17.91%	2.85%	31.40%	28.81%	26.09%	20.23%
Northern Region									
Sub-Total	123,712,700	\$8,817,915	\$46,665,450	\$179,196,065	\$6,965,600	\$67,701,650	\$718,873,300	\$793,540,550	\$972,736,615
% of Region	12.72%	0.91%	4.80%	18.42%	0.72%	6.96%	73.90%	81.58%	100.00%
% change 1990-2000	25.78%	35.41%	-45.66%	-6.06%	11.54%	18.58%	32.43%	30.91%	22.06%
Central Region									
Sub-Total	\$89,278,600	\$11,179,446	\$91,959,435	192,417,481	\$206,425,550	\$273,748,570	\$2,064,381,101	\$2,544,555,221	\$2,736,972,702
% of Region	3.26%	0.41%	3.36%	7.03%	7.54%	10.00%	75.43%	92.97%	100.00%
% change 1990-2000	31.05%	25.95%	-52.15%	-28.52%	-6.38%	18.26%	16.91%	14.74%	10.06%
Southern Region									
Sub-Total	\$71,349,450	\$10,430,057	\$77,763,248	\$159,542,755	\$291,851,650	\$306,689,552	\$1,375,783,126	\$1,974,324,328	\$2,133,867,083
% of Region	3.34%	0.49%	3.64%	7.48%	13.68%	14.37%	64.47%	92.52%	100.00%
% change 1990-2000	-19.88%	-0.81%	-11.18%	-14.74%	10.35%	49.83%	49.51%	42.11%	35.36%
1990									
WARREN COUNTY	\$255,536,344	\$25,903,306	\$365,608,267	\$647,047,917	\$491,218,645	\$493,270,463	\$3,228,736,919	\$4,213,226,027	\$4,860,273,944
% of Grand Total	5.26%	0.53%	7.52%	13.31%	10.11%	10.15%	66.43%	86.69%	100.00%
Northern Region									
Sub-Total	98,359,935	\$6,512,032	\$85,880,685	\$190,752,652	\$6,244,700	\$57,094,600	\$542,847,740	\$606,187,040	\$796,939,692
% of Region	12.34%	0.82%	10.78%	23.94%	0.78%	7.16%	68.12%	76.06%	100.00%
Central Region									
Sub-Total	\$68,124,100	\$8,876,437	\$192,175,645	269,176,182	\$220,501,200	\$231,485,852	\$1,765,714,050	\$2,217,701,102	\$2,486,877,284
% of Region	2.74%	0.36%	7.73%	10.82%	8.87%	9.31%	71.00%	89.18%	100.00%
Southern Region									
Sub-Total	\$89,052,309	\$10,514,837	\$87,551,937	\$187,119,083	\$264,472,745	\$204,690,011	\$920,175,129	\$1,389,337,885	\$1,576,456,968
% of Region	5.65%	0.67%	5.55%	11.87%	16.78%	12.98%	58.37%	88.13%	100.00%

TABLE IX - CHANGE IN NUMBER OF ITEMS BY PROPERTY CLASS BY REGION, 1990, 2000, 2005									
	Farm Reg.	Farm Qual.	Vacant	TOTAL FARM REG., FARM QUAL. & VACANT	Industrial	Commercial	Residential (Inc. Apartments)	TOTAL INDUSTRIAL, COMMERCIAL & RESIDENTIAL	GRAND TOTAL
2005									
WARREN COUNTY	1,848	3,987	4,200	10,035	197	1,832	33,047	35,076	45,111
% of County	4.10%	8.84%	9.31%	22.25%	0.44%	4.06%	73.26%	77.75%	100.00%
% change 2000-2005	11.80%	3.37%	-26.19%	-10.40%	4.79%	2.69%	9.51%	9.11%	4.07%
Northern Region									
Regional Total	749	1,526	777	3,052	10	235	4,406	4,651	7,703
% of Region	9.72%	19.81%	10.09%	39.62%	0.13%	3.05%	57.20%	60.38%	100.00%
% change 2000-2005	14.88%	5.61%	-25.07%	-2.62%	-28.57%	2.17%	5.61%	5.32%	2.03%
Central Region									
Regional Total	663	1,391	2,206	4,260	95	909	15,911	16,915	21,175
% of Region	3.13%	6.57%	10.42%	20.12%	0.45%	4.29%	75.14%	79.88%	100.00%
% change 2000-2005	10.50%	1.76%	-23.06%	-11.87%	15.85%	1.56%	7.87%	7.55%	2.99%
Southern Region									
Regional Total	436	1,070	1,217	2,723	92	688	12,730	13,510	16,233
% of Region	2.69%	6.59%	7.50%	16.77%	0.57%	4.24%	78.42%	83.23%	100.00%
% change 2000-2005	8.73%	2.39%	-31.86%	-15.75%	0.00%	4.40%	13.12%	12.54%	6.54%
2000									
WARREN COUNTY	1,653	3,857	5,690	11,200	188	1,784	30,176	32,148	43,348
% of County	3.81%	8.90%	13.13%	25.84%	0.43%	4.12%	69.61%	74.16%	100.00%
% change 1990-2000	16.49%	21.79%	-17.89%	-2.74%	-7.39%	0.06%	14.17%	13.13%	8.55%
Northern Region									
Regional Total	652	1,445	1,037	3,134	14	230	4,172	4,416	7,550
% of Region	8.64%	19.14%	13.74%	41.51%	0.19%	3.05%	55.26%	58.49%	100.00%
% change 1990-2000	15.40%	27.76%	-30.73%	-1.85%	-12.50%	-1.29%	12.36%	11.46%	5.52%
Central Region									
Regional Total	600	1,367	2,867	4,834	82	895	14,750	15,727	20,561
% of Region	2.92%	6.65%	13.94%	23.51%	0.40%	4.35%	71.74%	76.49%	100.00%
% change 1990-2000	29.03%	29.45%	-26.30%	-10.66%	-6.82%	1.47%	15.60%	14.54%	7.42%
Southern Region									
Regional Total	401	1,045	1,786	3,232	92	659	11,254	12,005	15,237
% of Region	2.63%	6.86%	11.72%	21.21%	0.60%	4.32%	73.86%	78.79%	100.00%
% change 1990-2000	3.08%	6.63%	15.75%	10.99%	-7.07%	-1.35%	13.03%	11.95%	11.74%
1990									
WARREN COUNTY	1,419	3,167	6,930	11,516	203	1,783	26,430	28,416	39,932
% of County	3.55%	7.93%	17.35%	28.84%	0.51%	4.47%	66.19%	71.16%	100.00%
Northern Region									
Regional Total	565	1,131	1,497	3,193	16	233	3,713	3,962	7,155
% of Region	7.90%	15.81%	20.92%	44.63%	0.22%	3.26%	51.89%	55.37%	100.00%
Central Region									
Regional Total	465	1,056	3,890	5,411	88	882	12,760	13,730	19,141
% of Region	2.43%	5.52%	20.32%	28.27%	0.46%	4.61%	66.66%	71.73%	100.00%
Southern Region									
Regional Total	389	980	1,543	2,912	99	668	9,957	10,724	13,636
% of Region	2.85%	7.19%	11.32%	21.36%	0.73%	4.90%	73.02%	78.64%	100.00%
1. On July 1, 1997, Pahaquarry Township was dissolved and its lands attached to Hardwick Township.									

TABLE X - ASSESSMENT VALUE PER ITEM BY REGION 1990, 2000, 2005

		Farm Regular Assessed Value per Item	Farm Qualified Assessed Value per Item	Vacant Assessed Value per Item	Total Farm Reg. Qual. And Vacant Assessed Value per Item	Industrial Assessed Value per Item	Commercial Assessed Value per Item	Residential Assessed Value per Item	Total Ind., Comm, Residential Assessed Value per Item	Grand Total Assessed Value per Item
2005										
WARREN COUNTY		\$264,556	\$9,851	\$47,222	\$72,397	\$3,370,992	\$501,891	\$199,546	\$233,149	\$197,390
% change 2000-2005		53.80%	24.87%	24.17%	52.66%	25.43%	38.15%	44.78%	41.09%	46.42%
Northern Region										
Regional Total		\$258,902	\$6,966	\$48,584	\$79,390	\$768,220	\$329,152	\$210,249	\$217,457	\$162,753
% change 2000-2005		36.45%	14.15%	7.96%	38.85%	54.40%	11.82%	22.02%	21.01%	26.32%
Central Region										
Regional Total		\$270,293	\$9,755	\$49,091	\$70,673	\$2,772,151	\$464,572	\$223,046	\$250,342	\$214,196
% change 2000-2005		81.65%	19.28%	53.05%	77.55%	10.12%	51.89%	59.37%	54.73%	60.91%
Southern Region										
Regional Total		\$265,544	\$14,092	\$42,964	\$67,258	\$4,272,271	\$610,198	\$166,469	\$217,026	\$191,903
% change 2000-2005		49.24%	41.19%	-1.32%	36.25%	34.67%	31.12%	36.17%	31.96%	37.03%
2000										
WARREN COUNTY		\$172,015	\$7,889	\$38,030	\$47,425	\$2,687,462	\$363,307	\$137,826	\$165,249	\$134,806
% change 1990-2000		-4.48%	-3.55%	-27.92%	-15.59%	11.06%	31.32%	12.82%	11.45%	10.76%
Northern Region										
Regional Total		\$189,743	\$6,102	\$45,000	\$57,178	\$497,543	\$294,355	\$172,309	\$179,697	\$128,839
% change 1990-2000		8.99%	5.98%	-21.56%	-4.29%	27.48%	20.12%	17.86%	17.45%	15.67%
Central Region										
Regional Total		\$148,798	\$8,178	\$32,075	\$39,805	\$2,517,385	\$305,864	\$139,958	\$161,795	\$133,115
% change 1990-2000		1.57%	-2.71%	-35.07%	-19.98%	0.47%	16.54%	1.14%	0.17%	2.46%
Southern Region										
Regional Total		\$177,929	\$9,981	\$43,540	\$49,363	\$3,172,301	\$465,386	\$122,248	\$164,459	\$140,045
% change 1990-2000		-22.28%	-6.98%	-23.27%	-23.18%	18.75%	51.88%	32.28%	26.94%	21.14%
1990										
WARREN COUNTY		\$180,082	\$8,179	\$52,757	\$56,187	\$2,419,796	\$276,652	\$122,162	\$148,269	\$121,714
Northern Region										
Regional Total		\$174,088	\$5,758	\$57,369	\$59,741	\$390,294	\$245,041	\$146,202	\$153,000	\$111,382
Central Region										
Regional Total		\$146,503	\$8,406	\$49,402	\$49,746	\$2,505,695	\$262,456	\$138,379	\$161,522	\$129,924
Southern Region										
Regional Total		\$228,926	\$10,729	\$56,741	\$64,258	\$2,671,442	\$306,422	\$92,415	\$129,554	\$115,610

1. On July 1, 1997, Pahaquarry Township was dissolved and its lands attached to Hardwick Township.

Population Trends and Projections

A prerequisite to establishing the park and open space objective is a review of past population trends and a projection of future growth.

Warren County is 365 square miles in land area, and because of its historical development and physical characteristics, its development pattern is not uniform and population is not evenly distributed. Various municipalities have closer orientation to one section of the county than to others by way of employment, transportation and other factors. In order to establish a more realistic basis, not only for population projections, but also for park locations that will more efficiently serve the population, the county has been subdivided into three broad planning regions, each comprising several municipalities. These regions are arranged as follows:

Northern Region

Blairstown Township
Frelinghuysen Township
Hardwick Township
Hope Township
Knowlton Township

Central Region

Allamuchy Township
Belvidere
Hackettstown
Independence Township
Liberty Township
Mansfield Township
Oxford Township
Washington
Washington Township
White Township

Southern Region

Alpha
Franklin Township
Greenwich Township
Harmony Township
Lopatcong Township
Phillipsburg
Pohatcong Township

The three regions are outlined on Map 4 Planning Regions contained in Appendix K.

Naturally, the three regions are not isolated and there are many overlapping influences. These regions, and particularly the Central Region, might be further subdivided; however, it is believed that any further breakdown would serve no meaningful purpose for the broad scope of open space planning.

Regionally, there have been significant population changes. As shown in Table XI the Northern Region experienced increasing rates of growth from 1980 to 1990 and 1970 to 1980. However in the 1990 to 2000 decade the rate of growth in the northern region slowed by almost half to 12% making the northern region the second to the central region whose growth consistently remains at about 14% per decade. One will see that the rate of growth in the southern region increased during the 1990 to 2000 decade and is now the fastest growing region through 2007 in real numbers and by percentage growth according the WC Planning Department's latest population estimates.

TABLE XI
Population Growth Trends
Warren County NJ
1970-2007 (Estimate)

MUNICIPALITIES	Area in sq. mi.	1970	1980			1990			2000			2007 Estimate			Increases 1970-2007	
		Population	Population	Numerical Change	Percent Change	Population	Numerical Change	Percent Change	Population	Numerical Change	Percent Change	Population	Numerical Change	Percent Change	Numerical	Percent
REGION 1																
Blairstown	30.9	2,189	4,360	2,171	99.2%	5,331	971	22.3%	5,747	416	8%	6,139	392	7%	3,950	180.4%
Frelinghuysen	23.6	1,118	1,435	317	28.4%	1,779	344	24.0%	2,083	304	17%	2,284	201	10%	1,166	104.3%
Hardwick	17.8	548	947	399	72.8%	1,235	288	30.4%	1,464	229	19%	1,677	213	15%	1,129	206.0%
Hope	19.2	1,140	1,468	328	28.8%	1,719	251	17.1%	1,891	172	10%	2,020	129	7%	880	77.2%
Knowlton	25.4	1,738	2,074	336	19.3%	2,543	469	22.6%	2,977	434	17%	3,258	281	9%	1,520	87.5%
Pahaquarry *	20.0	71	26	-45	-63.4%	20	-6	-23.1%	*			*			*	
Region Total	136.9	6,804	10,310	3,506	51.5%	12,627	2,317	22.5%	14,162	1,535	12%	15,378	1,216	9%	8,574	126.0%
Percent of County	37.55%	9.2%	12.2%	33.5%		13.8%	32.3%		13.8%	14.2%		13.7%	12.4%		22.38%	
REGION 2																
Allamuchy	20.3	1,138	2,560	1,422	125.0%	3,484	924	36.1%	3,877	393	11%	4,201	324	8%	3,063	269.2%
Belvidere	1.35	2,722	2,475	-247	-9.1%	2,669	194	7.8%	2,771	102	4%	2,797	26	1%	75	2.8%
Hackettstown	3.5	9,472	8,850	-622	-6.6%	8,120	-730	-8.2%	8,984	864	11%	9,394	410	5%	(78)	-0.8%
Independence	20.4	2,057	2,829	772	37.5%	3,940	1,111	39.3%	5,603	1,663	42%	5,900	297	5%	3,843	186.8%
Liberty	12.0	1,229	1,730	501	40.8%	2,493	763	44.1%	2,765	272	11%	3,006	241	9%	1,777	144.6%
Mansfield	30.5	3,546	5,780	2,234	63.0%	7,154	1,374	23.8%	8,072	918	13%	8,612	540	7%	5,066	142.9%
Oxford	6.2	1,742	1,659	-83	-4.8%	1,790	131	7.9%	2,307	517	29%	2,678	371	16%	936	53.7%
Washington Borough	1.95	5,943	6,429	486	8.2%	6,474	45	0.7%	6,712	238	4%	7,024	312	5%	1,081	18.2%
Washington Twp.	17.9	3,585	4,243	658	18.4%	5,367	1,124	26.5%	6,248	881	16%	6,744	496	8%	3,159	88.1%
White	28.6	2,326	2,748	422	18.1%	3,603	855	31.1%	4,245	642	18%	5,420	1,175	28%	3,094	133.0%
Region Total	142.7	33,760	39,303	5,543	16.4%	45,094	5,791	14.7%	51,584	6,490	14%	55,776	4,192	8%	22,016	65.2%
Percent of County	39.14%	45.6%	46.6%	52.9%		49.2%	80.7%		50.4%	59.9%		49.7%	42.6%		57.46%	
REGION 3																
Alpha	1.8	2,829	2,644	-185	-6.5%	2,530	-114	-4.3%	2,482	(48)	-2%	2,520	38	2%	(309)	-10.9%
Franklin	24.25	1,973	2,341	368	18.7%	2,404	63	2.7%	2,768	364	15%	3,229	461	17%	1,256	63.7%
Greenwich	11.15	1,482	1,738	256	17.3%	1,899	161	9.3%	4,365	2,466	130%	5,381	1,016	23%	3,899	263.1%
Harmony	24.1	2,195	2,592	397	18.1%	2,653	61	2.4%	2,729	76	3%	2,872	143	5%	677	30.8%
Lopatcong	7.45	3,144	4,998	1,854	59.0%	5,052	54	1.1%	5,765	713	14%	8,374	2,609	45%	5,230	166.3%
Phillipsburg	3.2	17,849	16,647	-1,202	-6.7%	15,757	-890	-5.3%	15,166	(591)	-4%	15,268	102	1%	(2,581)	-14.5%
Pohatcong	13.0	3,924	3,856	-68	-1.7%	3,591	-265	-6.9%	3,416	(175)	-5%	3,476	60	2%	(448)	-11.4%
Region Total	85.0	33,396	34,816	1,420	4.1%	33,886	-930	-2.7%	36,691	2,805	8%	41,120	4,429	12%	7,724	23.1%
Percent of County	23.30%	45.2%	41.2%	13.6%		37.0%	-13.0%		35.8%	25.9%		36.6%	45.0%		20.16%	
COUNTY TOTAL	364.55	73,960	84,429	10,469	14.2%	91,607	7,178	8.5%	102,437	10,830	12%	112,274	9,837	10%	38,314	51.8%

*Pahaquarry became part of Hardwick Township in 1997

Source: US Census Bureau, Census 2000
Prepared by: Warren County Planning Department, August 2007

Percentage wise, since 1970, the northern region grew the most. However numerically, the central region grew the most, 22,016 persons as compared to approximately 8,000 persons for each of the other two regions. The Central Region is the largest region geographically and contains the most municipalities. It also contains the largest population and is the second fastest growing of the three regions.

Numerically, Lopatcong's population grew the most since 1970 followed by Mansfield Township, Blairstown, Greenwich and Independence. Most of Greenwich and Lopatcong's growth has occurred over the last decade, Independence's growth occurred from 1989 to 2000, and Blairstown growth occurred from 1970 to 1980. Today's fastest growing municipalities are Lopatcong, White, Greenwich, Mansfield and Washington Township. These communities are located in the southern and central regions.

Past growth is not the only barometer of future growth and the trends described above may be amplified or reversed by many factors. Good highways, central water and sewer availability, and proximity to central cities are primary growth drivers. Route I-80 and the Pocono resorts in Pennsylvania had increased development pressures in the Northern Region during the 1970s and 1980s. In the Southern Region the completion of Route I-78 in 1989 and the lifting of the Phillipsburg sewer moratorium resulted in an influx of residential and commercial development growth over the past twenty years.

Future growth projections need to be examined to fully understand the magnitude of growth in Warren County. Projections of future population have been made by the Warren County Planning Department as part of the Cross Acceptance process of the State Development and Redevelopment Plan. They are shown in Table XII and organized by open space region.

The population projections show that in the year 2020 the population will reach almost 127,000 persons, an increase of 12.9 percent from 2007. As the table shows, the percent geographic distribution of the population will remain about the same through 2020. The growth rate in each region is very different with the southern region growing at a faster rate (14.81% than the county average, and much faster than the northern region which is projected to grow by 8% over the next 13 years. However these population projections do not reflect the stringent standards of the Highlands Preservation Area which will have the effect of curtailing growth within the areas boundaries. The municipalities in the northern region contain no highlands preservation area. The northern region municipalities of Hope and Frelinghuysen are in the Highlands Planning Area and will be subject to policies of the Highlands Regional Master Plan if they choose to opt in to it.

The population projections should be updated to reflect the Highlands Preservation Area standards of 25 acre and 88 acre septic densities. The draft Highlands Master Plan of November 2007 contains the number of septic systems that may be permitted in each HUC 14 watershed in the Planning Area. In the planning area median lot sizes range from 26 acres in the Protection zone and is 11 acres in the Conservation zone.

TABLE XII - POPULATION PROJECTIONS BY REGION AND MUNICIPALITY 2010, 2015, 2020, 2025, 2030

Municipality	Population April 1, 2000	Population Estimate 2007	Projected Total Population 2010	Projected Total Population 2015	Projected Total Population 2020	Percent Change 2007 to 2020	Projected Total Population 2025	Projected Total Population 2030
Northern Region								
Blairstown township	5,747	6,139	6,193	6,472	6,714	9.36%	7,005	7,214
Frelinghuysen township	2,083	2,284	2,266	2,368	2,456	7.54%	2,563	2,639
Hardwick township	1,464	1,677	1,684	1,741	1,791	6.77%	1,849	1,891
Hope township	1,891	2,020	2,015	2,106	2,185	8.15%	2,279	2,347
Knowlton township	2,977	3,258	3,264	3,375	3,471	6.55%	3,585	3,667
Region Total	14,162	15,378	15,423	16,062	16,617	8.05%	17,281	17,757
Percent of County	13.83%	13.7%	12.92%	13.00%	13.10%		13.22%	13.31%
Central Region								
Allamuchy township	3,877	4,201	5,286	5,506	5,698	35.63%	5,865	5,946
Belvidere town	2,771	2,797	3,278	3,426	3,554	27.05%	3,708	3,818
Hackettstown town	8,984	9,394	9,721	9,759	9,931	5.71%	<i>10,133</i>	<i>10,275</i>
Independence township	5,603	5,900	5,937	6,140	6,315	7.03%	6,523	6,671
Liberty township	2,765	3,006	3,005	3,075	3,135	4.29%	3,206	3,255
Mansfield township	8,072	8,612	9,418	9,711	9,961	15.67%	10,259	10,471
Oxford township	2,307	2,678	2,760	2,856	2,939	9.75%	3,038	3,079
Washington borough	6,712	7,024	7,157	7,478	7,758	10.45%	8,094	8,336
Washington township	6,248	6,744	7,049	7,338	7,589	12.53%	7,889	8,104
White township	4,245	5,420	5,688	5,905	6,091	12.39%	6,315	6,474
Region Total	51,584	55,776	59,299	61,194	62,971	12.90%	65,029	66,430
Percent of County	50.36%	49.7%	49.67%	49.54%	49.66%		49.74%	49.79%
Southern Region								
Alpha borough	2,482	2,520	2,797	2,923	3,000	19.05%	3,065	3,111
Franklin township	2,768	3,229	3,583	3,730	3,857	19.46%	4,010	4,119
Greenwich township	4,365	5,381	5,683	5,897	6,081	13.01%	6,301	6,410
Harmony township	2,729	2,872	3,751	3,888	4,006	39.48%	4,147	4,247
Lopatcong township	5,765	8,374	8,282	8,435	8,535	1.93%	8,687	8,793
Phillipsburg town	15,166	15,268	15,354	16,044	16,263	6.52%	<i>16,615</i>	<i>16,863</i>
Pohatcong township	3,416	3,476	5,225	5,356	5,467	57.29%	5,599	5,692
Region Total	36,691	41,120	44,676	46,272	47,210	14.81%	48,424	49,235
Percent of County	35.82%	36.6%	37.42%	37.46%	37.23%		37.04%	36.90%
Total Warren County	102,437	112,274	119,397	123,528	126,798	12.94%	130,734	133,422
Total State Population	8,414,350		9,062,800	9,470,200	9,824,500		10,250,100	10,555,900

Prepared by Warren County Planning Department

Assumes Year 2000 Occupancy Rates and Average Persons per Household are held constant

Assumes Highlands Preservation Area and Large Lot zoning (10 acre) reduction factors

Bold Population Numbers indicate when buildout is reached

Italic Population Numbers indicate projection after buildout is reached at a reduced rate

January 19, 2005
 March 29, 2005
 September 20, 2005

The Need for Public Open Space

A number of documents are available that discuss why open space and recreational facilities are needed. However, this section contains a brief discussion of the findings and recommendations of county and state plans concerning the need and provisions for open space.

Warren County Community Health Improvement Plan

The Warren County Health Department released its Community Health Improvement Plan on January 30, 2007. The document creates a blueprint for health improvement in Warren County and calls on the county and local communities to collaborate on ways to improve health status. One of the health issues identified in the plan is the need for good nutrition and physical activity. A Quality of Life Survey that was conducted in 2005 as part of the health plan revealed that 74% of the respondents have access to recreational areas such as parks, fitness facilities, hiking trails and pools although they said there were more hiking trails in the northern regions of the county vs. the southern region. In focus groups that were conducted, participants wanted recreational areas other than sports oriented fields and commented that all recreational and open space areas were not readily accessible. One of the barriers to providing sufficient recreational facilities was that no county parks system existed.

Senior Citizens and the Handicapped

The needs of these citizens should not be overlooked. According to the SCORP, the increasing population of senior citizens will pose challenges to open space and park providers. As seniors become more physically fit and more active than today's seniors, they will demand additional recreation services that will need to be designed to consider their special needs. A publication by the AARP pertaining to livable communities, states that the provision of walkways, benches, and picnic areas in safe and inviting environments are important. Public tennis courts, and safe walking, jogging, and bicycle trails are important for a livable community.

Accessibility to these facilities are important to seniors and the handicapped as well. Where possible, the access should be made wheelchair accessible and the trails kept free of safety hazards and other obstacles.

Handicap Accessibility for Trails

The Americans with Disabilities Act (ADA) requires that trails be accessible, however it does not provide guidelines for construction. The Access Board has proposed accessibility guidelines for outdoor developed areas in an effort to provide guidance on design and constructing accessible facilities. A Notice of Proposed Rulemaking (NPRM) provides guidance on the design and construction of newly constructed and altered trails, outdoor recreation access routes, picnic and camping facilities, and beach access routes. Comments were due on October 17, 2007.

The proposed ADA accessibility guidelines apply to trails that are designed and constructed for pedestrian use. These guidelines are not applicable to trails primarily designed and constructed for recreational use by equestrians, mountain bicyclists, snowmobile users, or off-highway vehicle

users, even if pedestrians may occasionally use the same trails. However, a multi-use trail specifically designed and designated for hiking and bicycling would be considered a pedestrian trail. The proposed guidelines apply only to areas of newly designed or newly constructed and altered portions of existing trails.

Warren County Planning Board Public Opinion Survey, 1998

In 1998, the Warren County Planning Board conducted a public opinion survey as part of the cross acceptance process of the State Development and Redevelopment Plan. It was a mail out survey to a random sampling of 10% of registered voters in each municipality of Warren County. Twenty nine percent of the surveys were returned. The survey asked 21 questions about land and transportation issues facing Warren County.

A few questions asked respondents about their thoughts on open space and farmland preservation. 85% and 74% of the respondents indicated that they would like to see more farmland and public open space preserved in the county. Respondents were willing to pay higher taxes for a clean natural environment, the preservation of farmland and the preservation of open with over 52% of the respondents being in favor.

The same general sentiment of population was revealed through a public opinion survey that was conducted as part of the Warren County Strategic Growth Plan process. The goal “To preserve and enhance rural character as well as agricultural, natural, environmental, historic, and open space resources and provide incentives to achieve this goal” was the highest ranked among the people responding.

Warren County Strategic Growth Plan

The Warren County Strategic Growth Plan was adopted by the County Planning Board on October 31, 2005. One of the goals of the plan is to “Preserve and enhance rural character as well as agricultural, natural, environmental, historic and open space resources and provide incentives to achieve this goal”. One of the indicators approved to measure the goal is the amount of land permanently protected as open space and farmland. Of the 12 goals provided in the plan, this one ranked the highest in a public opinion survey that was distributed as part of the planning process. A close second was goal to “Protect and enhance water quality and quantity” The plan contains recommendations on open space preservation stating that preservation efforts should target areas critical to the protection of ground and surface waters to include aquifer recharge areas and stream and river corridors. It is noted that the preservation of the Morris Canal satisfies the goal of preserving open space and historical resources while providing recreational opportunities. Acquiring these areas fulfill the public need and desires to have them protected and preserved.

State Development and Redevelopment Plan, 2001

One of the goals of the plan is to “Preserve and Enhance Areas with Historic, Cultural, Scenic, Open Space, and Recreation Value”. The vision of the State Plan for the year 2020 is:

Greenways, Trails and Walkways

Greenways are corridors of protected open space managed for conservation and recreation purposes. They often follow natural land and water features and link nature reserves, parks, cultural features and historic sites with each other and with populated areas. They are composed of permanently preserved farmland, public parks and reserves, and privately owned land with preservation easements. Parts of the greenways system are set up for recreation, but much of it is set aside for farming, habitat and wildlife preservation and other conservation uses. In the Year 2020, the New Jersey trail system, a statewide network of trails and walkways (including stretches along city streets) laces together national, state, county and municipal parks, educational facilities, museums and historic areas throughout the state. It coincides with the greenways in many places, but whereas parts of greenways also serve as farmland or other protected purposes, the trail system is used for commuting and recreation, as scenic and historic corridors, and as networks of learning. It also serves as a focus for redevelopment efforts in the state's river towns, including restoring existing parks and acquiring additional land along the waterways. Each municipality has what it considers "its" portion of the network and ensures that it is a safe and respected community resource.

Scenic, Open Space and Recreational Resources

Children in all the state's cities and older towns can walk to playgrounds in their neighborhoods. The goal, established by Governor Whitman and the Legislature and affirmed by the voters in 1998, has been achieved. Nearly two million acres of open space and farmland have been preserved. State, local and private funding has helped build a multi-purpose regional system of facilities integrating recreation and open space planning with land use and other infrastructure planning. Like the trail system, development of new open space and recreation facilities is planned to reinforce other goals, especially urban revitalization and beneficial economic growth. The value that New Jersey places on everyday vistas can be seen from roads and sidewalks all over the state. "

The NJ Division of Fish and Wildlife website

The number of people in search of wildlife-oriented recreational opportunities has grown significantly in the last 35 years as shown by the National Survey of Fishing, Hunting and Wildlife-Associated Recreation, conducted every five years by the US Fish and Wildlife Service. In New Jersey, the 2001 National Survey found that 135,000 people hunted, 806,000 people fished, and more than 2,328,000 people participated in other wildlife-oriented recreational activities (bird feeding, wildlife observation, photography, etc.). The survey includes only people 16 years of age and older.

While demand continues to increase, the overall amount of land available for the pursuit of wildlife-oriented recreation is declining. New Jersey loses roughly 45-sq. mi. of wildlife habitat to development every year. In view of this reality, acquiring and managing Wildlife Management

Areas is an important part of management programs conducted by the Division to provide for the public's wildlife-related recreation.

The 2008-2012 draft Statewide Comprehensive Outdoor Recreation Plan

An excerpt from the 2008-2012 draft Statewide Comprehensive Outdoor Recreation Plan reads as follows:

Natural resource based outdoor recreation requires the continued protection of these resources to ensure their public use. A 2005 recreation trends analysis study published by the Outdoor Industry Foundation found growth in individual activities is focused on activities that can be “done in day”. The study also noted a decline in commitment heavy activities. Considering that two income earners is common throughout the nation, these findings are not surprising. The study also noted the Northeast region had the lowest participation rate, 69%, in outdoor recreation activities in the United States. However, compared to the North Central region (72%) and the South Central region (70%) the differences appear not to be dramatic even when compared with the West region, which had the highest outdoor recreation participation rate of 78%. All four regions saw increased participation rates in outdoor recreation between 1999 and 2005. The Northeast region participation in outdoor recreation increased from 60% in 1999 to 69% in 2005.

Hiking has remained one of the most popular outdoor recreation activities in the United States and in New Jersey. The New Jersey Trail Plan Update provides an insight into hiking as a recreational activity. As part of the Trails Plan Update, a survey was conducted in September 2006 to gauge public opinion regarding trails in New Jersey. The survey identified topics, issues and concerns to inform the planning process for the Trails Plan.

The survey was conducted informally and the results cannot claim to be statistically representative. Participants were self-selecting. Regardless, the survey provided an important opportunity to hear from thousands of New Jersey residents who care about trails. The results provide significant insight into the perspectives and priorities of New Jersey’s trail users.

Some of the findings of the survey are as follows:

- A plurality of trail users’ use trails more than 30 days per year. A significant majority of trail users use them over eight times per year.
- Trails use is a four season phenomenon in New Jersey.
- Using trails on foot (hiking, walking, jogging, backpacking) are by far the most popular trails activities. Off Road Vehicle (ORV) use was mentioned second most by almost half the respondents. Mountain biking, bicycling, canoeing/kayaking, horseback riding and winter sports are significant trail uses.
- Trails are predominately experienced in rural or remote areas. (*although they are also located in urban areas*)
- Skylands and Delaware River areas are the most popular (frequently mentioned) locations for trails activities.
- A majority travel more than 10 miles (each way) for the purpose of using a trail; almost a quarter travel more than 30 miles.

- The D&R Multi-use Path is the most frequently used trail in the state. Other frequently used trails include: Wharton State Forest, NJ Off-Road Vehicle Park, Delaware Water Gap National Recreation Area and Brendan Byrne State Forest. The preponderant reason for the frequent use is the proximity to where the user lives.
- Most trail users learn about trails by word of mouth and from clubs; the internet is increasingly used as an information resource.
- Trails are a significant economic force. Almost half of respondents spend more than \$1000 annually on these purchases and almost a quarter of respondents spend more than \$5000.
- A significant percentage of respondents indicated that trails and their use of trails influenced the purchase of their home.
- On their most recent trails outing, most trail users purchased food and beverages, including meals at a restaurant en-route.
- Lack of trails and the quality of the facilities were identified as the two most important trails concerns. Lack of information about trails, overcrowding, the adequacy of support facilities, accessibility and safety and security were mentioned as significant concerns.
- Most users rarely if ever experience conflicts with other trail users.
- A plurality of trail users think that trails for specific types of trails activity should be emphasized; but significant numbers mention that trails connections, trails for multiple users type and trails in natural landscapes should be emphasized.
- Trail users overwhelmingly want an outcome of the Trails Plan Update to be more trails to use.
- Respondents to the survey overwhelmingly believe that trails rank high in importance when compared to other forms of outdoor recreation.
- New Jersey trails users most like the variety and diversity of trails facilities, the availability and convenience of trails, their maintenance and freedom from crowds.

The publication *Projections of Outdoor Recreation Participation to 2050* examines future recreation participation trends. The report identifies future recreational use of participants age 16 and over. Participation trends such as these provide direction for future planning. The following are national recreation participation trends highlighted in the report:

- Non Pool swimming (*which would include swimming in lakes, ponds, and rivers*) will continue to be the most popular water based recreation activity with an anticipated increase of 25% by 2050.
- Walking remains one of the top recreational activities in the county
- Non-consumptive wildlife recreation such as birding is expected to increase 61%
- Picnicking is projected to see an increase of 54% by 2050

Keeping the above discussion in mind, the Warren County Open Space Plan is attempting to meet the needs and desires of the people who currently use and will use public open space lands in the future. The plan recommends the acquisition of the Morris Canal and properties for the Warren Trail to create new trails in settings never experienced by the public before.

Highlands Act

The Highlands Act establishes specific goals relating to land preservation, including the preservation of “contiguous areas of land in its natural state”, the protection of “natural, scenic, and other resources of the Highlands Region, including but not limited to contiguous forests, wetlands, vegetated stream corridors, steep slopes, and critical habitat for fauna and flora”, the preservation of “farmland and historic sites”, of “outdoor recreation opportunities”, and of “environmentally sensitive lands and other lands needed for recreation and conservation purposes”.

A draft Highlands Regional Master Plan was released in November 2006 and was subject to numerous public comments. A revised plan was released on November 19, 2007. The November Plan contains a section on conservation and preservation priorities. In general forested lands with in forest resource areas and other land areas that are deemed important to protecting the region’s water resources and critical habitat protection, and connections to currently preserved areas are high priority.

Economic Need for Public Open Space

The economic impacts of public open space can be expressed in two ways. The effect on property taxes and the tax base and secondly on the public benefits. In terms of property taxes, according to the Table VIII, Assessed Valuation, from 1990, 2000, and 2005, in 2005 farm qualified and vacant lands accounted for 2.67% of the total assessed valuation in the County. Farm qualified accounted for less than ½ percent of the total value and vacant land just over 2%. One can observe from the tables that assessed valuation increased in all taxable categories since 1990 with the exception of vacant lands which decreased by over 8%. Individual municipal assessed valuations are similar to the countywide figures. The assessed value of vacant lands range from less than 1% of the total municipal valuation in Phillipsburg and Washington Borough, to 4% and 5% in Hope and Hardwick Townships. Similarly with farm qualified assessed lands, the percent total in the municipalities are from less than 1% to just over 1%.

These figures challenge the common belief that acquiring land for public open space significantly reduces the tax base. Because most lands that would be acquired for public open space would be assessed as vacant or farm qualified, the reduction in assessed value due to the loss of these lands would be less significant, since these lands comprise of less than 3% of the total tax base value.

Another belief is that the public lands will require significant public outlay to maintain. An accounting of the Warren County Open Space Trust Fund indicates that since the year 2000 through 2006, \$458,348 was spent for maintenance on county open space properties. This amounts to about \$283 per acre of maintenance costs over the seven year period or about \$41 per year per acre.

From a public benefit point of view, there a number of reasons why public open space should be pursued. According to Parks and Economic Development by John L. Crompton they can be grouped into three categories: Environmental Stewardship, Alleviating Social Problems, and Economic Development.

Environmental Stewardship:

Open space preservation in Warren County targets the acquisition of the Morris Canal, a site on the National and State Registers of Historic Places. Preserving historical remnants remind people of what and who was once there. It provides a cultural perspective of how we once lived and feeds people's need for a sense of local history. Preserving the natural environment provides people with something they cannot get from the built environment. It enhances the human being's quality of life through an ecologically sustainable and pleasing environment.

Alleviating Social Problems:

Preventing youth crime is cited as a reason for preserving open space. When using open space land areas and facilities, adult leaders work with youths in a structured environment to provide social support, leadership opportunities, individual attention to youth participants, a sense of group belonging, opportunities for community service, and youth input into program decisions. Prime examples of this concept in Warren County is the Highlands Project. The Highlands Project is operated by adult leaders to help youth by teaching them about the Morris Canal and working with them to restore portions of the Canal. The Highlands Project occupies the land and buildings at Bread Lock Park and have made marvelous strides toward improving the buildings, restoring the Canal, providing opportunities for youth. The Youth Corp and Americorp also have volunteered time to help clear portions of the Morris Canal in Greenwich and Lopatcong Township.

The preservation of open space promotes healthy lifestyles. The County Health Department is developing an action plan to improve the health of county residents. One component of this is to encourage more areas for physical fitness. The county open space plan and program can do its part in helping fulfill the Health Department's goal by continuing to acquire lands where hiking trails can be developed. These land areas could address the overall regional need to link parcels together to form the Warren Trail and Morris Canal greenway, as well as provide local trail systems on site.

In turn, open space preservation can help reduce mental stress that is afflicting so many today. A hike or bike ride through a natural area or along the Morris Canal can help one unwind in a stress free environment. Walking or biking along roadways that carry higher volume of vehicles will not relieve stress but may indeed increase it.

Economic Development:

Open space and related attractions increase tourism. Warren County is in its infancy in attracting tourists. While there are weekend and weeklong events held during the summertime, such as the Warren County Farmers Fair, Victorian Days, Warren County Heritage Festival, the Phillipsburg bike race etc, more attractions need to be developed to bring in the tourists. The semi

annual Morris Canal bus tour has consistently filled a school bus of 40 persons, eager to learn more about the canal's history. Two stops along the way, Breadlock Park and Inclined Plane # 9 are wonderful remnants of the Canal and are currently open for visitors the first Sunday of the month year round. Currently volunteers dedicate their time on these Sundays.

Expanding the availability of attractions to out of town visitors can help improve the local economy. Typically an out town visitor will patronize a local restaurant, buy souvenirs or other retail item, pay admission fees and concession fees if available, and stay at a local hotel if the area contains enough attractions for a multiple night stay. It is recommended that a county eco-tourism plan be developed to tie together the open space, historic, and cultural attractions, agricultural markets including wineries, Main Street programs, and seasonal events.

Studies have shown that residential property values increase when they are close to natural public open space areas. This means more tax revenue to local government that would offset the assessed value that was "lost" when other land areas are purchased by government agencies.

Businesses are often attracted to areas where the quality of life is high. Park and recreational opportunities often contribute to an areas high quality of life. In addition, businesses can be developed around the open space or cultural attractions available. It would not be unthinkable of a local business capitalizing on products and services related to the attraction. Hiking and biking equipment shops, restaurants, hotels, theme parks, etc.

Lastly, studies have shown that retired people like to live in areas with a higher number of recreational activities. Hiking along the flat Morris Canal opens the door for an influx of these type of communities.

Determination of the Amount of Open Space to be Acquired

There are two methods that can be used to determine the amount of open space that should be acquired by the County. One is the acres per population method, and the other is the Balanced Land Use Method which was used in the New Jersey Open Space and Outdoor Recreation Plan 2008-2012. The acres per population method generates higher acreage requirements as population increases and land becomes more scarce.

The Balanced Land Use Method recognizes land as an exhaustible resource that is being consumed over time by development. Consequently, the Balanced Land Use Method establishes a long-range goal by establishing a minimum amount of acreage that should be reserved for open space by all jurisdictions based on the amount of developed and developable land in the county or municipality. To establish the long-range goal, the Balanced Land Use Method is the preferred method.

The acres per population method can be used to define shorter-term goals, one to five years, as a means to measure the progress of open space acquisition according to population estimates and projections. Long range population projections are less certain and unreliable for the establishment of long term goals. Actual needs will vary according to local conditions and desires, as well as the availability of other open space areas owned by other levels of government.

Acres Per Population Method for Active Recreational Use

Typically active recreational areas are provided by the municipality and the Board of Education. These uses usually include ball fields, soccer fields, court sports, playgrounds, picnic areas and swimming pools. Hiking and biking trails and golf courses are also provided by some municipalities.

Table XIII contains a requirement for number of acres that should be in active recreation use according to the National Park and Recreation Association using a guideline of 8 acres per 1,000 persons for municipal land, and 12 acres per 1,000 persons for county land. Based on the acres per population method, there should be 185 acres of county land in the Northern Region, 669 acres in the Central Region, and 493 acres in the Southern Region, for a total of 1,347 acres in County ownership. Depending on the location, a county recreational facility could serve two regions.

The following is the amount of land area in athletic and recreational land use according to the 2002 GIS land use coverage from the NJDEP in each municipality by ownership. The acreage does not reflect parcel size. Instead it shows the amount of land area actually used for athletic and recreational purposes.

The provision of active recreation needs to be timed with population growth. This emphasizes the need for periodic review of population in terms of the pace of land acquisition for parks and open space. Therefore, the on-going planning policy should be geared to numbers of people rather than a given year in order to compensate for possible errors in projection.

TABLE XIII ACTIVE RECREATION GOALS BY MUNICIPALITY AND REGION (Acres per Population Method)

Municipality	Population Estimate 2007	Targetted Amount Municipal/School Owned	Actual Amount of Rec. Space Provided (2002)	Targetted Amount of County Owned Recreation	Amount of County Owned Recreation Space	Amount of non-govt. owned Recreation Space(2002)	Projected Total Population 2015	Goal Active Municipal/School Recreation Owned Open Spac	Goal County Owned Recreation Space
		Recreation	(2002)	Recreation	Space	Space(2002)	2015	Open Spac	Recreation Space
Northern Region									
Blairstown township	6,139	49	70.7	73.7		150.8	6,472	52	78
Frelinghuysen township	2,284	18	7.4	27.4		70.4	2,368	19	28
Hardwick township	1,677	13	0.0	20.1		51.2	1,741	14	21
Hope township	2,020	16	7.9	24.2		20.4	2,106	17	25
Knowlton township	3,258	26	17.3	39.1		122.0	3,375	27	41
Regional Total	15,378	123	103.3	184.5	0.0	414.8	16,062	128	193
Percent of County	13.7%	13.7%	15.3%	13.7%	0.0%	36.5%	13.0%	13.0%	13.0%
Central Region									
Allamuchy township	4,201	34	13.4	50.4		105.7	5,506	44	66
Belvidere town	2,797	22	37.0	33.6		3.5	3,426	27	41
Hackettstown town	9,394	75	64.8	112.7		30.9	9,759	78	117
Independence township	5,900	47	29.5	70.8		10.7	6,140	49	74
Liberty township	3,006	24	14.3	36.1		9.1	3,075	25	37
Mansfield township	8,612	69	46.7	103.3		24.7	9,711	78	117
Oxford township	2,678	21	7.3	32.1		17.8	2,856	23	34
Washington borough	7,024	56	26.0	84.3		0.0	7,478	60	90
Washington township	6,744	54	98.2	80.9		223.5	7,338	59	88
White township	5,420	43	25.1	65.0		88.0	5,905	47	71
Regional Total	55,776	446	362.3	669.3	0.0	513.9	61,194	490	734.3
Percent of County	49.7%	49.7%	53.8%	49.7%	0.0%	45.2%	49.54%	49.5%	49.5%
Southern Region									
Alpha borough	2,520	20	23.0	30.2		0.0	2,923	23	35
Franklin township	3,229	26	5.4	38.7	18.0	4.8	3,730	30	45
Greenwich township	5,381	43	13.1	64.6		17.2	5,897	47	71
Harmony township	2,872	23	41.9	34.5		16.9	3,888	31	47
Lopatcong township	8,374	67	26.3	100.5		150.5	8,435	67	101
Phillipsburg town	15,268	122	77.0	183.2		15.8	16,044	128	193
Pohatcong township	3,476	28	21.2	41.7		2.2	5,356	43	64
Regional Total	41,120	329	207.9	493.4	18.0	207.4	46,272	370	555.3
Percent of County	36.6%	36.6%	30.9%	36.6%	100.0%	18.3%	37.46%	555	37.5%
Total Warren County	112,274	898	673.5	1,347.3	18.0	1,136.1	123,528	988	1,482

Prepared by Warren County Planning Department May 19, 2008

* Includes ballfields, golf courses, and common areas that may be owned by homeowner associations, religious institutions, non-profit organizations.

Balanced Land Use Method

The State Open Space and Outdoor Recreation Plan of 2008-2013 recommends using the balanced land use method to establish long range open space acquisition goals. The draft SCORP states that to determine the amount of municipal open space, 3 percent of the developable and developed land area in the municipality. The standard for county open space is 7 percent of the developable and developed land area in the county. Developable Areas as defined in the SCORP exclude acreage of slopes over 12%, wetlands, and federal and state-owned open space. For purposes of the Warren County Open Space Plan, developed and developable areas are the buildable areas defined in the Warren County Strategic Growth Plan. These areas exclude slopes over 25 percent, wetlands, floodplains, all public open space/parklands, and preserved farmland.

Using the guideline and the county definition for developable lands, there should be 4,196 acres of municipal open space and 9,790 acres of county open space. Based on the figures from Table I, there is a "shortfall" of 260 acres of municipal space and a "shortfall" of 8,152 acres of county open space.

The guideline for state-owned lands is 10 percent of the state land area, and for federally-owned lands, it is 4 percent of the state land area. To calculate a "fair share" of state and federal lands in Warren County, one can assume that 10% of the County's land area should be in State ownership which equates to 23,360 acres. Currently, in the county, the state land area is 28,113 acres, resulting in a surplus of 4,753 acres of state-owned open space in Warren County. The same assumptions and methods can be employed at reaching a goal for federally-owned land. In Warren County, federally-owned land should amount to 9,344 acres, but it currently amounts to 10,749 acres, representing a surplus of 1,405 acres.

Using the Balanced Land Use Method, approximately 19 percent of the county's land area should be in permanent public open space. The same methodology is used to calculate open space requirements in each of the three regions of the county and is shown in Table XIV and XV.

TABLE XIV - OPEN SPACE TARGETS BALANCED LAND USE METHOD			
	Developed and Developable Land*	Municipal Req at 3%	County Req, of 7%
Northern Region			
Blairstown township	13,344	400	934
Frelinghuysen township	9,710	291	680
Hardwick township	6,865	206	481
Hope township	8,062	242	564
Knowlton township	9,474	284	663
Municipal Acreage Regional Total	47,456	1,424	3,322
County Total Region			
Central Region			
Allamuchy township	4,013	120	281
Belvidere town	760	23	53
Hackettstown town	1,752	53	123
Independence township	6,307	189	442
Liberty township	4,951	149	347
Mansfield township	11,838	355	829
Oxford township	2,154	65	151
Washington borough	1,150	34	80
Washington township	8,104	243	567
White township	12,847	385	899
Municipal Acreage Regional Total	53,876	1,616	3,771
County Total Region			
Southern Region			
Alpha borough	854	26	60
Franklin township	10,646	319	745
Greenwich township	5,697	171	399
Harmony township	9,505	285	665
Lopatcong township	3,937	118	276
Phillipsburg town	1,895	57	133
Pohatcong township	5,990	180	419
Municipal Acreage Regional Total	38,523	1,156	2,697
County Total Region			
Total Municipal Warren County	139,855	4,196	9,790
County Total			

TABLE XV

SUMMARY OF WARREN COUNTY PUBLIC OPEN SPACE REQUIREMENTS											
	Federal		State		County		Municipal		Total		Overall
	Supply	Goal	Supply	Goal	Supply	Goal	Supply	Goal	Supply	Goal	Surplus/(Deficit)
North	10,749	3,528	12,262	8,818	386	3,322	253	1,424	23,650	17,092	6,558
Central	0	3,621	13,895	9,052	614	3,771	2,847	1,616	17,356	18,060	(704)
South	0	2,195	1,956	5,490	638	2,697	836	1,156	3,430	11,538	(8,108)
Warren County	10,749	9,344	28,113	23,360	1,638	9,790	3,936	4,196	44,436	46,690	(2,254)

Based on the previous table, the central and the southern regions are lacking in the amount of preserved public open space while the northern region has a surplus. Depending on the location, a open space reserve could serve two regions. Additionally, an over abundance of state and federal lands should not preclude the need for the county to acquire additional lands in a particular region.

Efforts to acquire land for public open space should be made now to take advantage of today's lower land values rather than wait until tomorrow when land values will likely be higher, and less desirable undeveloped land will be available. Land can also be targeted today for acquisition that offers unique scenic and environmental beauty, surface and groundwater protection, as well as recreational activities, such as hunting, fishing, hiking, and biking that could be lost if we wait too long to acquire it.

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