

Preston Township

Wayne County Agricultural Land Use/Land Cover Study

A study examining the change of agricultural land use and land cover
in Wayne County from 1959 to 2002

This is report M-20, Preston Township; in a series of reports examining land use and land cover change in Wayne County's 28 municipalities, particularly agricultural land between 1959 and 2002. For a detail of the study procedures, see the Project Narrative.



Overview

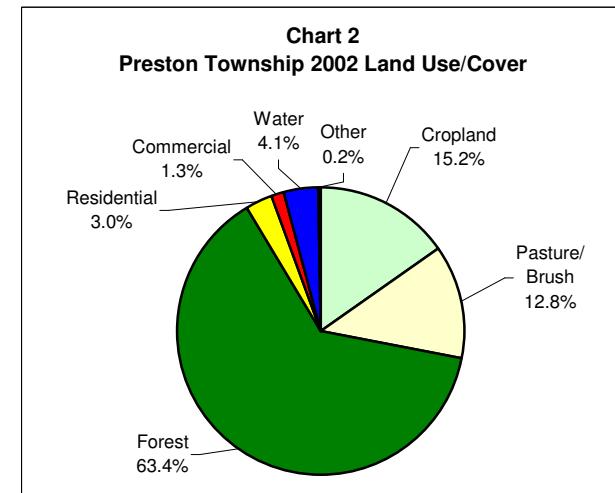
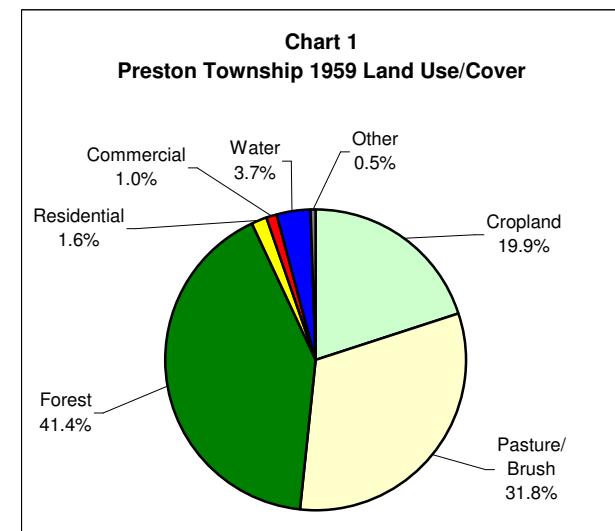
Preston Township is located in the northwest part of Wayne County with Susquehanna County forming its western border. It is the third largest municipality in Wayne County with a total land area of approximately 32,987 acres or 51.5 square miles, which accounts for nearly 7% of the County's total land area.

Nearly one-fifth of the Township was being utilized for cropland production in 1959 and the Township was able to retain 63.9% of its cropland over the 43 years of the study period, which ranked 8th in the County. As can be seen in Table 1 {below}, approximately 5,028 acres of Preston Township remains as cropland. The greatest increase in land use/land cover was forestland. Forest increased from 41.4% of the Township's total land area in 1959 to 63.4% by 2002, covering roughly 20,900 acres. Residential acreage increased from 1.0% in 1959 to 2.6% by 2002, an increase of 546 acres.

Table 1 - Preston Township Land Use/Land Cover

Land Use/Land Cover	Preston 1959 Acres	Category Percent of Total	Preston 2002 Acres	Category Percent of Total
Residential	325.06	1.0%	871.05	2.6%
Commercial	335.67	1.0%	443.39	1.3%
Industrial	4.99	0.0%	11.12	0.0%
Transportation	148.00	0.4%	-	0%
Utilities	0.34	0.0%	1.39	0.0%
Religious	8.88	0.0%	8.96	0.0%
Government/Institution	11.11	0.0%	25.58	0.1%
Recreational	-	0%	7.06	0.0%
Cropland	6,567.75	19.9%	5,028.65	15.2%
Farmstead	210.28	0.6%	124.83	0.4%
Pasture/Brush	10,490.30	31.8%	4,213.63	12.8%
Forest	13,652.67	41.4%	20,900.89	63.4%
Water	1,231.78	3.7%	1,345.60	4.1%
Mining/Extraction	-	0%	4.68	0.0%
Total	32,986.83	100.0%	32,986.83	100.0%

The charts below show the percent values for the land use/land cover categories in Preston Township for 1959 and 2002. The residential category includes farmsteads in each chart's total throughout this report, and the category "other" includes land use/land cover categories that were too small to illustrate individually.



The charts shown above give a visual comparison of the land use and land cover changes over the forty-three year study period. Cropland and pasture/brush covered 4.7% less and 19% less of the Township, respectively. Forestland, however, now covers 22% more of the Township, accounting for 63.4% of Preston Township's total land area.

Cropland

In 1959, cropland accounted for 19.9% of the Township's land area. By 2002, that land use decreased to 15.2%. Table 2 {below} shows what changes occurred to the 1959 cropland.

Table 2 - 1959 Cropland Use in 2002

Land Use/Land Cover	1959 Cropland Classification in 2002	
	Acres	Percent
Residential	240.42	3.7%
Commercial	39.46	0.6%
Industrial	-	0%
Transportation	-	0%
Utilities	0.08	0.0%
Religious	-	0%
Government/Institution	9.33	0.0%
Recreational	4.61	0.1%
Cropland	4,195.56	63.9%
Farmstead	33.04	0.5%
Pasture/Brush	1,049.64	16.0%
Forest	986.14	15.0%
Water	9.47	0.1%
Mining/Extraction	-	0%
Total	6,567.75	100.0%

Nearly 64% of Preston Township's 1959 cropland was still being used for cropland production in 2002. Over this same time period, 16.0% of prior cropland became idle and was utilized for either pasture ground or became brush-covered land. Another 15% became reforested covering almost 1,000 acres. An additional 240 acres was converted to residential use, accounting for 3.7% of the 1959 cropland.

The United States Department of Agricultural (USDA) classifies soil as prime agricultural soil, farmland of statewide importance or non-prime soil. Details of the three classifications can be found in the County summary. The following section analyzes soils from a prime verses non-prime perspective.

Prime & Non-Prime Agricultural Soil

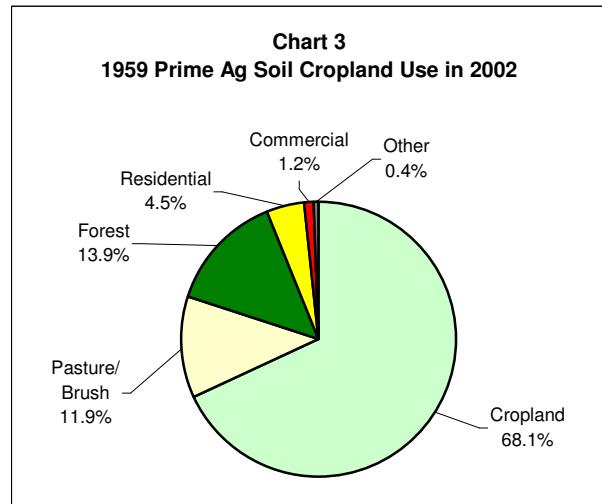
A total of 36.1% of Preston Township's 1959 cropland was on prime soil and 63.9% was on non-prime soil. Table 3 {above right} shows how the changes over the past four decades have affected the cropland that was located on both

prime and non-prime agricultural soil. It is noteworthy that over 68% of the 1959 cropland on prime agricultural soil was still being used as cropland in 2002. Over 61% was still being utilized as cropland on non-prime agricultural soil in 2002.

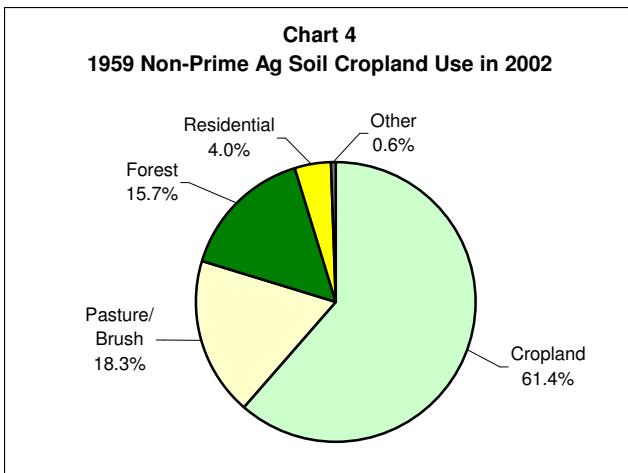
Table 3 - 1959 Prime & Non-Prime Cropland Use in 2002

Land Use/Land Cover	Prime Ag Soil Crops		Non-Prime Ag Soil Crops	
	Classification in 2002	Acres	Classification in 2002	Acres
Residential	3.9%	92.65	3.6%	149.41
Commercial	1.2%	28.66	0.3%	10.80
Industrial	0%	-	0%	-
Transportation	0%	-	0%	-
Utilities	0.0%	0.08	0%	-
Religious	0%	-	0%	-
Government/Institution	0.0%	4.79	0.0%	4.54
Recreational	0.2%	4.31	0.0%	0.30
Cropland	68.1%	1,615.74	61.4%	2,575.93
Farmstead	0.6%	14.49	0.4%	18.55
Pasture/Brush	11.9%	281.69	18.3%	769.43
Forest	13.9%	330.31	15.7%	656.60
Water	0.0%	0.75	0.2%	8.72
Mining/Extraction	0%	-	0%	-
Total	100.0%	2,373.47	100.0%	4,194.28

The percentage of non-prime agricultural soil that converted to pasture/brush and forest is higher than the percentage of prime agricultural soil that changed to those land covers. Table 3 indicates that 6.4% more of 1959 cropland turned into pasture/brush on non-prime soil than on prime soil {see following Charts 3 and 4}.



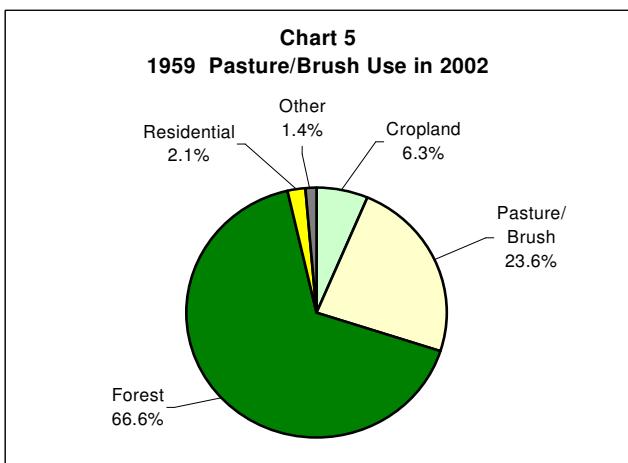
Over 68% of the Township's 1959 prime agricultural soil cropland remained as cropland in 2002.



Over 61% of the Township's 1959 non-prime agricultural soil cropland remained as cropland in 2002.

Pasture/Brush

The pasture/brush land cover classification is land that is used for either agricultural support operations, such as livestock grazing, or the start of early reforestation, but not considered as true forestland yet. Pasture/brush covered 19% less of the Township in 2002 than it did in 1959. The chart below shows the 1959 pasture/brush land and its classification of cover and use by percentage in 2002. As the chart indicates, a total of 660 acres was converted to cropland production equaling 6.3%. Nearly 2,500 acres remained as pasture/brush, but almost 7,000 acres grew into forest over this time span. Residential land use accounted for 223 acres, which includes the farmstead category. Another 45 acres was converted to commercial use and 93 acres became water, which are shown in the "other" category in Chart 5 {below}.



Two-thirds of the 1959 pasture/brush land grew into forest by 2002, which was equal to nearly 7,000 acres.

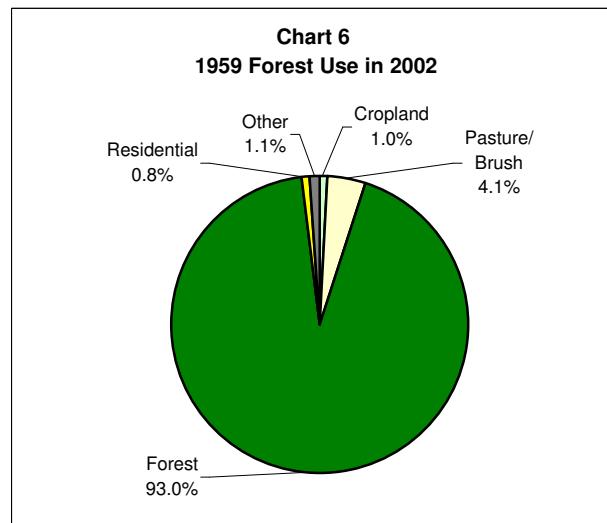
Forest

Forest was the largest land classification in Preston Township for both 1959 and 2002. A total of 12,700 acres of 1959 forestland remained as such by 2002, equating to 93%. A total of 130 acres equaling 1% of 1959 forest was converted to cropland by 2002 and 4.1% or 566 acres was classified as pasture/brush. A total of 105 acres was converted to residential land use, which includes the farmstead category {see Table 4 and Chart 6 below}.

Table 4 - 1959 Forest Use in 2002

Land Use/Land Cover	1959 Forestland Classification in 2002	
	Acres	Percent
Residential	103.22	0.8%
Commercial	63.07	0.5%
Industrial	1.84	0.0%
Transportation	-	0%
Utilities	-	0%
Religious	-	0%
Government/Institution	2.23	0.0%
Recreational	0.99	0.0%
Cropland	129.96	1.0%
Farmstead	2.00	0.0%
Pasture/Brush	565.73	4.1%
Forest	12,698.88	93.0%
Water	81.47	0.6%
Mining/Extraction	3.27	0.0%
Total	13,652.66	100.0%

The table above shows the acres and percentages of the 1959 forest and what it became by 2002.



The above chart shows the percent values for the 1959 forest and what it became by 2002. A total of 93% remained as forestland over this forty-three year period.

In 2002, the majority of Preston Township was forested land cover with a total of 20,900-plus acres. The following table shows how this forest acreage existed back in 1959.

Table 5 - 2002 Forest Use in 1959

Land Use/Land Cover	2002 Forest Classification in 1959	
	Acres	Percent
Residential	31.09	0.1%
Commercial	32.72	0.2%
Industrial	0.42	0.0%
Transportation	128.74	0.6%
Utilities	-	0%
Religious	0.06	0.0%
Government/Institution	1.80	0.0%
Recreational	-	0%
Cropland	986.37	4.7%
Farmstead	8.00	0.0%
Pasture/Brush	6,984.32	33.4%
Forest	12,698.67	60.8%
Water	28.69	0.1%
Mining/Extraction	-	0%
Total	20,900.88	100.0%

Nearly 1,000 acres was prior cropland and one-third came from previous pasture/brush ground. These two classifications alone make up 38.1% of the existing 2002 forest cover. Once the 1959 forest percentage is included, nearly 99% is accounted for. The remaining 1% consists of transportation (the former O & W railroad), commercial, residential and water classification.

Commercial

In 1959, the amount of land being used for commercial activity was equal to 1% of the Township's total land area {see Table 1}. By 2002, an additional 100 plus acres was added to Preston Township's commercial land base, but this only accounted for a 0.3% increase in land coverage. A majority of the commercial activity in Preston Township is associated with the seasonal summer camp businesses located throughout the Township and the local general stores located in the villages of Orson, Preston Center, Lakewood and Preston Park, all of which are along State Route 370, known as the "Crosstown Highway".

Protected Agricultural Land

Preston Township had a total of approximately 14,035 acres enrolled in the Agricultural Security Area Program by 2002, which is equivalent to 42.2% of the Township's land area. Additionally, there were 158 acres enrolled in the Agricultural Conservation Easement Purchase Program at the end of the study period. There were also approximately 4,451 acres of land accepted into the Act 319 (Clean & Green) Program, which accounts for 13.8% of the taxable acreage within Preston Township. This tax designation reduces the assessed value of the Township by \$4,756,700 or 2.6%.

Summary

The most notable change in the Township during the study period was the increase in forest cover. Nearly 7,250 additional acres were gained during this time period, which equaled a 22% increase of this land use/cover of the Township's total land area. Two-thirds of this forest cover increase came from prior pasture/brush land. As a percentage of the total land area, cropland decreased by 4.7%, pasture/brush by 19% and farmsteads by 0.2%. Residential land increased by 1.6% and commercial land use increased by 0.3%, due mainly from seasonal summer camp expansion. An important component associated with the commercial camp industry is the abundance of lakes and ponds located within the Township. The water coverage alone of 1,345 acres equals over 4% of the Township's land area. This land study confirms that Preston Township still maintains the rural character of northern Wayne County.

Wayne County Agricultural Land Use/Cover Study

This project was funded in part by the Wayne County Commissioners and by a grant from the Pennsylvania Department of Community and Economic Development. This study examines the change in agricultural land use/cover over 43 years (1959-2002). The base data is 1959 USDA aerial photos which were registered to the state plane coordinate system by Wilkes University's Center for Geographic Information Sciences. This enabled comparison with 1997 aerial photos taken by Wayne County. To aid in the analysis of the data, local municipal volunteers worked with planning department staff members in reviewing the aerial photos and resulting land use maps. A complete list of those community volunteers who aided in the completion of this report can be found in the report summary.

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