

Canaan 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-4, Canaan 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



Canaan Township is located along the western boundary of Wayne County with Lackawanna County. The total land area of the Township is approximately 12,300 acres or roughly 19.2 square miles. As seen in Table 1 {below} and Charts 1 and 2 {right}, the majority of the Township landscape was forested in both

1959 and 2002. As one might expect, the area of agricultural types of land use/cover decreased by a certain extent over the forty-plus year study period. On the other hand, the amount of forestland increased by more than 700 acres and comprised 5.7% more of the Township by the end of the study period. The amount of residential and commercial land use/land cover also increased. The specific conversions and various types of land use/cover that comprised Canaan Township during this study period will be discussed in greater length on the following pages of this report.

The charts below show the percent values for the land use/land cover categories in Canaan 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.

Chart 1
Canaan Township 1959 Land Use/Cover

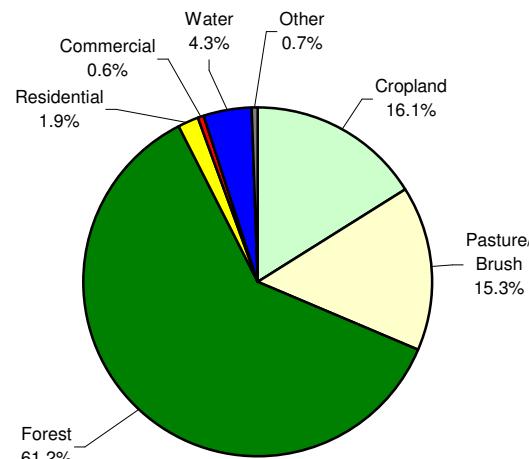
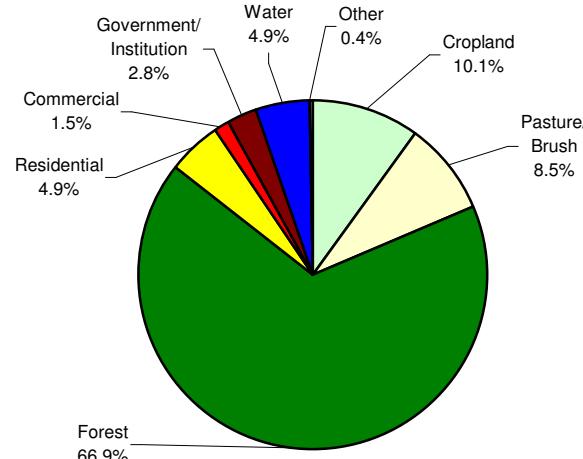


Chart 2
Canaan Township 2002 Land Use/Cover



Note the obvious decrease in the agricultural land use/cover types and the increase in the forest cover in the above charts.

Table 1 - Canaan Township Land Use/Land Cover

Land Use/Land Cover	Canaan 1959 Acres	Category Percent of Total	Canaan 2002 Acres	Category Percent of Total
Residential	106.92	0.9%	568.79	4.6%
Commercial	73.44	0.6%	179.69	1.5%
Industrial	-	0%	1.55	0.0%
Transportation	-	0%	-	0%
Utilities	2.34	0.0%	4.34	0.0%
Religious	15.64	0.1%	15.76	0.1%
Government/Institution	65.47	0.5%	348.56	2.8%
Recreational	-	0%	-	0%
Cropland	1,985.12	16.1%	1,243.97	10.1%
Farmstead	122.58	1.0%	38.38	0.3%
Pasture/Brush	1,879.31	15.3%	1,043.42	8.5%
Forest	7,518.10	61.2%	8,228.06	66.9%
Water	523.50	4.3%	596.47	4.9%
Mining/Extraction	-	0%	23.47	0.2%
Total	12,292.42	100.0%	12,292.46	100.0%

Cropland

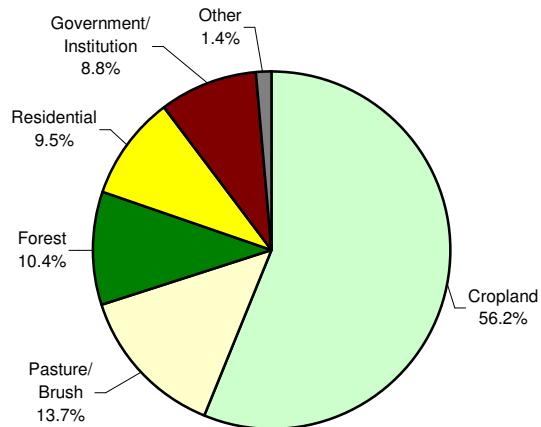
For the purposes of this study, cropland consists of various types of agricultural products, including but not limited to corn and hay. In 1959, approximately 16% of the Township land area consisted of cropland. By 2002, the area of cropland had decreased by approximately 741 acres. Relative to 1959, this means that cropland accounted for 6% less of the total Township land area at the end of the study period. Table 2 {below} and Chart 3 {right} depict what became of the 1959 Canaan Township cropland.

Table 2 - 1959 Cropland Use in 2002

Land Use/Land Cover	1959 Cropland Classification in 2002	
	Acres	Percent
Residential	178.76	9.0%
Commercial	19.48	1.0%
Industrial	-	0%
Transportation	-	0%
Utilities	-	0%
Religious	-	0%
Government/Institution	174.87	8.8%
Recreational	-	0%
Cropland	1,115.19	56.2%
Farmstead	10.35	0.5%
Pasture/Brush	272.65	13.7%
Forest	206.07	10.4%
Water	7.74	0.4%
Mining/Extraction	-	0%
Total	1,985.11	100.0%

Of the nearly 2,000 acres of 1959 cropland in Canaan Township, approximately 1,100 acres or roughly 56% remained as cropland in 2002. By 2002, approximately 24% of the 1959 cropland converted to natural land cover types, either as forest (10.4%) or pasture/brush (13.7%). Nearly 10% changed to residential land use and about 8.8% converted to government/institution use by 2002. The latter conversion was largely due to the construction of the new Federal Penitentiary, USP Canaan. The United States Department of Agriculture 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 sections will analyze soil from a prime versus non-prime perspective.

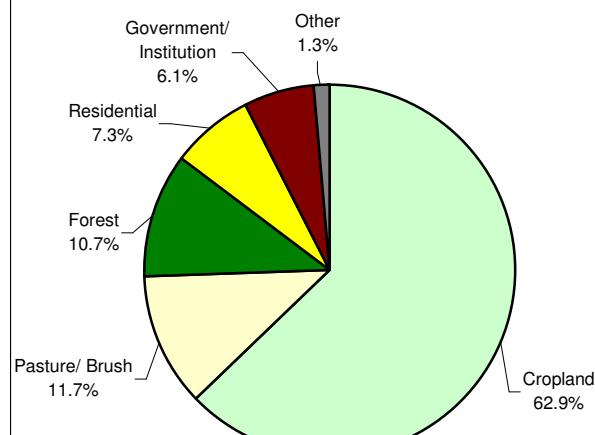
Chart 3
1959 Cropland Use in 2002



Prime Agricultural Soil

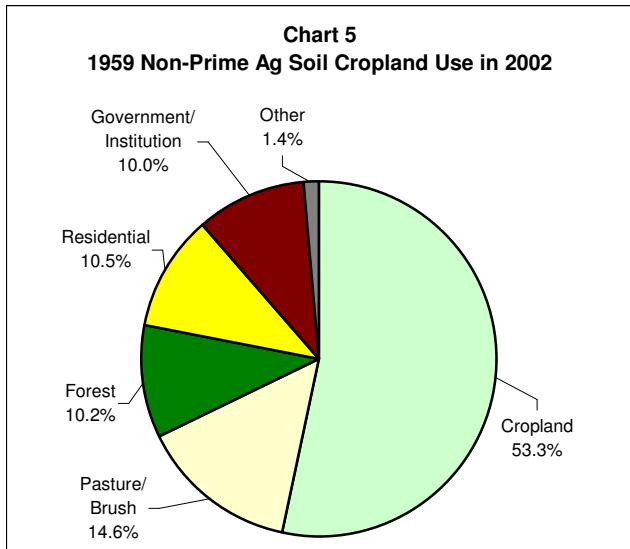
In 1959, about 30% or approximately 600 acres of the cropland in Canaan Township was utilizing prime agricultural soil. Of that prime agricultural soil cropland, nearly 63% or 377 acres was still in existence as cropland at the end of the study period in 2002. Approximately 23% of the cropland converted to natural types of land cover, namely forest (11%) and pasture/brush (12%). Residential and government/institution uses accounted for about 7% and 6% of the 1959 prime agricultural soil cropland, respectively. The remaining area converted to various other land use/cover types. Chart 4 {below} illustrates what became of the 1959 prime agricultural soil cropland.

Chart 4
1959 Prime Ag Soil Cropland Use in 2002



Non-Prime Agricultural Soil

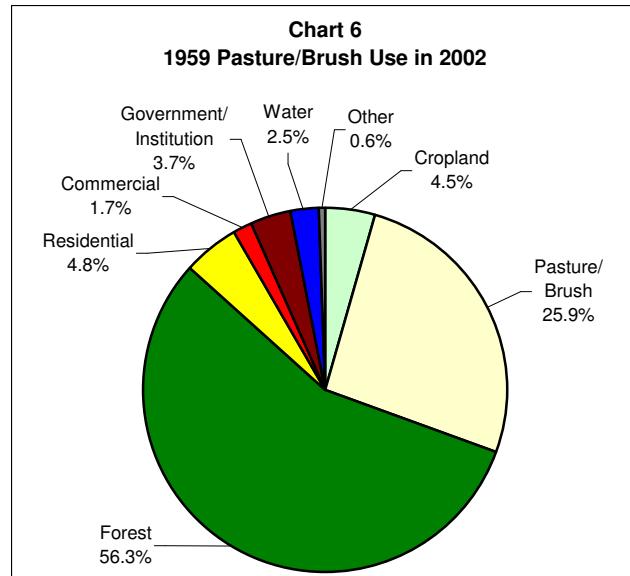
In 1959, nearly 70% or approximately 1,385 acres of the cropland in Canaan Township was utilizing non-prime agricultural soil. As in the last section, we will explore what became of the 1959 non-prime agricultural soil cropland. In comparison to the prime agricultural soil cropland, a lesser percentage of the non-prime



agricultural soil cropland was still being used as cropland in 2002. Over 53% or 738 acres of the non-prime agricultural soil cropland was still being used as cropland in 2002 {See Chart 5, above}. Nearly 15% of the 1959 non-prime agricultural soil cropland converted to pasture/brush and approximately 10% converted to forest. In 2002 residential and government/institution uses accounted for roughly 10% each of the 1959 non-prime agricultural soil cropland. The remaining 1959 non-prime agricultural soil cropland converted to other uses.

Pasture/Brush

In 1959, pasture/brush accounted for approximately 1,879 acres or 15.3% of the total land area {See Table 1}. By the year 2002, the amount of pasture/brush in Canaan Township had decreased by about 836 acres. Of the 1959 pasture/brush, only 26% remained as pasture/brush when compared to 2002. {See Chart 6, above right} About 56% or nearly 1,059 acres of the 1959 pasture/brush converted



to forest by the end of the study period. A total of 85 acres or 4.5% of the pasture/brush converted to cropland. Approximately 5%, 4% and 2% of the 1959 pasture/brush converted to residential, government/institution or commercial uses, respectively. Another 2.5% converted to water. The remaining 1959 pasture/brush converted to various other types of land use/cover.

Forest

As stated earlier, the majority of Canaan Township was covered by forest in both 1959 and 2002. In 1959, there were roughly 7,518 acres of forest, which accounted for approximately 61% of the total land cover {See Table 1}. By 2002, the amount of forest had increased to roughly 8,228 acres or 67% of the total Canaan Township land area. The increase in forest cover is mostly attributed to the maturation of the pasture/brush. On a percentage basis, more than half of the 1959 pasture/brush in Canaan Township converted to forest by 2002. {See Chart 6}

Additionally, the majority of the 1959 forest in the Township remained as forest by 2002. {See Table 3 on the next page} Of the roughly 7,518 acres of 1959 forest, over 92% or almost 6,936 acres remained as forest cover in 2002. Approximately 2% or 150 acres of the 1959 forest was used for residential purposes by the end of the study period in 2002. The remaining

1959 forest cover within the Township converted to various other uses.

Table 3 - 1959 Forest Use in 2002

Land Use/Land Cover	1959 Forestland Classification in 2002	
	Acres	Percent
Residential	149.99	2.0%
Commercial	74.77	1.0%
Industrial	0.01	0.0%
Transportation	-	0%
Utilities	2.88	0.0%
Religious	0.69	0.0%
Government/Institution	41.64	0.6%
Recreational	-	0%
Cropland	27.13	0.4%
Farmstead	0.46	0.0%
Pasture/Brush	238.66	3.2%
Forest	6,938.24	92.3%
Water	29.83	0.4%
Mining/Extraction	13.80	0.2%
Total	7,518.10	100.0%

The table above shows both the acreage and percent of the 1959 forest and what it became by 2002.

Residential

In 1959, the Canaan Township landscape was comprised of nearly 1% or approximately 107 acres of residential land use. According to the U.S. Census Bureau, the population of Canaan Township in 1960 was 1,831. In a Township that is approximately 19 square miles, that translates to roughly 96 persons per square mile. Comparatively speaking, by 2002 the Township was comprised of nearly 5% or about 569 acres of residential land use/cover. According to the U.S. Census Bureau, the total population of the Township at the time of the 2000 census was 1,916, which translated to approximately 101 persons per square mile. It should be noted that the Township populations are subject to influence from the Farview State Hospital in 1960 and the Farview State Prison in 2000.

Commercial

On a percentage basis, commercial land comprised only a small portion of Canaan Township's landscape in both study years. The commercial land was mainly confined to areas along U.S. Route 6 in the northeastern part of

the Township and areas south of Waymart Borough. In 1959, there were roughly 73 acres of commercial land. This total constituted 0.6% of the total Canaan Township land area. By 2002, there were nearly 180 acres of commercial land, which accounted for about 1.5% of the total land area.

Protected Agricultural Land

Canaan Township had approximately 1,600 acres enrolled in the Agricultural Security Area Program. There were no farms enrolled in the Agricultural Conservation Easement Purchase Program. There were also approximately 3,602 acres of land accepted into the Act 319 Program (Clean & Green), which accounts for about one-third of the taxable acreage within the Township. This tax designation reduces the assessed value of the Township by \$4,451,600 or 6.5%.

Summary

The most notable conversion in the Township during the study period was the change from agricultural related land use/cover to forest cover. Over 10% of the cropland and 56% of the pasture/brush converted to forest. Relative to 1959, cropland and pasture/brush, combined, comprised 12.8% less of the total Township land area by 2002. Conversely, the forest cover increased by nearly 710 acres between 1959 and 2002. By the end of the period, forest accounted for nearly 67% of the Township land area. Residential land use increased by nearly 462 acres between 1959 and 2002. However, by 2002, residential land accounted for less than 5% of the total Canaan Township land area.

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.

Wayne County Department of Planning 2006
925 Court Street
Honesdale PA 18431
570-253-5970