

Hawley Borough

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-10, Hawley Borough; 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



Hawley Borough is located on Wayne County's eastern boundary with Pike County and is nearly surrounded by Palmyra Township. The Borough is the second smallest municipality in the County containing 402 acres or approximately 0.6 square miles. In 1959 and 2002,

residential was the largest land use. Table 1 {below} shows that forestland was the second largest land use in both years accounting for 21% and 20%, respectively. Pasture/brush in 1959 covered 16.3% of the Borough, primarily along the banks of the Lackawaxen River. By 2002, much of the pasture/brush land along the river had been converted to recreational land and the remaining pasture/brush land covered 5.2% of Hawley Borough. There were just six acres of cropland in 1959, and by 2002, it had all been converted to other types of land use/land cover.

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

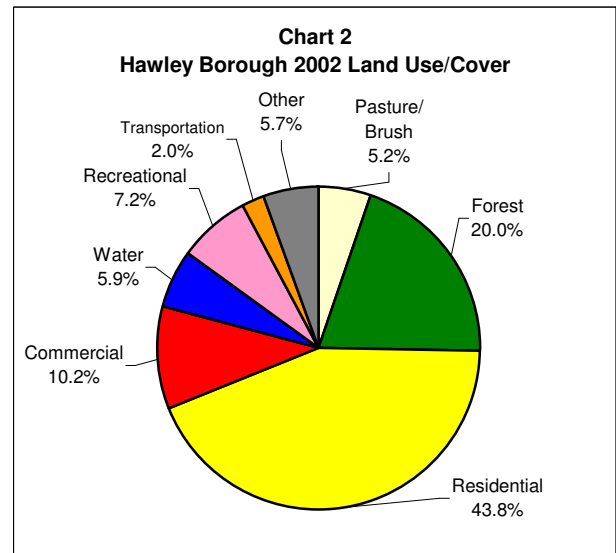
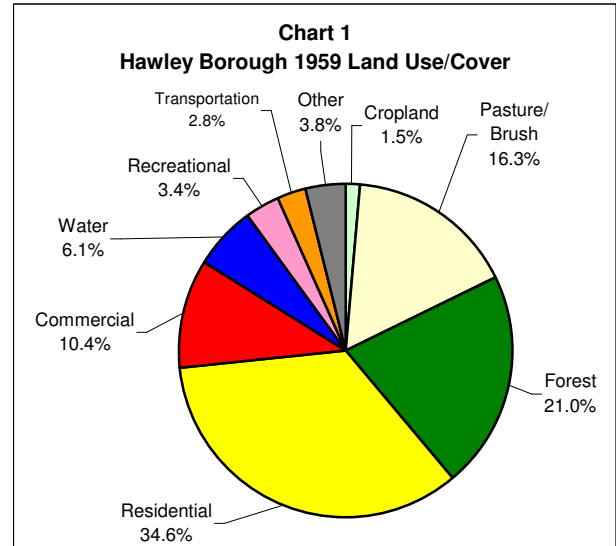


Table 1 – Hawley Borough Land Use/Land Cover

Land Use/Land Cover	Hawley 1959 Acres	Category Percent of Total	Hawley 2002 Acres	Category Percent of Total
Residential	137.88	34.3%	175.75	43.8%
Commercial	41.78	10.4%	40.89	10.2%
Industrial	3.38	0.8%	0.52	0.1%
Transportation	11.31	2.8%	8.19	2.0%
Utilities	-	0%	2.04	0.5%
Religious	8.13	2.0%	9.99	2.5%
Government/Institution	3.89	1.0%	10.31	2.6%
Recreational	13.57	3.4%	28.88	7.2%
Cropland	6.09	1.5%	-	0%
Farmstead	1.06	0.3%	-	0%
Pasture/Brush	65.59	16.3%	20.98	5.2%
Forest	84.47	21.0%	80.25	20.0%
Water	24.54	6.1%	23.88	5.9%
Mining/Extraction	-	0%	-	0%
Total	401.69	100.0%	401.68	100.0%

The above charts show that pasture/brush, cropland, and forestland all decreased over the 43-year period of this study. The railroad accounts for the transportation land use. Most of the decrease in the acreage is attributed to the land formerly owned by the Erie Railroad that was converted to government/institution use.

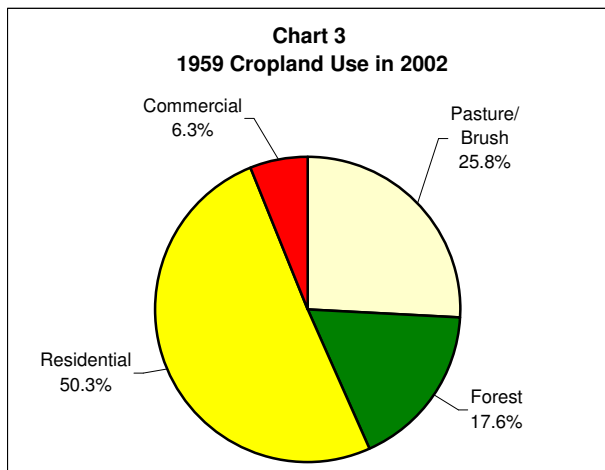
Cropland

In 1959, Hawley had just six acres of cropland, none of which remained by 2002. Cropland accounted for just 1.5% of the Borough's land use/land cover in 1959. By 2002, the six acres of cropland that existed in 1959 had been converted to some other land use classification.

Table 2 – 1959 Cropland Use in 2002

Land Use/Land Cover	1959 Cropland Classification in 2002	
	Acres	Percent
Residential	3.06	50.3%
Commercial	0.38	6.3%
Industrial	-	0%
Transportation	-	0%
Utilities	-	0%
Religious	-	0%
Government/Institution	-	0%
Recreational	-	0%
Cropland	-	0%
Farmstead	-	0%
Pasture/Brush	1.57	25.8%
Forest	1.07	17.6%
Water	-	0%
Mining/Extraction	-	0%
Total	6.08	100.0%

As shown in Table 2 {above} and Chart 3 {below}, more than half of the cropland was converted to residential use. Also, over 43% of the acreage had changed back to natural vegetation, either as pasture/brush or forestland. Approximately two acres became pasture/brush, one acre grew back into forestland, and less than one-half of an acre became used for commercial activity.



The United States Department of Agriculture (USDA) classifies soil as either prime agricultural soil, farmland of statewide importance, or non-prime soil. The following sections analyze soil from a prime versus non-prime perspective.

Prime Agricultural Soil

Approximately three out of the six acres of cropland that existed in 1959 were on prime agricultural soil. Cropland on prime agricultural soil in 1959 that had been converted for residential use by 2002 equaled nearly two acres. The remaining acres converted to either pasture/brush or forestland as shown in Table 3 {below}.

Table 3 – 1959 Prime & Non-Prime Cropland Use In 2002

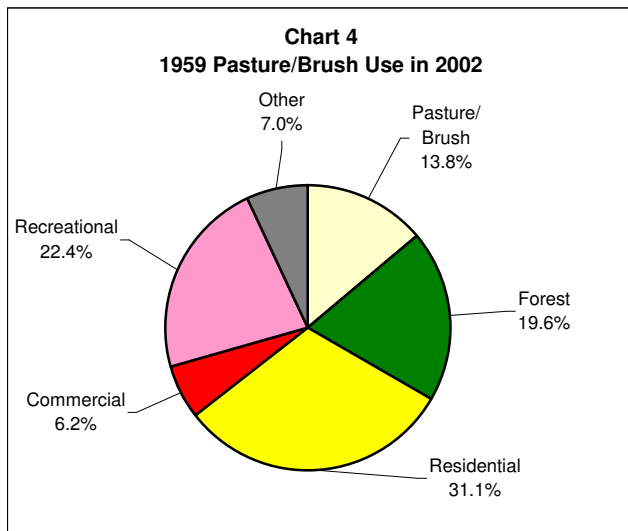
Land Use/Land Cover	Prime Ag Soil Crops		Non-Prime Ag Soil Crops	
	Classification in 2002		Classification in 2002	
	Acres	Percent	Acres	Percent
Residential	1.95	68.2%	1.11	34.5%
Commercial	-	0%	0.38	11.8%
Industrial	-	0%	-	0%
Transportation	-	0%	-	0%
Utilities	-	0%	-	0%
Religious	-	0%	-	0%
Government/Institution	-	0%	-	0%
Recreational	-	0%	-	0%
Cropland	-	0%	-	0%
Farmstead	-	0%	-	0%
Pasture/Brush	0.78	27.3%	0.79	24.5%
Forest	0.13	4.5%	0.94	29.2%
Water	-	0%	-	0%
Mining/Extraction	-	0%	-	0%
Total	2.86	100.0%	3.22	100.0%

Non-Prime Agricultural Soil

In 1959, approximately three acres of cropland within the Borough existed on non-prime agricultural soil. One-third of the former cropland was changed into residential use in the amount of only one acre as shown in Table 3 {above}. The remaining acreage changed back to natural vegetation, with the exception of approximately one-third of an acre became used for commercial purposes.

Pasture/Brush

There were approximately 66 acres of pasture/brush land within the Borough in 1959 ranking it the third largest land use/cover classification for that year {see Table 1}. By 2002, the area of pasture/brush land had been reduced to 21 acres or 5.2% of the Borough's total land area. Between 1959 and 2002, just nine acres or 13.8% of 1959 pasture/brush was retained as pasture/brush by 2002. Recreational acreage more than doubled over the 43-year study period with an increase of nearly 15 acres or 22.4% of the total former pasture/brush. This is shown in Chart 4 {below}. The land use/land cover classification of residential gained 20 acres from previous 1959 pasture/brush accounting for 31.1% of the total. A total of 12 acres grew naturally into forestland over the course of the 43-year study period, accounting for 19.6% of the total. A total of four acres, equal to 6.2% of 1959 pasture/brush was converted to commercial land use by 2002.



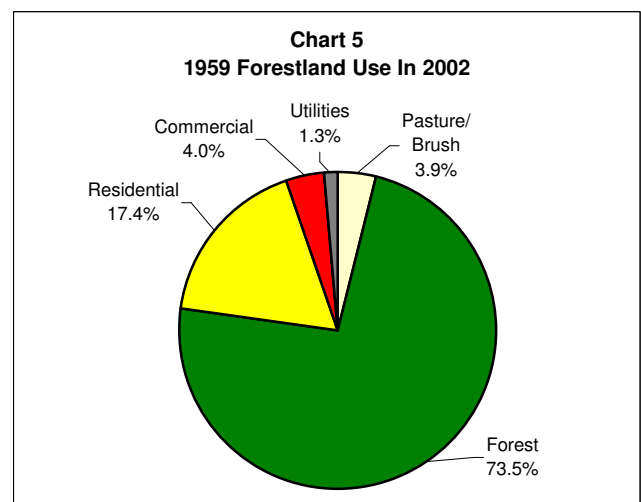
Forest

In both 1959 and 2002, forestland was the second largest land cover in Hawley Borough. Over the course of the 43-year study period, forestland decreased by approximately four acres, the opposite of the general trend throughout the County. In 1959, forestland covered approximately 84 acres or 21.0% of the Borough. By 2002, roughly 80 acres of the Borough were forested, accounting for one-fifth

of the Borough's land area. As shown in Table 4 and Chart 5 {below}, by 2002, 62 acres equaling almost three-quarters of forestland was retained. However, nearly 15 acres of forestland was converted for residential use by the end of the study period. The remaining acreage was split among commercial, pasture/brush and utilities. Both commercial acreage and pasture/brush land each gained over three acres of former forestland and one acre became used for utilities. Most of the forestland in 2002 was located in the north-central and south-central part of the Borough. Steep slopes in these parts of the Borough would make further development of these forested areas more difficult.

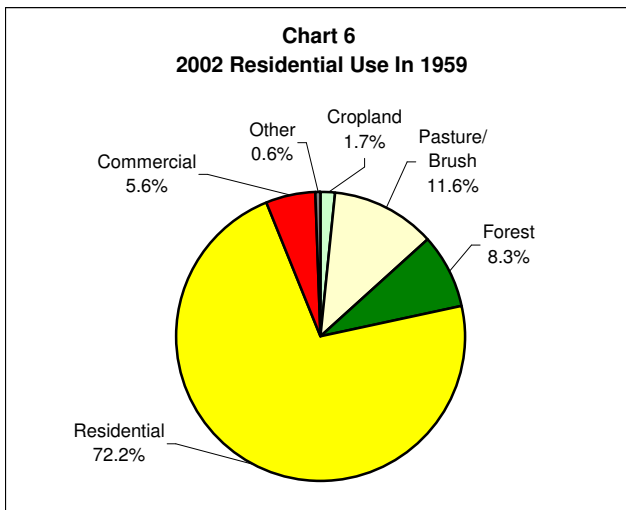
Table 4 - 1959 Forestland in 2002

Land Use/Land Cover	1959 Forestland Classification in 2002	
	Acres	Percent
Residential	14.66	17.4%
Commercial	3.35	4.0%
Industrial	-	0%
Transportation	-	0%
Utilities	1.11	1.3%
Religious	-	0%
Government/Institution	-	0%
Recreational	-	0%
Cropland	-	0%
Farmstead	-	0%
Pasture/Brush	3.30	3.9%
Forest	62.03	73.5%
Water	-	0%
Mining/Extraction	-	0%
Total	84.45	100.0%



Residential

Residential was the number one land use in Hawley Borough for the years 1959 and 2002. In 1959, residential acreage totaled 138 acres or 34.3% of the Borough's total land area. Over the 43-year study period, residential acreage increased by 38 acres to almost 176 acres in 2002, which represents 43.8% of the Borough's land area. Chart 6 {below} shows that residential acreage in 2002 that was already residential land in 1959 totaled approximately 126 acres or 72.2% of the total 2002 residential acreage. Roughly 20 acres of former pasture/brush land was converted for residential use, which accounted for 11.6% of the total. Forestland was also converted for residential purposes in the amount of nearly 15 acres or 8.3% of the 2002 residential total. Commercial acreage in 1959 that was changed to residential by 2002 contributed 5.6% of the total, which was equivalent to almost 10 acres. Cropland that converted to residential development only amounted to 3 acres or just 1.7% of the total.



Commercial

Commercial activity in Hawley Borough in terms of acreage did not change much. However, not all the acreage that was used for commercial purposes in 2002, was also used for commercial purposes in 1959. Commercial acreage that was retained over the 43-year time period totaled 26 acres. Residential acreage, which became used for commercial purposes, amounted to nearly 5 acres. Pasture/brush that

was changed to commercial acreage consisted of a total of four acres as shown in Table 5 {below}. Forestland was also converted to commercial land in the amount of three acres. Approximately two acres of industrial acreage was also converted for commercial use by 2002.

Table 5 – 2002 Commercial Use In 1959

Land Use/Land Cover	2002 Commercial Classification in 1959	
	Acres	Percent
Residential	4.60	11.3%
Commercial	25.89	63.3%
Industrial	2.40	5.9%
Transportation	0.01	0.0%
Utilities	-	0%
Religious	-	0%
Government/Institution	-	0%
Recreational	-	0%
Cropland	0.38	0.9%
Farmstead	-	0%
Pasture/Brush	4.04	9.9%
Forest	3.35	8.2%
Water	0.21	0.5%
Mining/Extraction	-	0%
Total	40.88	100.0%

Summary

The overall landscape of Hawley Borough has not changed much over the time span of this study. While residential land use has increased, much of it came from prior pasture/brush land. Recreational acreage increased along the southern bank of the Lackawaxen River. Much of this acreage was converted from 1959 pasture/brush land. Even though cropland was completely eliminated during the study period, there were only six acres of cropland existing back in 1959.

Wayne County Agricultural Land Use/Cover

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 the 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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