

Berlin 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-1, Berlin 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.



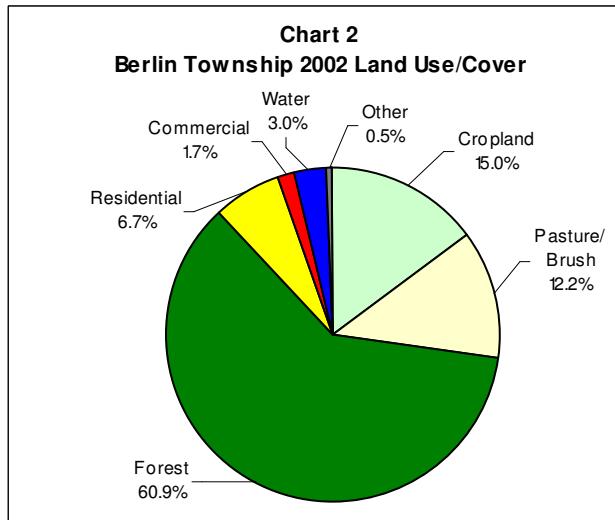
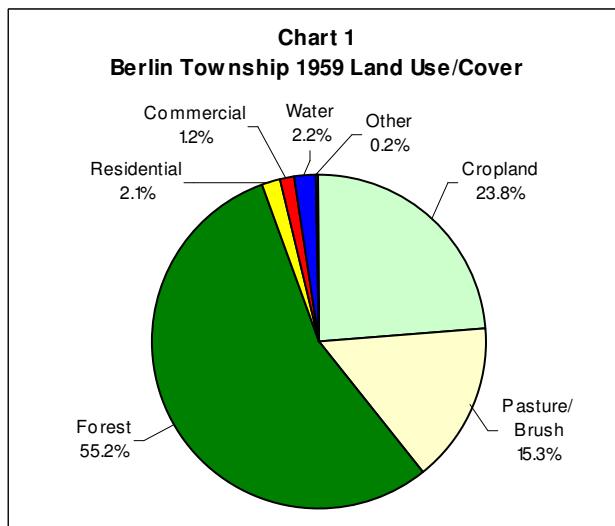
Overview

Berlin Township is located along the eastern portion of Wayne County with Pike County forming its eastern border. The total land area of the Township is approximately 25,322 acres or roughly 39.5 square miles. Cropland was the second most dominant land use in both 1959 and 2002. Table 1 {below} indicates there were 6,031 acres of cropland in 1959; the acreage of cropland declined to approximately 3,809 by 2002. Table 1 also shows that forestland gained the most acres (1,448) in the Township of all other land use classifications. The pasture/brush classification included land that may be used as pasture for an active farm, or may be idle farmland in some early stage of reforestation. Pasture/brush accounted for 15.3% of the land cover in 1959 and 12.2% in 2002. Residential land use gained more than 1,300 acres, but only accounted for 6.4% of the total land area of Berlin Township in 2002.

Table 1 - Berlin Township Land Use/Land Cover

Land Use/Land Cover	Berlin 1959 Acres	Category Percent of Total	Berlin 2002 Acres	Category Percent of Total
Residential	297.49	1.2%	1,627.47	6.4%
Commercial	303.98	1.2%	422.30	1.7%
Industrial	3.38	0.0%	25.33	0.1%
Transportation	-	0%	-	0%
Utilities	3.41	0.0%	28.41	0.1%
Religious	9.05	0.0%	16.51	0.1%
Government/Institution	8.86	0.0%	21.84	0.1%
Recreational	4.03	0.0%	6.88	0.0%
Cropland	6,030.85	23.8%	3,808.65	15.0%
Farmstead	237.59	0.9%	58.29	0.2%
Pasture/Brush	3,879.79	15.3%	3,091.01	12.2%
Forest	13,979.34	55.2%	15,427.76	60.9%
Water	554.73	2.2%	764.91	3.0%
Mining/Extraction	9.80	0.0%	22.95	0.1%
Total	25,322.30	100.0%	25,322.31	100.0%

The charts below and throughout this report show the percent values for the land use/land cover categories in Berlin Township for 1959 and 2002. The category residential includes farmsteads in its total in each chart throughout this report. The category "other" includes land uses too small to show up individually such as government/institution, industrial, mining/extraction and utilities.



Notice the decrease in both cropland and pasture/brush land over this time period and the increase in forest, residential, commercial and water land use/land cover over the forty-three year study period.

Cropland

Cropland represents land that may have produced a variety of products such as corn, hay, or various other fruits and vegetables. It is the second largest use of land in Berlin Township for the years 1959 and 2002. In 1959, cropland covered 24% of the landscape of Berlin Township {see Table 1}. In 1959, cropland accounted for 6,031 acres, which 57% or 3,445 of those acres were still being used for agricultural purposes in 2002 {see Table 2 below and Chart 3, right}.

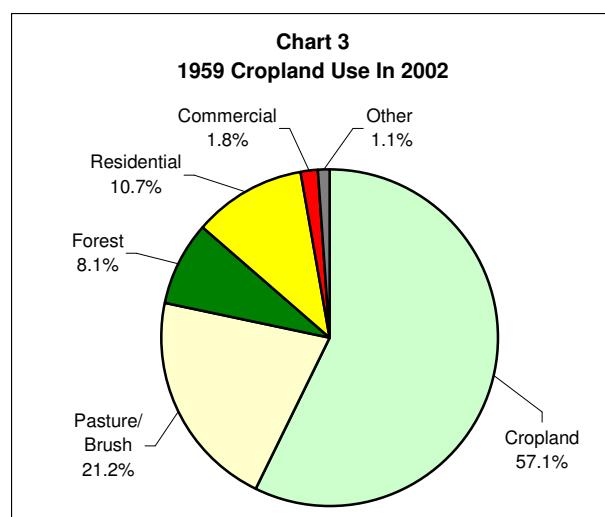
Table 2 - 1959 Cropland Use In 2002

Land Use/Land Cover	1959 Cropland Classification in 2002	
	Acres	Percent
Residential	628.07	10.4%
Commercial	107.71	1.8%
Industrial	0.21	0.0%
Transportation	-	0.0%
Utilities	22.69	0.4%
Religious	-	0.0%
Government/Institution	13.19	0.2%
Recreational	6.11	0.1%
Cropland	3,444.53	57.1%
Farmstead	20.21	0.3%
Pasture/Brush	1,275.91	21.2%
Forest	487.10	8.1%
Water	22.77	0.4%
Mining/Extraction	2.36	0.0%
Total	6,030.86	100.0%

The above table shows the acres and percentages for cropland in 1959 as well as what it became by 2002.

A total of 628 acres of prior cropland from 1959 was converted to residential use in 2002, which amounted to 10.4% of the total. Additionally, 21.2% of the 1959 cropland converted into pasture/brush land.

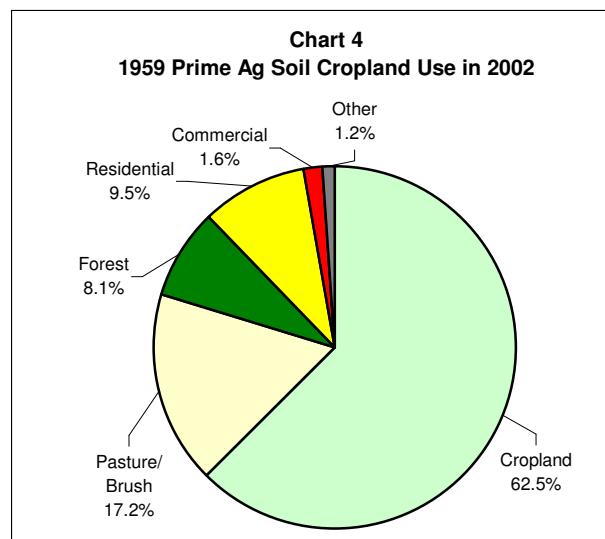
By 2002, cropland totaled 3,809 acres. A total of 90.4% or 3,445 of those acres were cropland in 1959 as well. Of the remaining 364 acres, 236 were pasture/brush land in 1959 and 103 were forestland. The remaining 25 acres originated from residential, commercial, government/institution, or water uses.



The United States Department of Agriculture (USDA) defines soil as either prime or non-prime for agricultural purposes. The following sections explore the relationship of the 1959 Berlin Township cropland to the type of soil present.

Prime Agricultural Soil

Berlin Township had 1,041 acres of cropland on prime agricultural soil in 1959. In 2002, 724 acres of cropland were on prime agricultural soil. A total of 650 of the 1,041 acres were still being used as cropland in 2002, which is 62.5% {see Chart 4 below}.



The above chart shows the 1959 cropland located on prime agricultural soil and what it became by 2002. A total of 62.5% remained as cropland over the four decade plus study period.

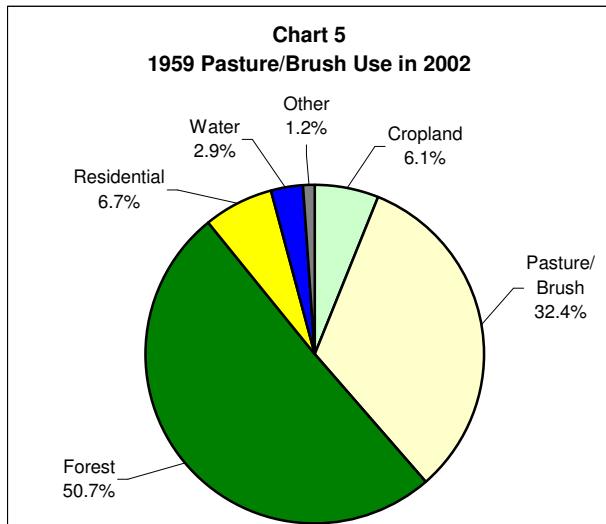
Another 178 acres or 17.2% reverted back to pasture/brush land by 2002 and nearly 99 acres of cropland on prime agricultural soil became utilized for residential purposes by 2002, which accounted for 9.5%. Only 84 acres grew into forestland by 2002, equal to 8.1%. The remaining 33 acres converted to several different types of land use/cover, the largest being commercial with 17 acres on prime agricultural soil.

Non-Prime Agricultural Soil

Also in 1959, 4,990 acres of cropland were on non-prime agricultural soil. A total of 86% of those acres were still open space 43 years later. By 2002, 56%, or 2,794 acres, were still being used for cropland and 22%, or 1,097 acres, converted to pasture/brush land, and 8.1% became forest, which totaled 403 acres. Also, 532 acres were developed for residential purposes, which equaled 10.7% of the total. The remaining land uses that gained acreage from previous non-prime soil cropland were less than 1% each with the exception of commercial, which was 1.8% or 91 acres.

Pasture/Brush

Pasture/brush land in 1959 accounted for 15.3% of the total land use. In 1959, the total acreage of pasture/brush land was 3,880 acres. {Table 1} By 2002, half of that pasture/brush, equaling 1,967 acres grew into forestland {see Chart 5 below}.



An additional 1,258 acres, or 32% of the 1959 pasture/brush land, were still being used the same way 43 years later. The remaining acres were converted to a number of uses with residential, cropland as well as water being the three largest. Residential accounted for 6.7%, cropland accounted for 6.1% and water 2.9% of the 1959 pasture/brush.

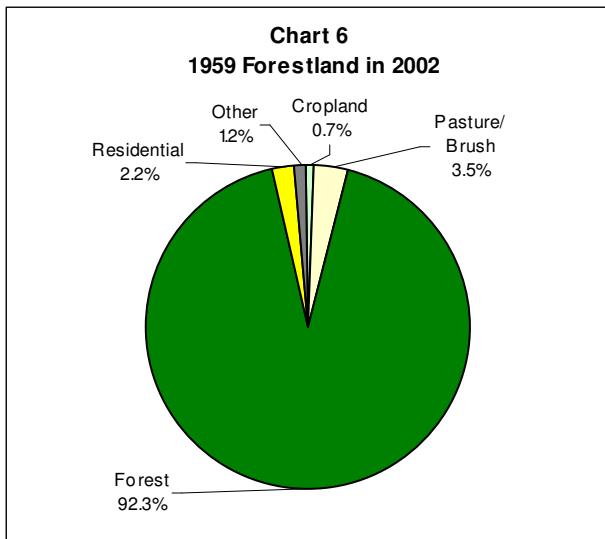
Forest

Forestland was the number one land use in Berlin Township in both years of the study. In 1959, forestland totaled 13,979 acres, which was 55.2% of the total Township acreage. By 2002 that number grew to 15,428 acres, nearly 61% of the Township's total acreage. {Table 1} A total of 92.3%, or 12,905 acres of the forestland in 1959 was retained as forestland in 2002 {see Table 3 below}. The remaining 1,075 acres became used for a variety of other land uses, the largest being pasture/brush land with 495 acres. Another 307 acres had been turned into residential use by 2002. Combined pasture/brush and residential acreages accounted for 802 acres of the 1,075 remaining acres that were formerly forestland in 1959.

Table 3 – 1959 Forestland Use In 2002

Land Use/Land Cover	1959 Forestland Classification in 2002	
	Acres	Percent
Residential	307.24	2.2%
Commercial	63.05	0.5%
Industrial	10.12	0.1%
Transportation	-	0%
Utilities	0.64	0.0%
Religious	0.14	0.0%
Government/Institution	1.44	0.0%
Recreational	-	0%
Cropland	102.79	0.7%
Farmstead	0.72	0.0%
Pasture/Brush	494.51	3.5%
Forest	12,904.58	92.3%
Water	91.22	0.7%
Mining/Extraction	2.89	0.0%
Total	13,979.34	100.0%

A total of only 1,075 acres of forest had changed to another land use/cover over this forty-three year period.



Residential

In 1959, Berlin Township had 297 acres of residential land use. That amount was 1.2% of the total land area of Berlin Township. By 2002 the number of acres being used for residential purposes increased to 1,627 acres {See Table 1}. Residential use accounted for 6.4% of the total land area of the Township at the end of the 43-year study period. Residential acreage gained between 1959 and 2002 came from several different land uses in 1959, including cropland, which made up the largest gain in residential acreage totaling 628 acres or 38.6%. Residential acreage was also added to by land that was previously forested in 1959 in the amount of 307 acres, which was 18.9% of the total. Another 15.8% of prior pasture/brush land from 1959 became used for residential purposes by 2002.

Commercial

Berlin Township had nearly 50 boarding homes at one time, many of which were still in operation in 1959. Many of the boarding houses were located in the Beach Lake area in northern Berlin Township. In 1959, Berlin Township had 304 acres of commercial land and by 2002 that number had increased to 422, a gain of 118 acres {see Table 1}. Of the land that was being used for commercial purposes in 2002, nearly

used land came primarily from cropland. A total of 108 acres of land being used as cropland in 1959 were converted to commercial use during the span of more than 40 years. This acreage was 25.5% of the total commercial acreage. Another 14.9% of the commercially used land in 2002 was previously forestland. The remaining came from other prior land uses with pasture/brush being the largest accounting for half of the remaining 9.7%.

Protected Agricultural Land

Berlin Township had 4,356 acres of land that were in the Agricultural Security Area Program in 2002. Also, Berlin Township has a total of approximately 188 acres of farmland that had perpetual easements by being enrolled in the Agricultural Conservation Easement Purchase Program. There are 10,033 acres in Berlin Township with a preferential assessment under the Clean and Green Program, which accounts for 41% of the taxable acreage within Berlin Township. These 10,033 acres reduce the assessed value of the township by \$13,486,300 or 6.7%.

Summary

The most notable change in the Township over the 43-year study period was the decrease of farming related activities. A total of 1,275 acres of cropland became pasture/brush land during this time. In 2002, forest covered 6% more of the township than in 1959 due mostly to the maturation of former pasture/brush. Over half of the pasture/brush (1,967 acres) became forestland.

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.

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

half of it was being used for commercial purposes in 1959 as well. The 118 acres of commercially