



COMPREHENSIVE FARMLAND PRESERVATION PLAN UPDATE DRAFT

*Green Township
Sussex County
June 29, 2023*



June 29, 2023 - DRAFT

COMPREHENSIVE FARMLAND PRESERVATION PLAN UPDATE

PREPARED BY



19 Boonton Avenue
Boonton, NJ 07005
PH: (973) 541-1010
tlc-nj.org

The Land Conservancy of New Jersey
David Epstein, President
Barbara Heskins Davis, PP, AICP, Vice President, Programs
Kenneth Fung, Senior GIS Manager
Linda Glosinski, Land Preservation Specialist
Planning Team:
Sarah Howe & Will Parker, Planning Fellows

The original document was appropriately signed and sealed
in accordance with Chapter 41, Title 13 of the State Board of
Professional Planners.

Barbara Heskins Davis, PP, AICP - NJ Professional Planner
(License No. 5926)

Date: _____

ACKNOWLEDGMENTS



19 Boonton Avenue
Boonton, NJ 07005
PH: (973) 541-1010
tlc-nj.org

The Land Conservancy of New Jersey acknowledges the following individuals and organizations for their help in providing information, guidance, and materials for the Green Township Comprehensive Farmland Preservation Plan Update. Their contributions have been instrumental in the creation of the Plan.

Green Township Committee:
Margaret “Peg” Phillips, Mayor
Virginia “Ginnie” Raffay, Deputy Mayor
James DeYoung
Bader Qarmout
Michael Rose

Mark Zschack, RMC, Clerk/Administrator
Patty DeClesis, Municipal Clerk

Agricultural Advisory Committee:
Louis Tomasso, Chair
Richard Vohden, Vice Chair
James Chirip
Patty DeClesis, Secretary

Sussex County Planning & Economic Development:
Autumn Sylvester and Maggie Faselt

State Agriculture Development Committee:
Steven Bruder, Thomas Allen, and David Zaback

The Green Township Comprehensive Farmland Preservation Plan Update was prepared with funding from the New Jersey State Agriculture Development Committee.

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Executive Summary

Green Township's rolling hillsides and quiet country lanes, dotted with historic houses and agricultural fields, offer Township residents a beautiful, scenic backdrop in a corner of the state only an hour from the New York metro area. Located at the southern tip of Sussex County, Green Township is within close proximity to Route 80, providing access to markets throughout the region.

Half of the town is assessed as farmland (5,011 acres) and more than half of this (2,681 acres) is in active agriculture use. Farming in Green is limited by its soils (there are 2,004 acres of prime agricultural soils in the town) and slopes - 38% (3,902 acres) of the town is located on slopes steeper than 15%.

In 2012 Green Township completed its Comprehensive Farmland Preservation Plan in order to become eligible for funding through the State Agriculture Development Committee's Planning Incentive Grant Program. It is completing this update in order to remain eligible for this state program so it may continue to preserve farms in the municipality. Since the completion of the 2012 Plan, three additional farms have been preserved, totaling 162 acres.

As of June 2023, there are 14 farms totaling 1,422 acres preserved in Green Township. The first farm was preserved in 1989. The State of New Jersey has contributed 42% of the total cost (\$3,048,814), Sussex County has provided \$4,036,996 (56%) and Green Township has contributed 2% of the funds needed (\$127,734) to protect these farms. The Township collects one and one-half cents through its Open Space Trust Fund to preserve farms and open space in the municipality - approximately \$65,000 per year.

Based on the state's minimum eligibility criteria for soils and tillable land, there are 34 farm assessed properties totaling 1,391 acres which are potentially eligible for farmland preservation, and are located within the County's Agriculture Development Area. Working with the county, state, and other partners, Green Township hopes to preserve another 500 acres over the next ten years.

Green Township's agricultural community and governing body leaders are committed to supporting efforts to permanently protect their farms.

Public Meetings

Two public meetings will be held on the Comprehensive Farmland Preservation Plan Update to share the draft Update with residents. The meetings will be included as part of the regularly scheduled meetings of the Township Committee and Land Use Board.

Once reviewed by Township officials and boards, the Plan will be approved by resolution by the Agriculture Advisory Committee and adopted by the Land Use Board as an Element of the Master Plan.

The meetings will be announced on the municipal website and the plan will be made available to the public by the Township on its website (www.greentwp.com).



Chapter 1.

Agricultural Land Base

A. Agricultural Landscape

The Township of Green has 5,011 acres of farm assessed land—49% of the town—devoted to agricultural or horticultural use, including cropland, pasture, woodland, and equine operations. In farm-assessed acreage, it ranks tenth in Sussex County. Much of the town’s landscape consists of farm fields and forest assessed as farmland. **(Map 1)**

Green Township is located in the southern part of Sussex County. At 16.31 square miles, it is bordered by Fredon Township, Andover Borough and Township, and Byram in Sussex County; and Frelinghuysen and Allamuchy Townships in Warren County.

Green Township spans two of New Jersey’s physiographic provinces. Most of the town is in the Ridge and Valley province (the Kittatinny Valley). Allamuchy Mountain on its southern edge is in the Highlands Region.

The bedrock of the Kittatinny Valley is comprised of Kittatinny Limestone, causing sinkholes and caves to be common. Martinsburg Shale is also found, predominately in the northwestern parts of Green. The valley supports the largest concentration of agricultural operations in Sussex County. This includes the hay and livestock farms and nursery operations in Green Township.

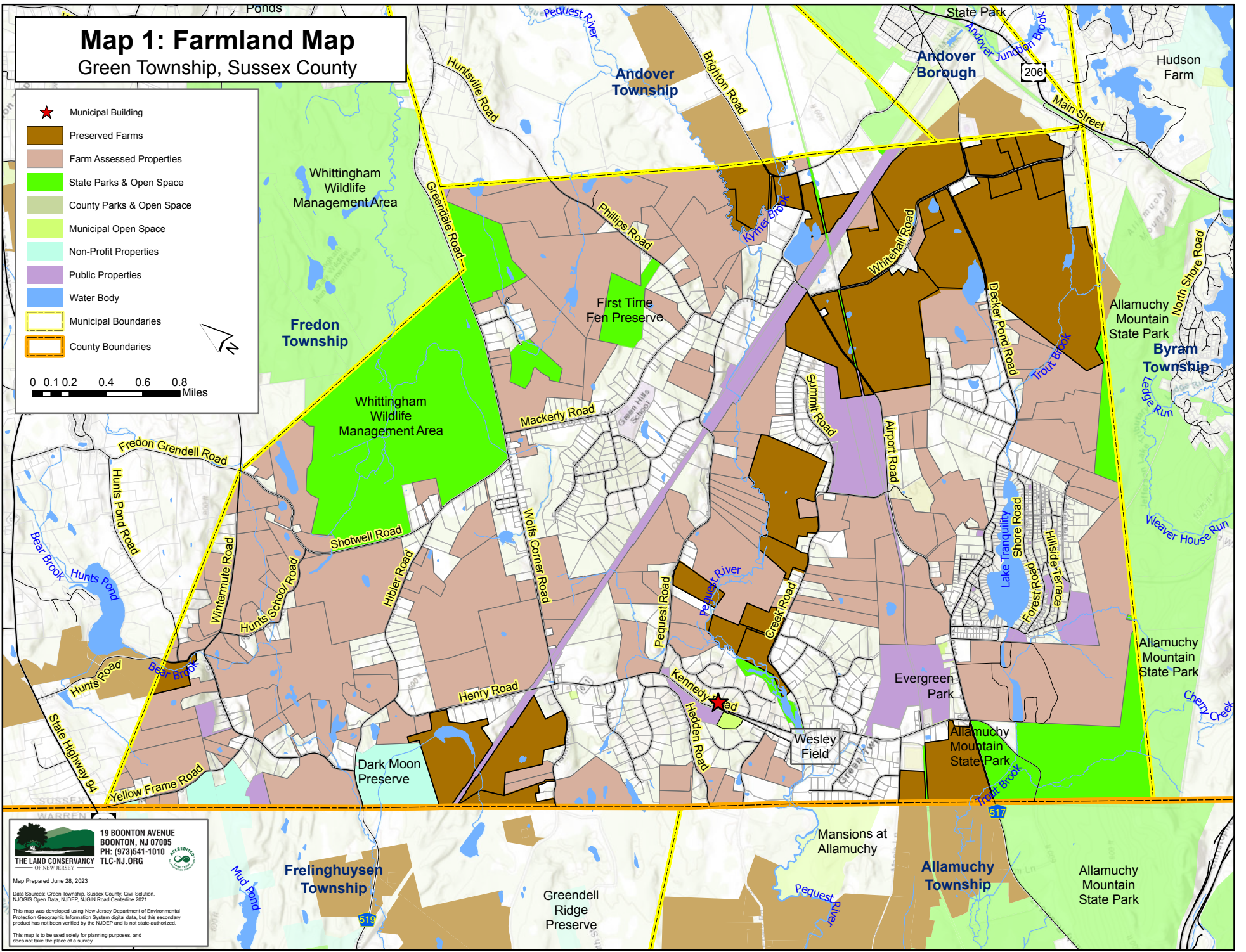
The Highlands Province consists of rocky terrain featuring steep

Map 1: Farmland Map

Green Township, Sussex County

- ★ Municipal Building
- Preserved Farms
- Farm Assessed Properties
- State Parks & Open Space
- County Parks & Open Space
- Municipal Open Space
- Non-Profit Properties
- Public Properties
- Water Body
- Municipal Boundaries
- County Boundaries

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19 BOONTON AVENUE
BOONTON, NJ 07005
PH: (973) 541-1010
TLC-NJ.ORG

THE LAND CONSERVANCY
 OF NEW JERSEY

Map Prepared June 28, 2023

Data Sources: Green Township, Sussex County, Civil Station, NJDEP Open Data, NJDEP, NJ Road Centerline 2021

This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by the NJDEP and is not state-authorized.

This map is to be used solely for planning purposes, and does not take the place of a survey.

Land Use / Land Cover: Green Township - 2015

Source: NJDEP Land Use / Land Cover 2015

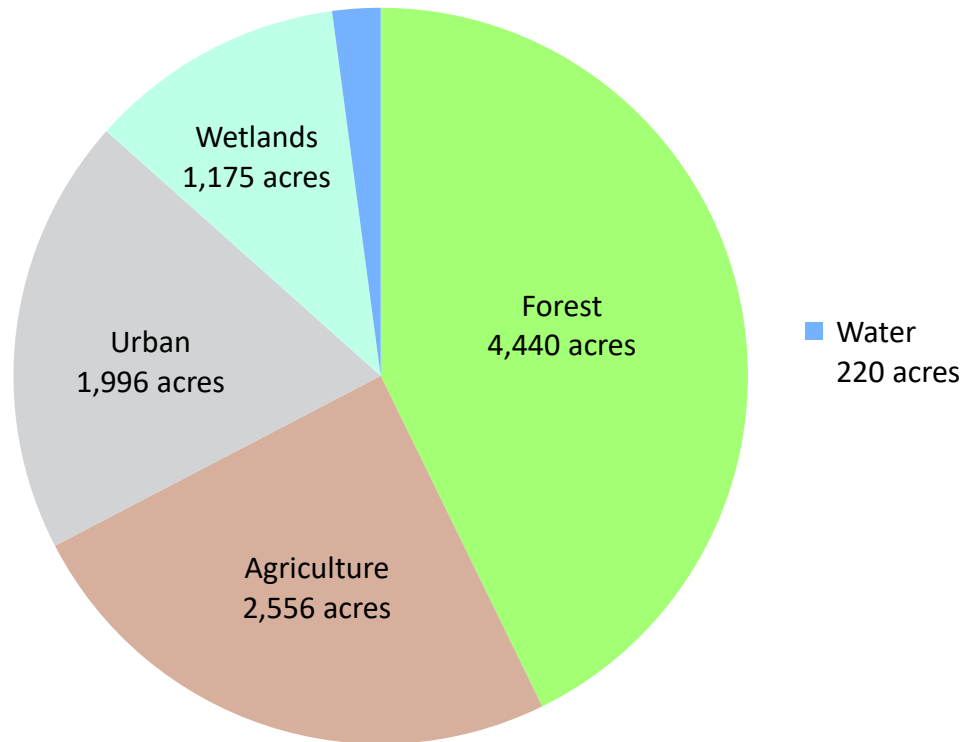


Figure 1. Land Cover Green Township

slopes, wetlands, and poorly drained soils; underlain by a granitic gneiss formation. It is a source of runoff into the Trout Brook watershed, and much of the town's water is dependent on this drainage.

According to 2015 Land Use/Land Cover (LU/LC) data from the New Jersey Department of Environmental Protection (NJDEP), 24.5% (2,556 acres) of the Township is dedicated to land in agricultural use, a higher percentage than the county-wide figure of 10%. (**Table 1**, **Figure 1** and **Figure 2**) Green also has a higher percentage of urban land (19%) than the County wide figure of 16%. The percent of lands in agricultural use is substantially less than the farm-assessed acreage cited above because farm-assessed

property may also include some forested lands, which make up 43% of Green Township, the largest land use category.

Table 1. 2015 Land Use/Land Cover, Green Township and Sussex County				
	Green Township		Sussex County	
	Acres	%	Acres	%
Agriculture	2,556	25%	34,629	10%
Barren	42	0.4%	2,125	1%
Forest	4,440	43%	191,119	56%
Urban	1,996	19%	54,837	16%
Water	220	2%	13,055	4%
Wetland	1,175	11%	46,793	14%
Total	10,429	100%	342,557	100%
Source: NJDEP 2015 Land Use/Land Cover				

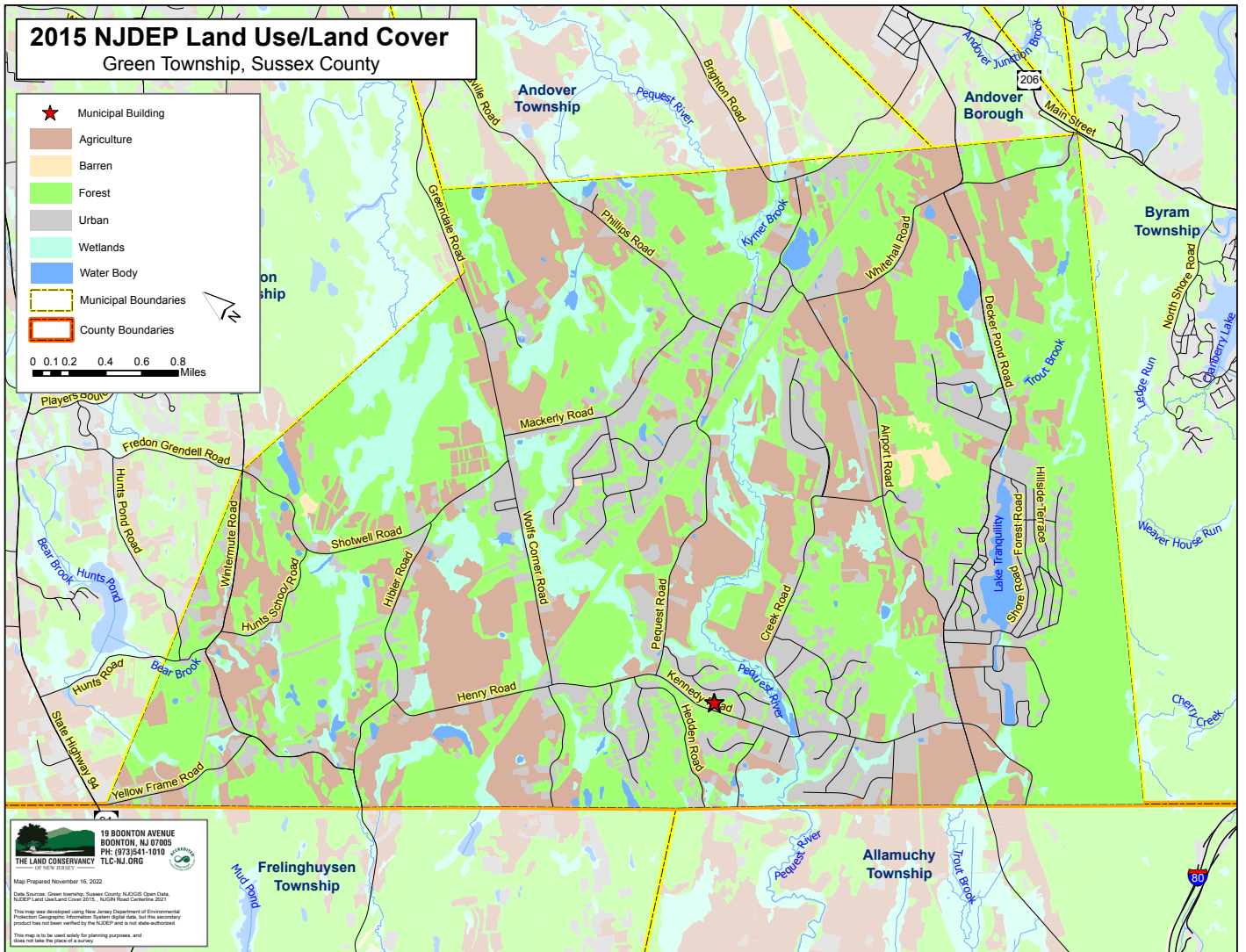


Figure 2. Land Use Land Cover Map, Green Township

Of the 5,011 acres assessed as farmland in Green Township, more than half are woodlands and/or wetlands. Other major uses include harvested cropland and permanent pasture. (Figure 3)

B. Soils

Areas of high-quality farmland soil are largely in agricultural use, and they make up a substantial share of the town's actively farmed areas.

Soils are classified by the United States Department of Agriculture's (USDA) Natural Resource Conservation Service

(NRCS) in series, which share basic characteristics such as bedrock material from which they were formed, chemical composition, and drainage. Within these broader series are specific soil types which are differentiated from one another by slope, stoniness, and frequency of flooding. The NRCS classifies soil types as prime, of statewide importance, or unique based on their potential for agricultural productivity.

Table 2 identifies the major NRCS soil types in Green Township, and **Map 2** illustrates their location.

Farm Assessed Land (Acres) Green Township - 2018

Source: NJ Farmland Tax Assessment 2018

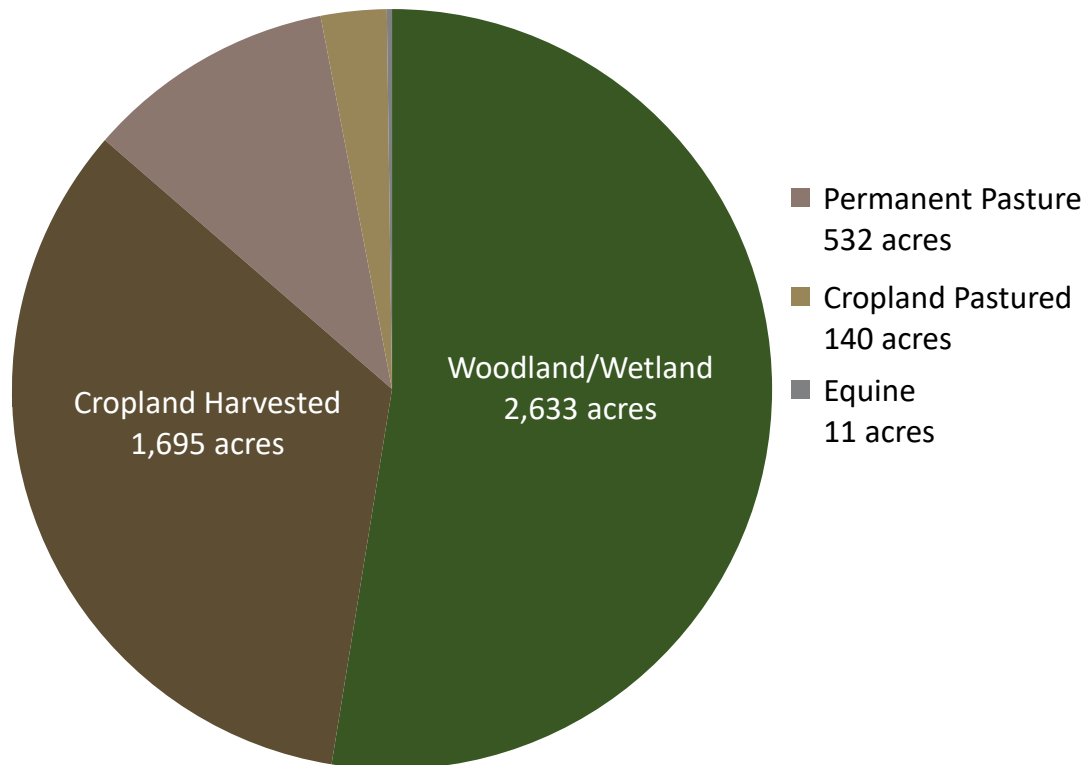


Figure 3. Farm Assessed Land, Green Township

Prime farmland soils rest on land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. They have the quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed according to acceptable farming methods. Prime soils flood infrequently and are not excessively erodible or saturated with water for a long period of time.








There are 2,004 acres of prime farmland soils in Green Township, of which 1,179 are in active agricultural use. 44% of all active agriculture in the Township exists on prime farmland soil. Accounting for 19% of the total soils in the Township, these soils have been classified as

belonging to the *Hazen-Paulins Kill* (Hdx), which can be used for hay, corn, small grains, vegetables, fruit, and silage. A small section also belongs to the *Riverhead* (Rkr) series.


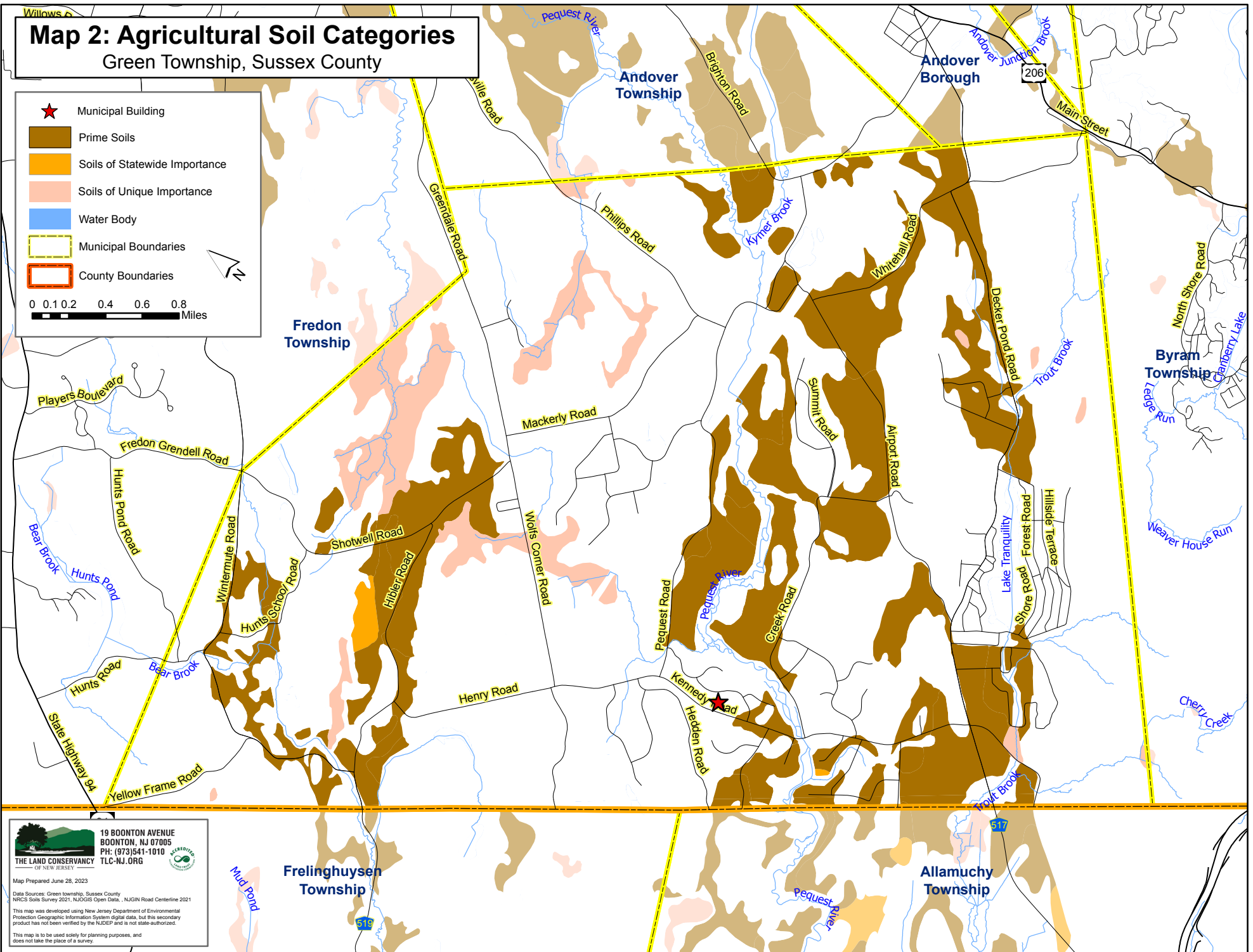
Farmland soils of statewide importance produce high crop yields when treated and managed according to acceptable farming methods. However, their yields are rarely as high as those of prime soils. There are 29 acres of soils of statewide importance in Green Township, of which 0.58 acres are in agricultural use. The Township's soils of statewide importance belong to the *Paulins Kill-Hazen* (Pdu) series and are generally adjacent to the prime farmland soils but on land with more slope.


Map 2: Agricultural Soil Categories

Green Township, Sussex County

-  Municipal Building
-  Prime Soils
-  Soils of Statewide Importance
-  Soils of Unique Importance
-  Water Body
-  Municipal Boundaries
-  County Boundaries

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 19 BOONTON AVENUE
BOONTON, NJ 07005
PH: (973)541-1010
TLC-NJ.ORG

Map Prepared June 28, 2023

Data Sources: Green Township, Sussex County
NRCS Soils Survey 2011, NJDCIS Open Data, NJGIN Road Centerline 2021

This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by the NJDEP and is not state-authorized.

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Table 2. Soil Types - Green Township

Code	Name	Acres
HdxbBb	Hazen-Paulins Kill complex, 3 to 8 percent slopes, very stony	1,201
HdxbAb	Hazen-Paulins Kill complex, 0 to 3 percent slopes, very stony	802
RkrB	Riverhead sandy loam, 3 to 8 percent slopes	0
Prime Farmland		2,004
PduaCb	Paulins Kill-Hazen complex, 8 to 15 percent slopes, very stony	29
Farmland of Statewide Importance		29
CatbA	Catden muck, 0 to 2 percent slopes	432
Farmland of Unique Importance		432
RnfD	Rock outcrop-Farmington-Galway complex, 15 to 35 percent slopes	2,708
ChkE	Chatfield-Hollis-Rock outcrop complex, New Jersey Highlands, 35 to 60 percent slopes	27
PduoEb	Paulins Kill-Otisville complex, 25 to 60 percent slopes, very stony	244
AhcBc	Alden mucky silt loam, gneiss till substratum, 0 to 8 percent slopes, extremely stony	150
RnfC	Rock outcrop-Farmington-Galway complex, 8 to 15 percent slopes	1,121
RokD	Rockaway-Chatfield-Rock outcrop complex, 15 to 35 percent slopes	313
USFARC	Urban land-Farmington-Rock outcrop complex, 0 to 15 percent slopes	154
FdwB	Farmington-Wassaic-Rock outcrop complex, 0 to 8 percent slopes	288
FrdAb	Fredon-Halsey complex, 0 to 3 percent slopes, very stony	285
RoefCc	Rockaway loam, thin fragipan, 8 to 15 percent slopes, extremely stony	78
ChkC	Chatfield-Hollis-Rock outcrop complex, 0 to 15 percent slopes	179
UdaB	Udorthents, 0 to 8 percent slopes, smoothed	94
USHBPB	Urban land-Hazen-Paulins Kill complex, 0 to 8 percent slopes	53
NauEg	Nassau-Manlius very channery silt loams, 35 to 60 percent slopes, very rocky	19
NauD	Nassau-Manlius very channery silt loams, 15 to 35 percent slopes, rocky	320
WATER	Water	116
HhmBc	Hibernia loam, 0 to 8 percent slopes, extremely stony	104
NauB	Nassau-Manlius very channery silt loams, 0 to 8 percent slopes, rocky	177
FaxC	Farmington-Rock outcrop complex, 0 to 15 percent slopes	185
PHG	Pits, sand and gravel	42
VepBc	Venango silt loam, 0 to 8 percent slopes, extremely stony	21
RoefDc	Rockaway loam, thin fragipan, 15 to 35 percent slopes, extremely stony	191
NauC	Nassau-Manlius very channery silt loams, 8 to 15 percent slopes, rocky	505
AhbBc	Alden silt loam, 0 to 8 percent slopes, extremely stony	5

Table 2. Soil Types - Green Township		
Code	Name	Acres
RooB	Rockaway-Urban land complex, thin fragipans, 0 to 8 percent slopes	8
USFAWB	Urban land-Farmington-Wassaic complex, 0 to 8 percent slopes	34
FmhAs	Fluvaquents, loamy, 0 to 3 percent slopes, occasionally flooded	276
RooD	Rockaway-Urban land complex, thin fragipans, 0 to 25 percent slopes	80
RooC	Rockaway-Urban land complex, thin fragipans, 0 to 15 percent slopes	37
Not Prime Farmland		7,812
Total		10,277
Source: Natural Resources Conservation Service Soil Data (2022)		

Farmland of Unique Importance

exhibits specific qualities that may be favorable to the production of specialized crops. There are 432 acres of soils of unique importance in Green Township, of which 2.6 acres are in agricultural use. Accounting for 4% of the Township's soils, these unique soils belong to the *Catden Muck* (Cat) series. These soils are generally used for woodland, and occasionally for pasture.

The following major soil series (non-prime farmland) are also found in Green Township:

- Rock outcrop-Farmington-Galway (Rnf) – 3,829 acres, 37% of Green
- Nassau-Manlius (Nau) – 1,020 acres, 10%
- Rockaway (Roe) – 394 acres, 4%
- Farmington (Fax) – 339 acres, 3%

The total land in active agricultural use (2,681 acres) represents 26% of Green. (**Table 3**) Note that active agriculture includes the following land use types: agricultural wetlands, cropland and pastureland, former agricultural wetland, orchards/vineyards/nurseries, and other agriculture.

Much of Green Township's may be limited for agricultural use by slope. Approximately 38% of Township land (3,902 acres) is located on slopes steeper than 15%. These soils tend to have a high risk of erosion, require management to control runoff and erosion, and have some equipment limitations.

C. Irrigated Land & Water Sources

Irrigation is not common in Green Township, but surface waters generally provide water for irrigation when it is used. Groundwater is generally preferable to surface waters because it contains less sediment and particulates that may clog irrigation pipes and damage crops, but surface waters are often easier to access. Most of the crops that are grown in the Township, such as hay, corn, and soybeans do not require irrigation or are not cost effective to irrigate, even during drought periods, due to the large amount of land they occupy. The Township had 114 acres of vegetables in 2018, with no acres in irrigation. The most substantial irrigation recorded was 13 acres of vegetables irrigated in 2005. (**Table 4**) Those 13

Table 3. Agricultural Soils and Land in Active Agriculture, Green Township

Soil Classification	Acres	% of Total	Acres in Active Agriculture	% of Soil Type in Active Agriculture	% of Acres in Active Agriculture
Prime Farmland Soil	2,004	19%	1,179	59%	44%
Soils with Statewide Importance	29	0.3%	0.58	2%	0.02%
Soils with Unique Importance	432	4%	2.63	1%	0.10%
Not Prime Farmland	7,812	76%	1,499	19%	56%
Total	10,277	100%	2,681*	26%	100%

Source: NRCS Soil Data Access 2022; 2015 NJDEP Land Use/Land Cover data

*statistics may differ within this report due to the inclusion of agricultural wetlands as active agriculture in this chart.

irrigated acres made up only 6% of Sussex County’s irrigated land. (Table 5)

The Highland Council’s *Net Water Availability Map (Figure 4)* shows that most of Green Township is in an area of mild net water availability, except for the northwest corner of the town. Of the three main Highlands subwatersheds within Green Township, one is calculated to be in deficit. Where net water availability is negative, existing uses are exceeding sustainable supplies and the subwatershed is deemed to be a current deficit area. In addition, maintenance of stream flows within any HUC14 subwatersheds upstream of a current deficit area is necessary to avoid further impairing the ecological health of the stream.

Green Township contains 2,414 acres of prime groundwater recharge areas, making up 23% of the town. 8,614 acres, or 83% of Green, is a groundwater recharge area.

Table 4. Irrigated Land (acres), Green Township

	2000	2005	2010	2015	2018
Field Crops	0	13	0	0	0
Fruit	0	0	0	0	2
Ornamental	0	0	0	0	0
Vegetables	8	0	0	0	0
Total	8	13	0	0	2

Source: Farmland Assessments

Table 5. Irrigated Land (acres), Green Township and Sussex County

	2000	2005	2010	2015	2018
Green Township	8	13	0	0	2
Sussex County	149	235	231	183	124
% of County	5%	6%	0%	0%	2%

Source: Farmland Assessments

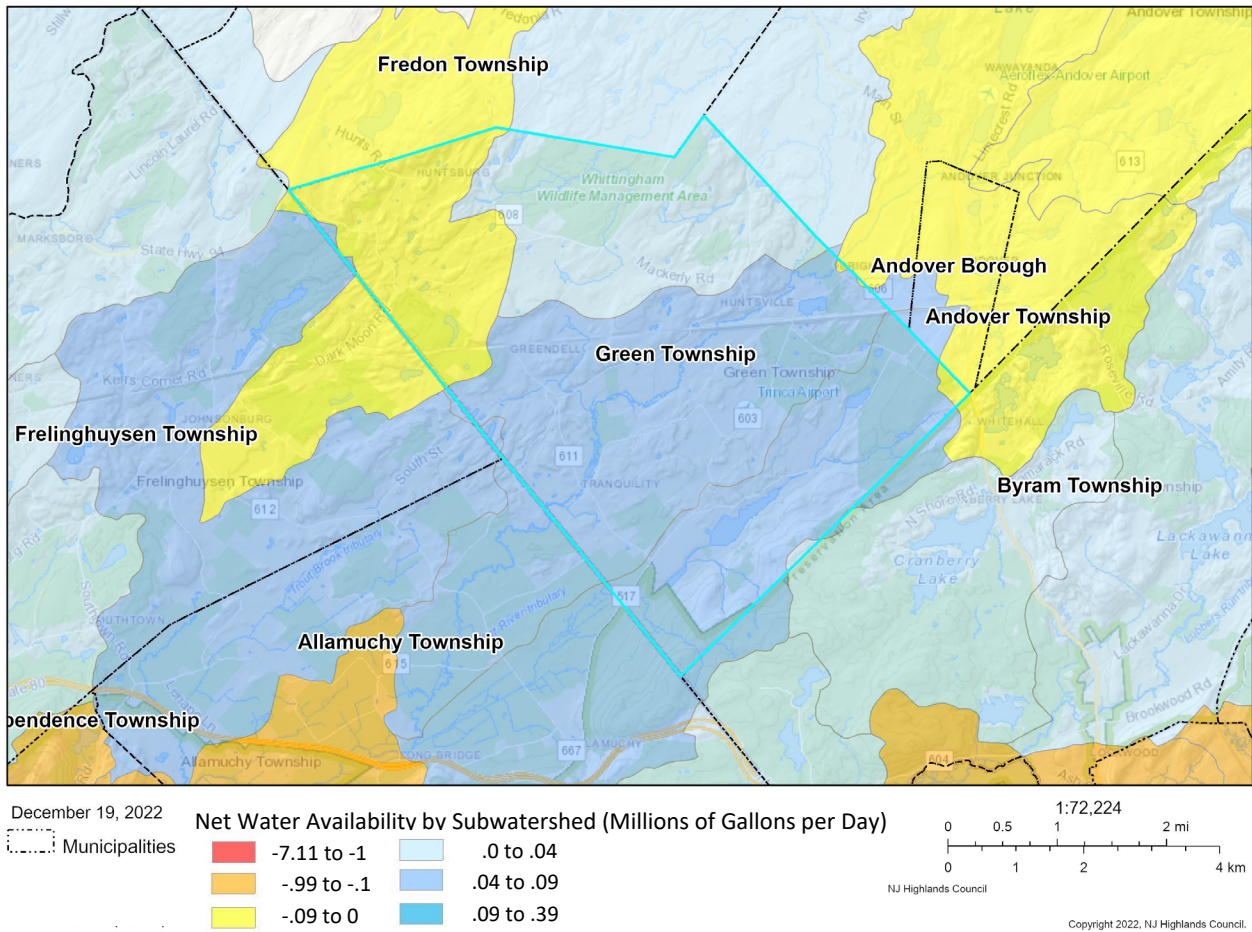


Figure 4. Highlands Council Net Water Availability, Green Township

D. Farmland Trends and Statistics

Green Township has 181 farm-assessed parcels as of 2023, with an average farm parcel size of 29 acres and a median parcel size of 15 acres. The largest farm parcel in Green is 350 acres.

Figure 5 shows the breakdown of farm parcel sizes in the Township based on the 2023 tax assessment data.

In Sussex County over the three decades from 1987 to 2017, the number of farms increased somewhat while the acreage of farmland decreased by 9%—meaning the average farm size decreased from 101 acres to 59. (**Figure 6**) The average farm size increased, however, from 2007

Farm Parcels by Acreage, Green Township

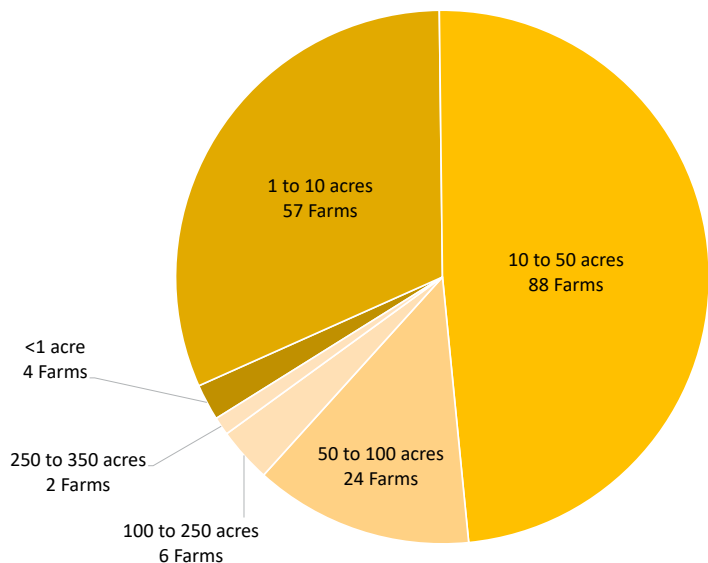


Figure 5. Farm Parcels by Acreage, Green Township

to 2012. Average farm size is also likely increasing in Green Township as older farmers sell their farms and they are consolidated.

The loss of farm acreage has not been evenly distributed across towns or categories of farmland. In Green Township, the total amount of farm assessed land in 2018 was 5,011 acres—an 11% decline from 2000, compared to Sussex County’s 10% decline over the same period. Green’s 4% decline in acreage was unevenly distributed across farmland uses: **(Figure 7)**

- Harvested cropland decreased 22%
- Pastured cropland decreased 22%
- Permanent pasture decreased 23%
- Woodland increased 3%
- Equine use increased 267%

Sussex County Farm Size, 1987-2017

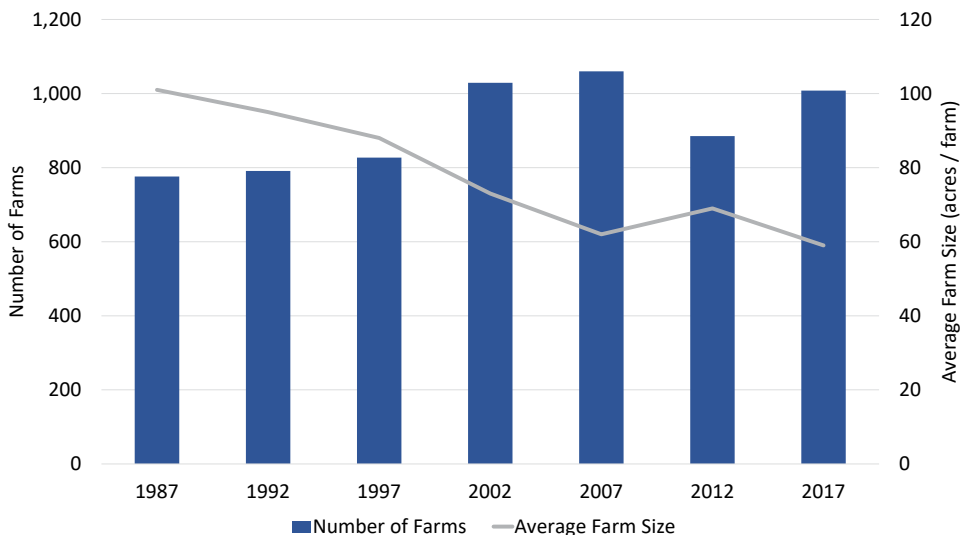


Figure 6. Sussex County Farm Size, 1987-2017

Assessed Farmland in Green Township, 2000-2018

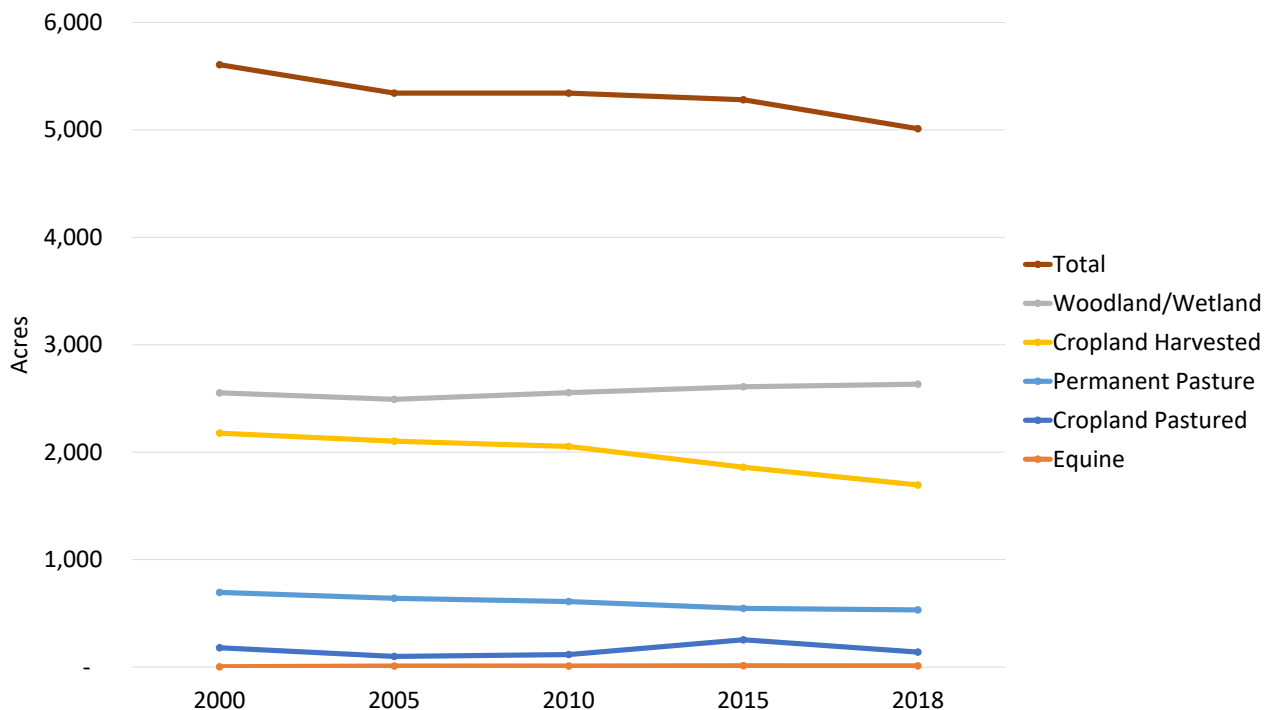


Figure 7. Assessed Farmland in Green Township, 2000-2018

Active agricultural area—including harvested cropland, pastured cropland, and permanent pasture, declined even faster than overall farm assessed acreage, with 22% decreases for both Green Township and Sussex County. In the county, the argest losses were in cropland pastured, whereas the town showed larger losses in permanent pasture. **(Table 6)**

In Green Township, the only categories of farmland to increase in acreage between 2000 and 2018 were woodland and equine. This increase in woodland may come from cropland left abandoned or fallow for extended periods of time, which undergoes ecological succession into forested land.

The increasing costs of farming and farmland in the state and the county may compel local farmers to produce less land-intensive products and leave parts of their farms fallow.

Rising property taxes and the USDA's forest stewardship incentives have also encouraged more landowners of forested properties to obtain farmland tax assessment, thereby increasing the amount of forested farmland in the County for tax purposes without necessarily increasing the actual amount of forest.

Table 6. Farmland Assessment, Green Township and Sussex County (2000-2018) (acres)

	Cropland Harvested		Cropland Pastured		Permanent Pasture		Total Active Agriculture	
	Green Township	Sussex County	Green Township	Sussex County	Green Township	Sussex County	Green Township	Sussex County
2000	2,177	32,805	180	5,910	695	16,218	3,052	54,933
2005	2,103	29,242	99	5,696	640	14,899	2,842	49,837
2010	2,053	29,511	117	4,685	609	14,247	2,779	48,443
2015	1,860	27,617	254	4,206	546	13,645	2,660	45,468
2018	1,695	27,497	140	3,270	532	11,896	2,367	42,663
% Change	-22%	-16%	-22%	-45%	-23%	-27%	-22%	-22%

Source: Farmland Assessments



Rock Ridge Farm

Chapter 2.

Agricultural Industry

A. Trends in Market Value of Agricultural Products Sold

Agriculture in Sussex County is decreasing in annual sales with substantial year-to-year variation. Crop sales increasingly outperform livestock sales. As of 2017, Sussex County ranked 15th in the state in agricultural sales. (**Table 7**)

As of 2017, annual crop sales of \$10.8 million make up 59% of the total agricultural sales (\$18.2 million) in Sussex County. The remaining 41% includes \$7.3 million in livestock sales. Since 2002, crop sales have increased by 34% while livestock sales have increased by 11%.

Table 7. Agricultural Sales by County, 2017

County	Sales (\$1,000s)
Cumberland	\$212,649
Atlantic	\$120,673
Gloucester	\$102,454
Salem	\$102,342
Burlington	\$98,580
Warren	\$93,217
Hunterdon	\$92,246
Monmouth	\$80,633
Middlesex	\$38,359
Mercer	\$24,981
Morris	\$24,824
Ocean	\$24,640
Camden	\$22,893
Somerset	\$20,118
Sussex	\$18,226
Cape May	\$9,838
Passaic	\$2,863

Both categories increased substantially from 2002 to 2007, and have been decreasing since that year. **(Figure 8)** Sussex County ranks 14th in New Jersey based on the percent change in their average sales per farm from 2012 to 2017, with a 14% decrease. **(Table 8)** This may be partly explained by the shrinking size of the average farm, as discussed in **Chapter 1.**

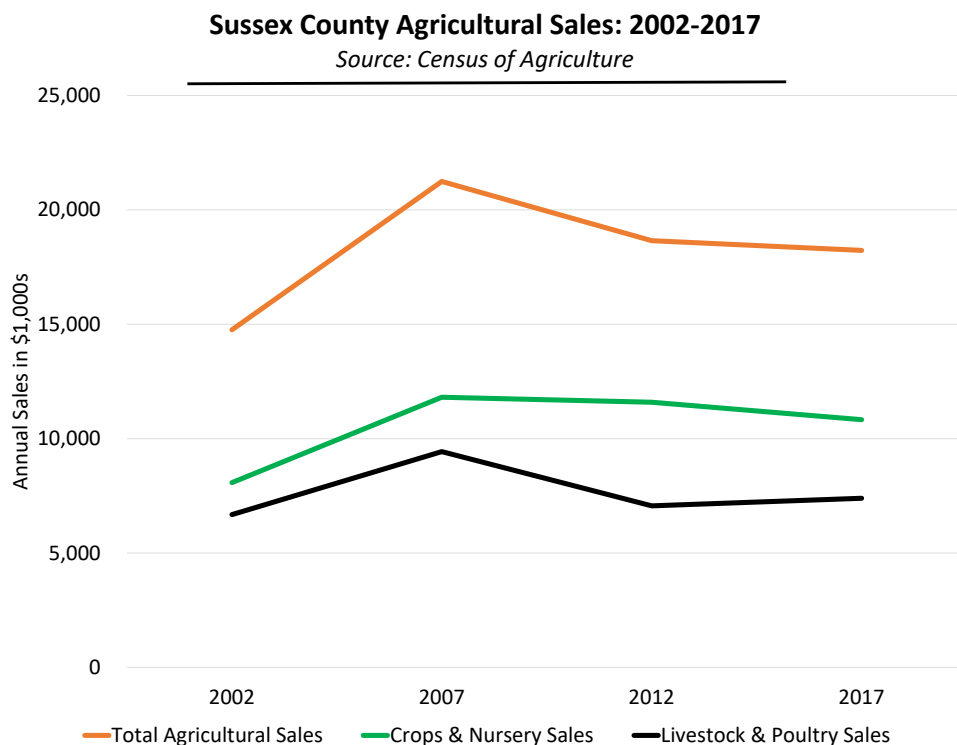


Figure 8. Agricultural Sales, Sussex County, 2002-2017

Of the \$7.3 million in annual livestock sales in Sussex County as of 2017, \$4.4 million come from the sale of dairy. There are 12 dairy farms in the County. Only Salem and Warren Counties have more dairy operations than Sussex, and only Salem and Gloucester produce more dairy sales annually. Though it has declined from \$4.6 million in sales at 29 farms in 2002, the dairy industry has held on stronger in Sussex County than other areas of the state.

As of 2017, the other major livestock sectors in Sussex County, as measured by annual sales, are cattle and calves (\$1.2 million), horses (\$0.6 million), poultry and eggs (\$0.5 million), and sheep and goats (\$0.2 million).

Table 8. Average Sales per Farm by New Jersey Counties, 2012-2017				
Rank	County	2012	2017	% Change
1	Ocean	\$64,885	\$94,769	46.06%
2	Cumberland	\$292,216	\$379,730	29.95%
3	Camden	\$91,528	\$116,210	26.97%
4	Hunterdon	\$46,445	\$57,510	23.82%
5	Middlesex	\$147,733	\$176,772	19.66%
6	Gloucester	\$150,154	\$176,644	17.64%
7	Cape May	\$52,810	\$59,988	13.59%
8	Mercer	\$72,534	\$77,341	6.63%
9	Salem	\$135,749	\$131,040	-3.47%
10	Monmouth	\$102,565	\$96,221	-6.19%
11	Burlington	\$120,390	\$107,738	-10.51%
12	Warren	\$116,333	\$101,543	-12.71%
13	Atlantic	\$312,040	\$268,163	-14.06%
14	Sussex	\$21,078	\$18,081	-14.22%
15	Somerset	\$58,016	\$44,508	-23.28%
16	Morris	\$77,560	\$59,389	-23.43%
17	Passaic	\$44,045	\$32,168	-26.97%

Source: U.S. Census of Agriculture 2012, 2017

Sussex County Crop Sales: 2002-2017

Source: Census of Agriculture

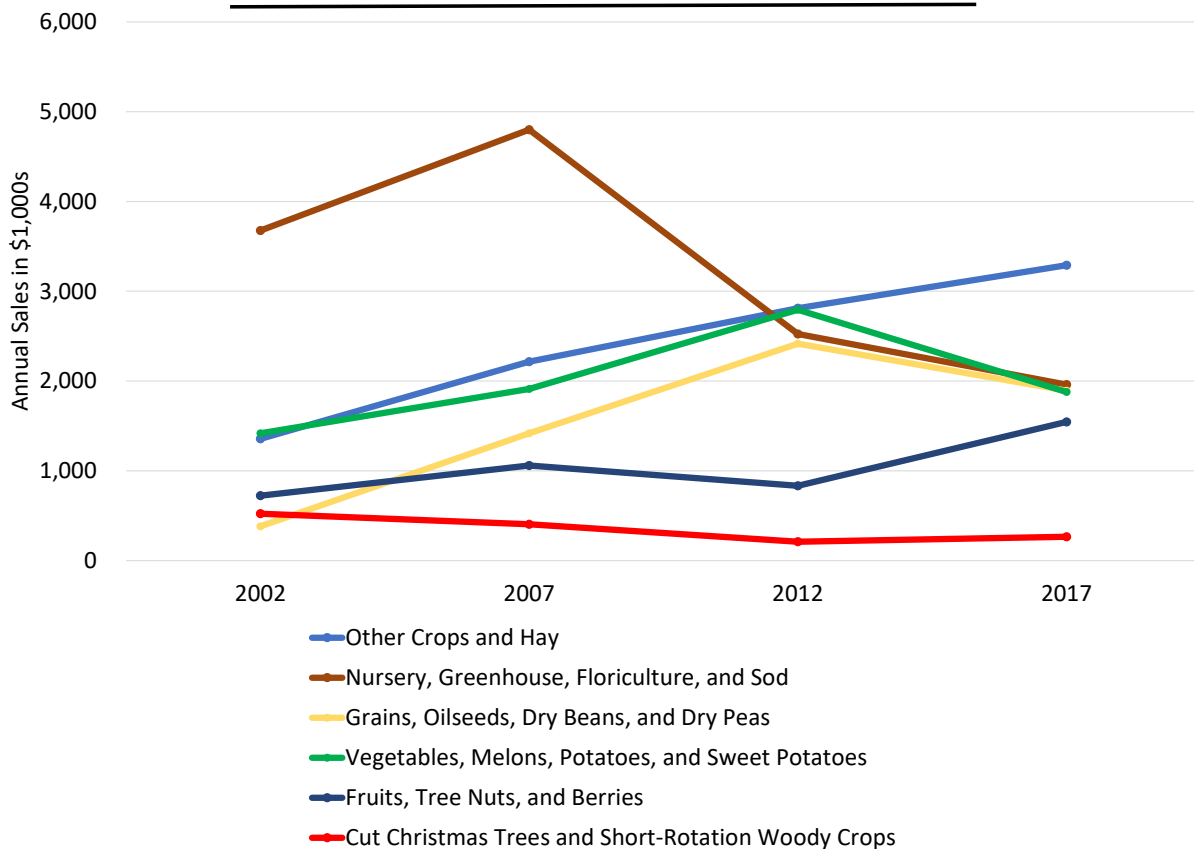


Figure 9. Crop Sales, Sussex County, 2002-2017

Since 2002, there have been minor increases in the sales of cattle and calves and horses. Sales of poultry and eggs, along with sheep and goats, have increased substantially. Sales of hogs and pigs have declined sharply, and dairy sales, have decreased slightly.

Of the \$10.8 million in annual crop sales in Sussex County, the largest share (\$3.2 million) comes from other crops and hay. (Full category names are shown in **Figure 9**) Sales from this category have grown by 143% since 2002. As of 2017, the next highest crop sales categories were nursery, grains, and vegetables.

Nursery sales increased substantially from 2002 to 2007, but then began to decrease, making for an overall

drop of 47% since 2002. Grain sales have increased almost 400% since 2002, despite decreasing from 2012 to 2017. Vegetable sales, similarly, increased from 2002 to 2012 and subsequently decreased, making for an overall increase of 32% since 2002. Fruit sales have increased by 114%, while Christmas trees sales have decreased by 49%. All categories experience substantial volatility, with regular decreases and increases within 5-year periods over 25%.

These figures may not fully represent the value of crops grown in Sussex County. For example, some grains such as corn are often fed directly to livestock on the farm where they are grown, and is not included in sales figures.

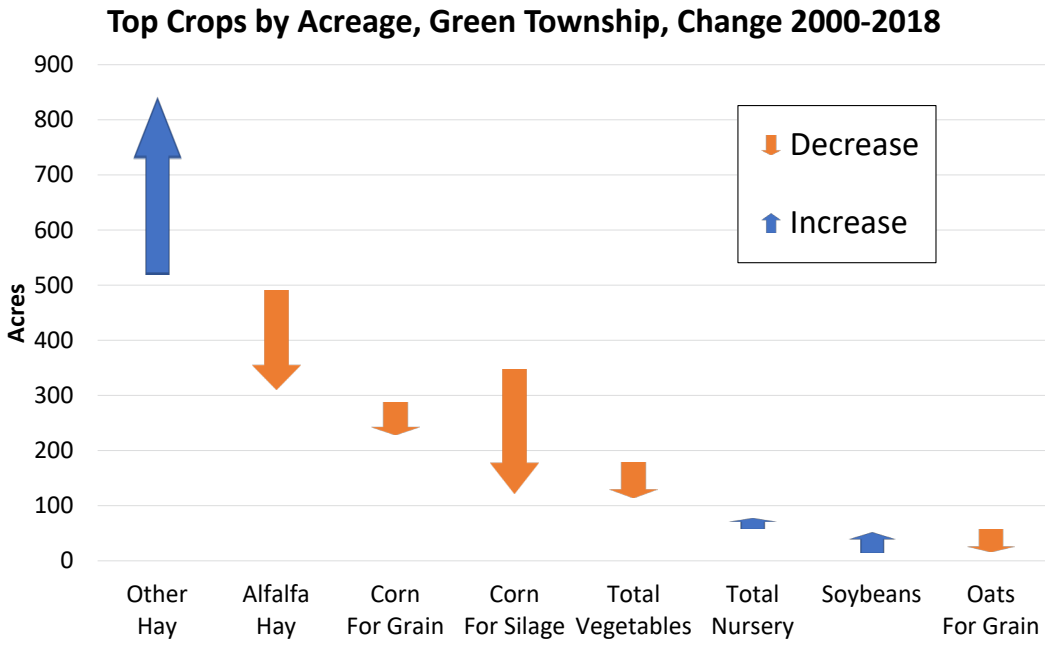


Figure 10. Top Crops by Acreage, Green Township, Change 2000-2018

most crops, as measured by the number of acres associated with their production, declined during the period from 2000 to 2018. (Figure 10 and Figure 11) The largest decrease was in corn for silage, which lost 224 acres. The highest percentage decrease was in oats for grain, which lost 70%

B. Agricultural Production Trends

The general decrease in agricultural acreage from 2000 to 2018 in Green Township, as discussed in Chapter 1, fell disproportionately on active agricultural areas while woodland acres under farm assessment remained stable. The loss of active agricultural acreage was also distributed unevenly across specific crops, with some crops increasing by up to 200% while others decreased by as much as 70%. Production of

of its acreage. Crops which increased in production include soybeans, hay other than alfalfa, nursery products, cover crops, and fruit. Hay other than alfalfa (“other hay”) increased by 322 acres, a change greater than the decrease in corn for silage.

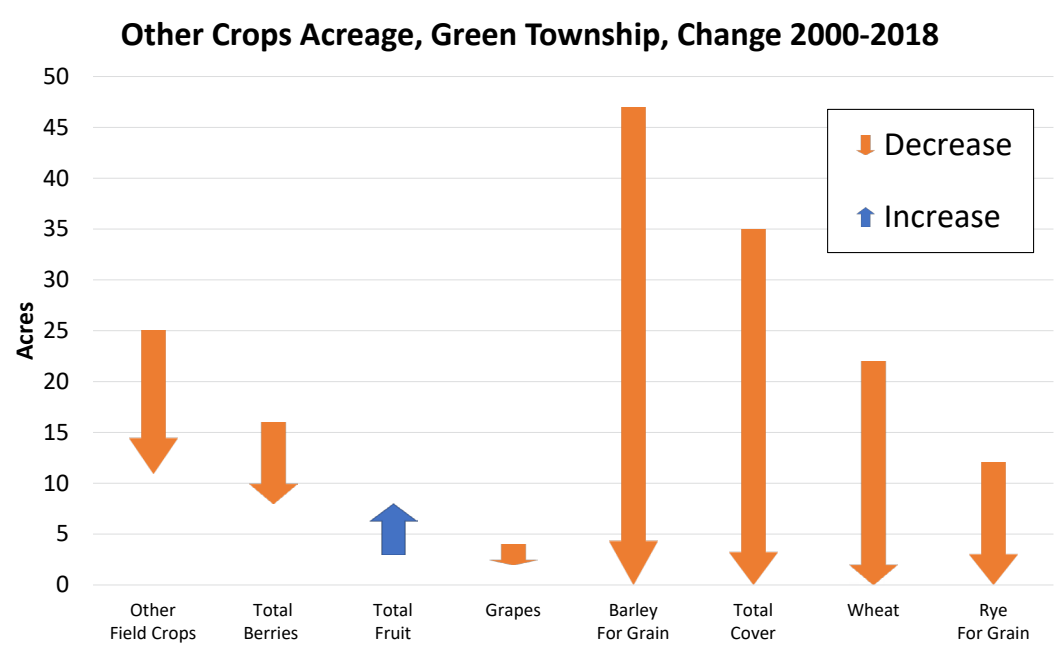
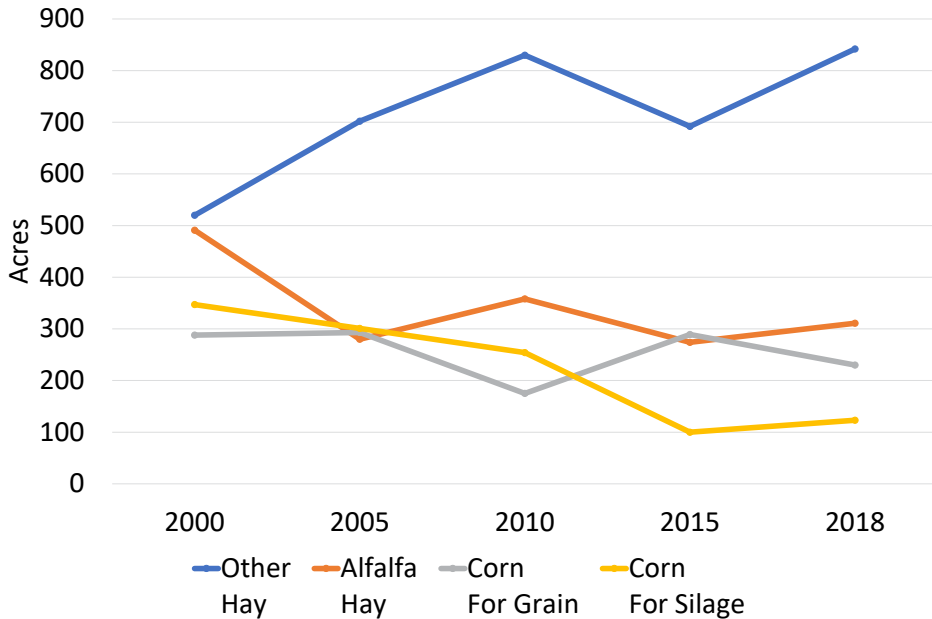


Figure 11. Other Crops by Acreage, Green Township, 2000-2018

Top 4 Crops in 2018, Green Township, Trend 2000-2018



with mature dairy cows decreasing by 60% and young dairy decreasing by 69%. Major increases occurred in the number of meat and egg chickens, and beef cattle, with meat and egg chickens each increasing by more than 2,000 chickens. A minor decrease occurred in the number of equine animals and goats, along with minor increases in the number of sheep, turkeys, and swine. The number of beehives, not shown

Figure 12. Top 4 Crops in 2018, Green Township, 2000-2018

The four top crops by acreage showed differing trends between 2000 and 2018. (Figure 12) While acres of hay other than alfalfa increased overall, the other three top crops trended downwards. There has been volatility, with each crop showing some periods of increases and some of decreases.

in any figure, decreased over the same period from 28 to 12.

The kinds of livestock raised in Green Township also changed between 2000 and 2018. (Figure 13) Decreases occurred in the number of dairy cows and ducks,

The number of animals in the top four livestock categories has also fluctuated. (Figure 14)

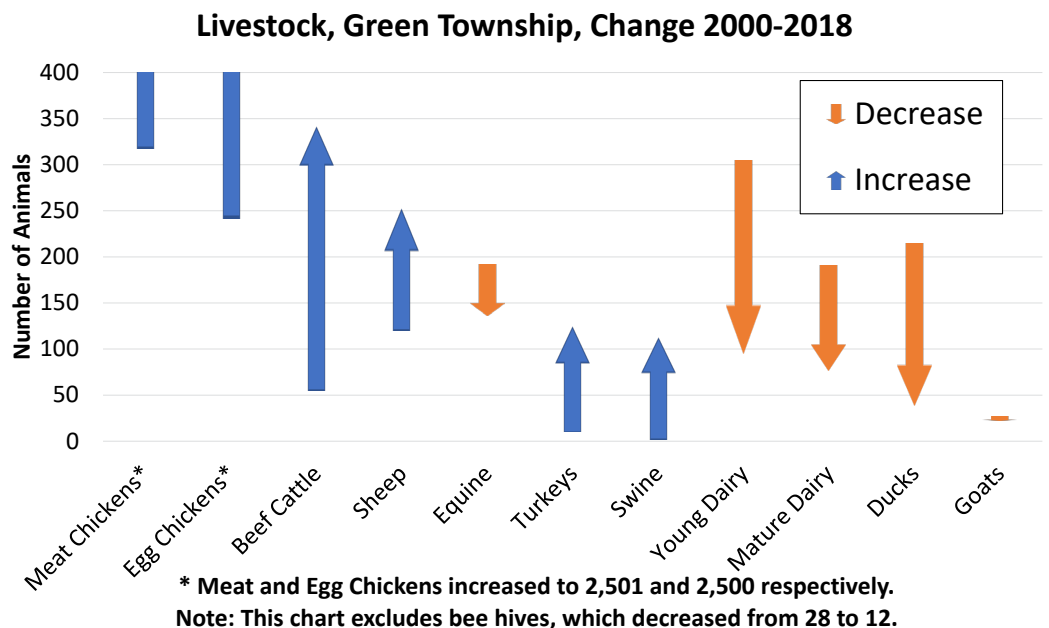


Figure 13. Livestock, Green Township, Change 2000-2018

Top 4 Livestock in 2018, Green Township, Trend 2000-2018

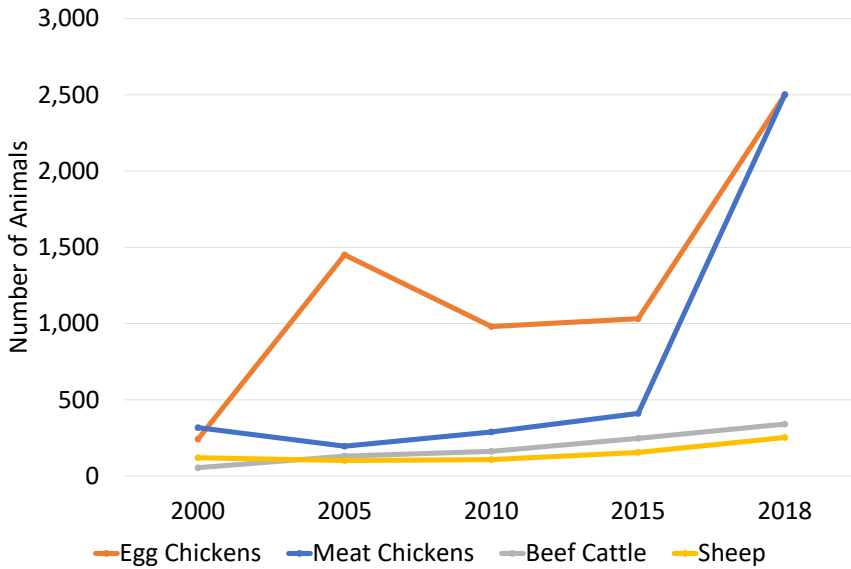


Figure 14. Top 4 Livestock in 2018, Green Township, 2000-2018

The number of egg chickens is particularly volatile, rising substantially until 2005 and subsequently decreasing then increasing again to become the largest category of livestock in 2018. The number of meat chickens, meanwhile, decreased before 2005 and remained low until growing rapidly between 2015 and 2018. The number of beef cattle and sheep has remained more consistent, with gradual increases and decreases generally trending slightly upward from 2000 to 2018.

Sussex County's top crop trends differ from those in Green. Where Green is dominated by hay other than alfalfa and alfalfa hay, Sussex County is dominated by corn for grain and silage. While corn for silage has

decreased in both Green and Sussex, corn for grain has increased in Sussex but decreased slightly in Green. (Figure 15)

While Green has experienced an increase in livestock inventory, Sussex County has similarly shown an 11% increase between 2002 and 2017. This has occurred concurrently with a decrease in livestock sales due to a decrease in larger animals such as milk cows, while the number of small animals like chickens increases. In Sussex County, as in Green, the top livestock category has become egg chickens. (Figure 16)

An inventory of meat chickens is not available at the county level, but sales figures show that approximately 10,000 meat chickens were sold in Sussex County in 2018.

Crop Trends in Sussex County, 2002-2017

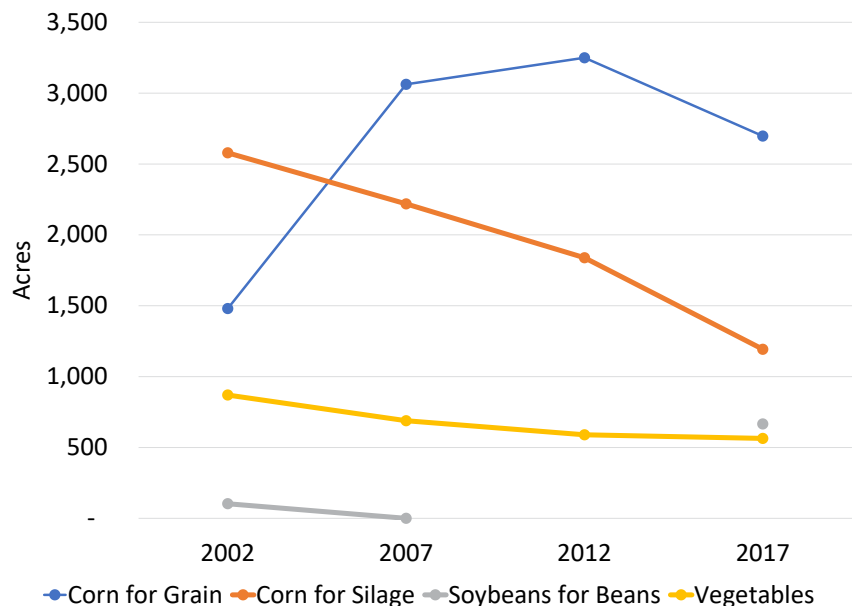


Figure 15. Crop Trends in Sussex County, 2002-2017

C. Agricultural Support Services and Related Industries

Accessing the goods and services required to support farming can be a challenge in Green. Agricultural support services in Sussex County and Green Township include tractor sales and supply stores, feed vendors, and hardware/equipment retailers. Local retailers include Tractor Supply Company in Sussex and feed vendors such as Tickner’s in Hackettstown. Farmers take advantage of retailers, large animal veterinarians, and feed suppliers located outside of the county and in eastern Pennsylvania. A comprehensive list of farm related businesses, organizations, and services in New Jersey is available through the Rutgers Cooperative Extension of Salem County Green Pages. **(Appendix C)**

Green Township’s farmers rely heavily upon mail order and out-of-state retailers for their agricultural supplies. Some farmers have found that reliance upon out-of-state suppliers and non-local processing facilities imposes transportation costs that cut into their operations profitability.

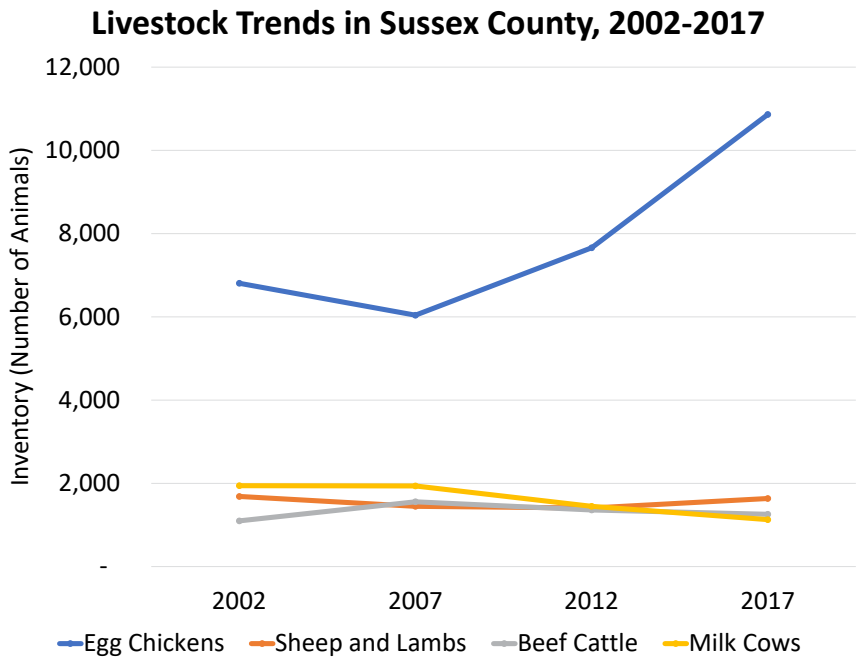


Figure 16. Livestock Trends in Sussex County, 2002-2017



Chapter 3.

Land Use Planning Context

A. State Development and Redevelopment Plan

The State Development and Redevelopment Plan outlines general policy objectives concerning land use and future development in New Jersey. The combination of Planning Areas and Designated Centers establishes a comprehensive framework for pursuing land use and development regulation. Land in Green Township is included within following Planning Areas: **(Figure 17)**

- Rural-Environmentally Sensitive Planning Area (PA4B): This area occurs throughout the town. Lands in this area can support agriculture, but contain environmentally sensitive

features. Development should respect those features.

- Environmentally Sensitive Planning Areas (PA5): Lands in this area contain large contiguous valuable ecosystems, and are vulnerable to damage from any new development nearby.
- Parks & Natural Lands: This area consists of the Whittingham Wildlife Management Area and other lands in the southern corner of Green Township. These lands are intended for resource protection and the provision of recreational opportunities.

Note that some of the municipality is excluded from the state planning areas due to their inclusion in the Highlands Preservation Area.

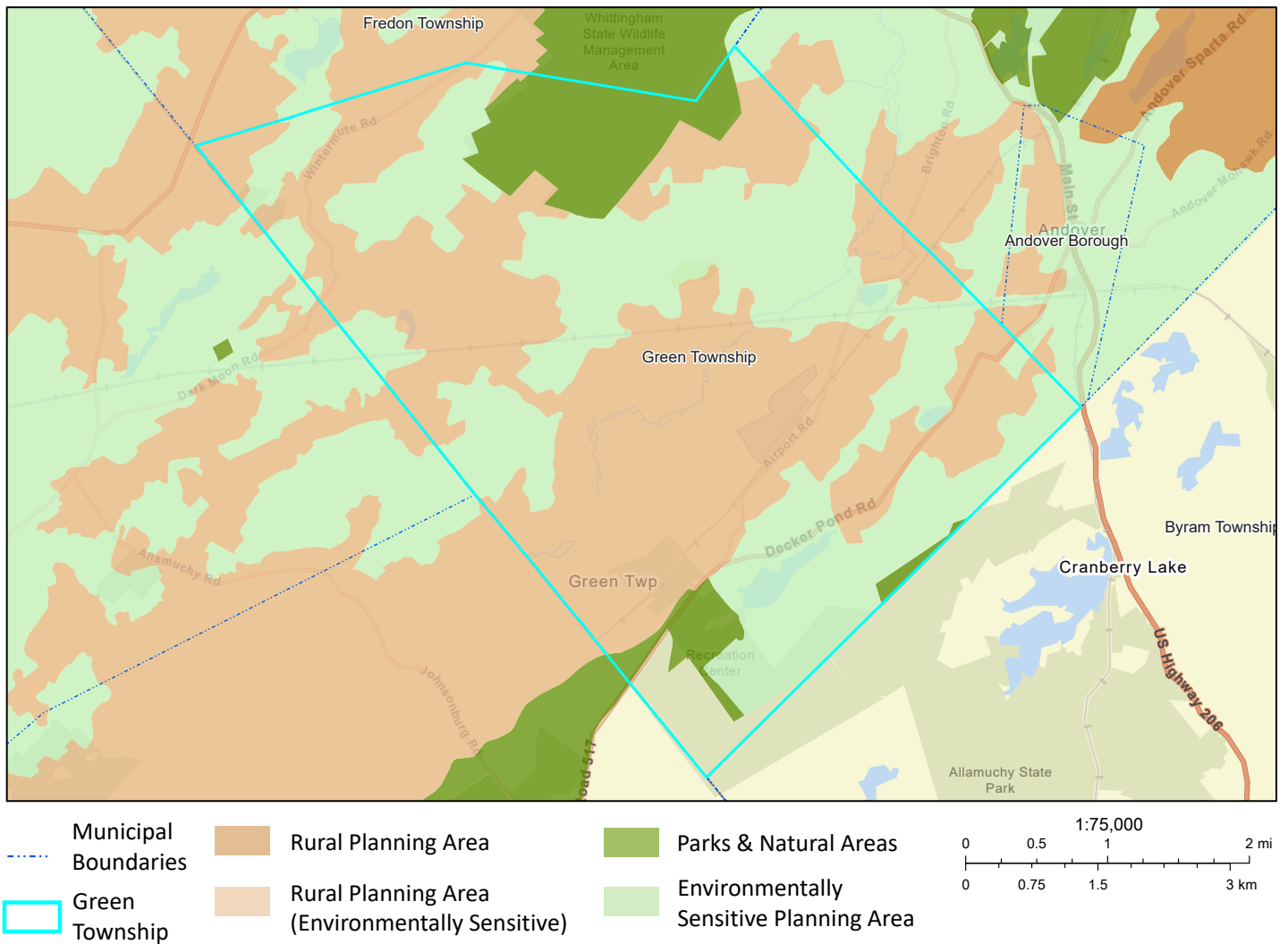


Figure 17. State Development and Redevelopment Areas

B. Special Resource Area: Highlands Region

The New Jersey State Legislature enacted the Highlands Water Protection and Planning Act (Highlands Act) on August 10, 2004. The Highlands Act imposes strict land use controls over large parts of the 88-municipality region, where lands are subject to heightened restrictions to protect water quality and environmentally sensitive lands. Green Township is located within the Highlands Region. Almost all of the Township falls within the Highlands Planning Area. A small area in the southern corner of the Township,

making up 261 acres, falls within the Highlands Preservation Area. (Figure 18) Conformance with the Highland Regional Master Plan is required in the Preservation Area only.

The Highlands Council – the regional planning body charged with implementing the Highlands Act – has established the preservation of farmland and the industry of farming as one of its principal objectives. To this end, the Highlands Regional Master Plan identifies an Agricultural Resource Area that will receive the bulk of future funding and institutional support from the Highlands Council.

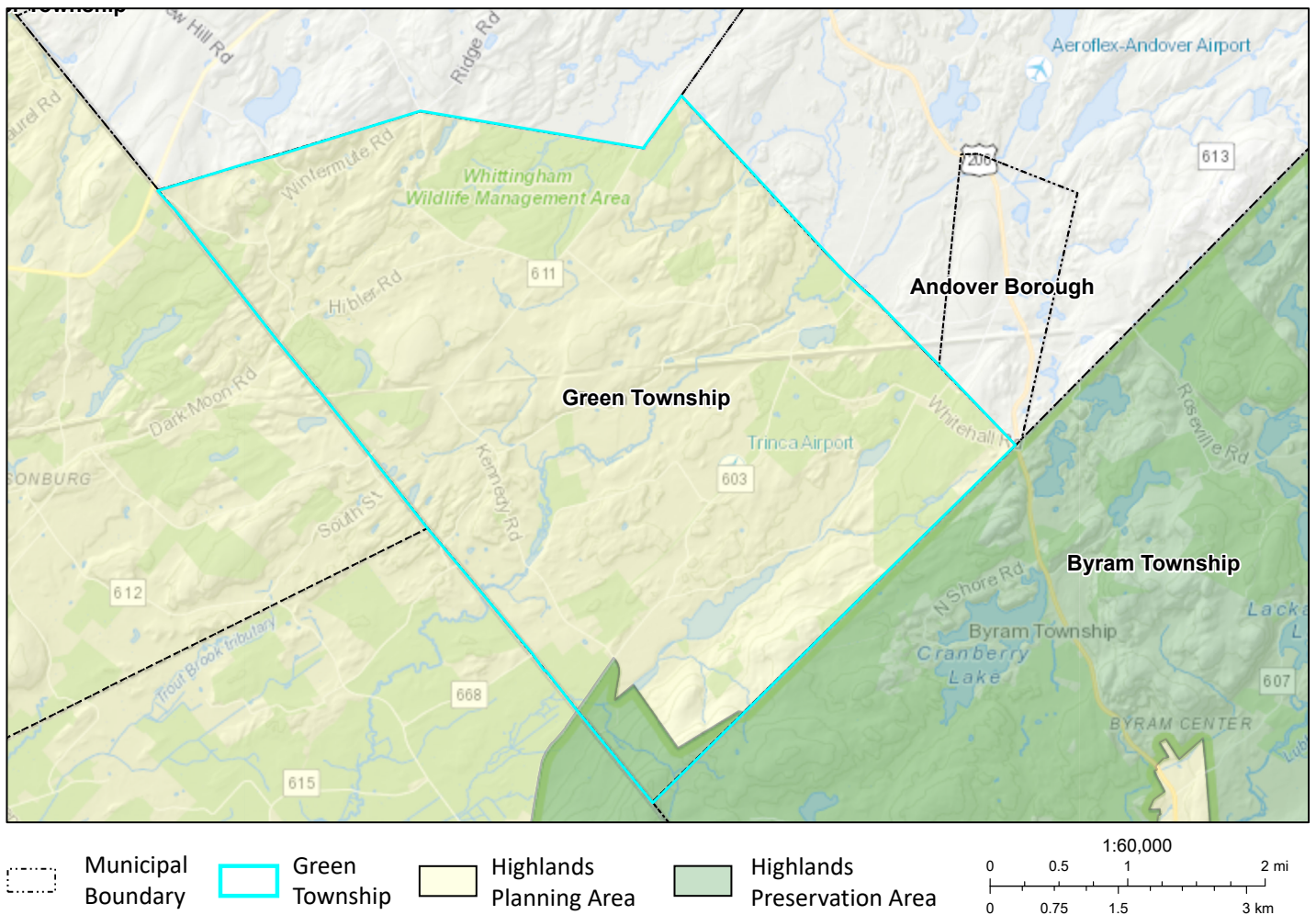


Figure 18. Highlands Preservation and Planning Area

The Agricultural Resource Area encompasses lands that contain contiguous farmbelts and quality agricultural soils. All of Green Township falls within the Agricultural Resource Area. (Figure 19)

The Highlands Council also identifies Agricultural Priority Areas – subsets of the larger Agricultural Resource Area that are particularly well suited to agricultural production. Criteria used by the Highlands Council to delineate these areas include soil quality, tillable acreage, buffers, development potential, local commitment, contiguity with other farm parcels and size. There is a large area of moderate priority in Green northwest of County Route 611, and a large area of high priority south of

the Lackawanna Cutoff on the town’s eastern side. (Figure 20)

C. Municipal Master Plan

Green Township’s most recent Master Plan Reexamination, published in 2018, states the Township aims to “preserve the local heritage by protecting farmland and historic landmarks for the cultural benefit of present and future generations.” The Master Plan and its updates in 2008 and 2018 include the following goals pertaining to farmland preservation:

- Encourage farmland preservation.
- Protect the rural / agricultural character of the town.

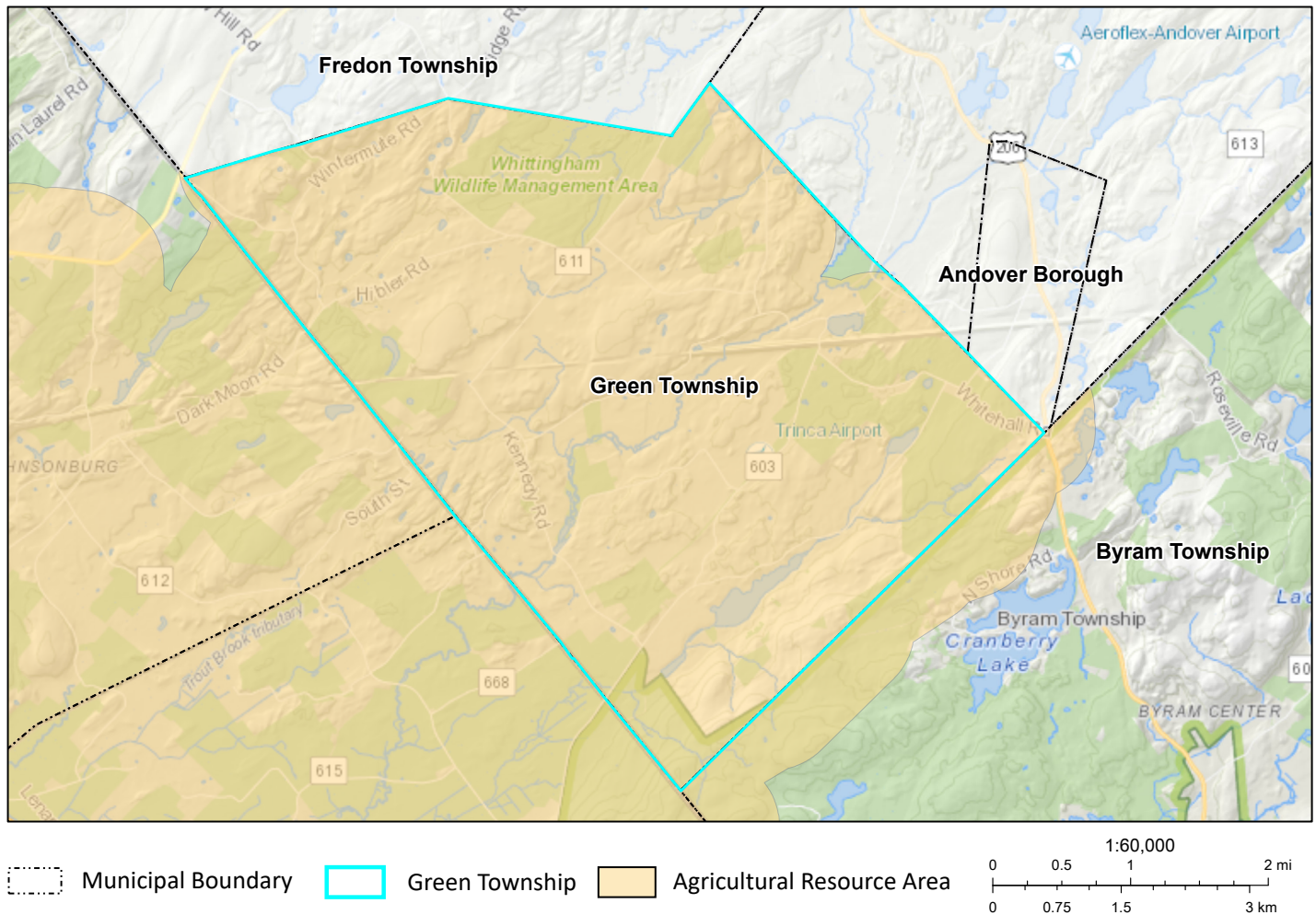


Figure 19. Agricultural Resource Area, Highlands Regional Master Plan

- Retain Open Space.
- Encourage innovation in the development of larger tracts so that land can be preserved for conservation purposes, for agricultural use, and for recreation.

D. Land Use Trends

According to the NJDEP's 2015 Land Cover imaging (the most recent orthophotography available), agricultural areas make up 25% of Green Township. The largest category is forest, at 43%. Other major land uses include urban and (19%) and wetland (11%). Since 1986, 700 acres of agricultural area and 300 acres of forest have been lost,

largely to urban land use. Much of this change occurred before 2002, and land use has remained generally stable since then. (see **Chapter 1.**)

E. Public Infrastructure – Sewer and Water

Much of Green is served by private septic systems and wells. However, NJDEP data show two public community water supply areas in Green Township: Tranquil Valley Retreat Center and Aqua NJ's system for the Forest Knolls housing development. These areas are both small and specific to only one development. NJDEP data also identify three sewer service areas: Tranquil Valley Retreat Center, NVE

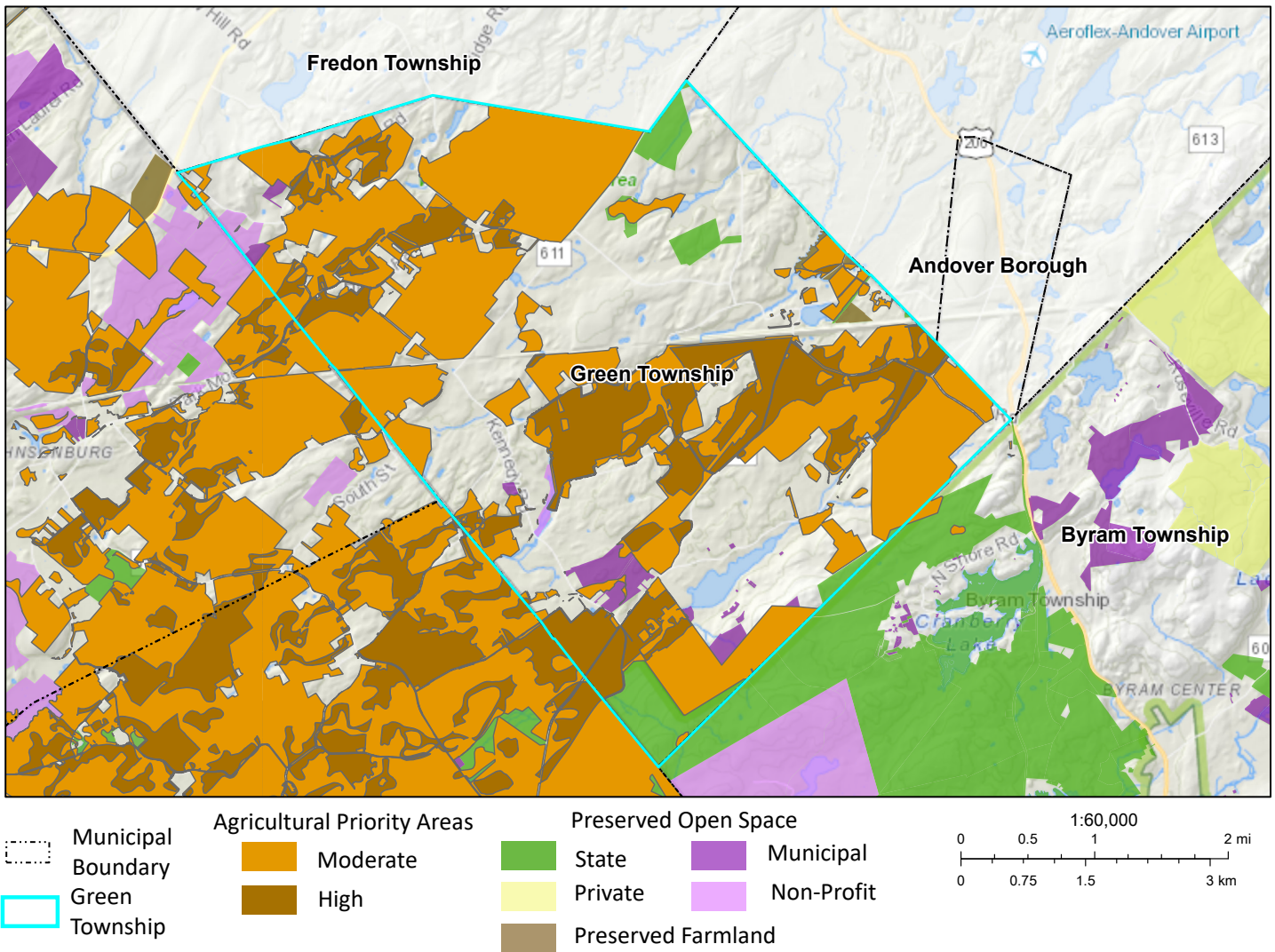


Figure 20. Agricultural Priority Areas, Highlands Regional Master Plan

Pharmaceuticals, and Cross Keys Banquet Hall. Similar to the water supply areas, these are small and specific to only one facility. There is a municipal water and sewer in neighboring Andover Borough, but there are no known plans for a municipal water supply or sewer in Green Township.

F. Municipal Zoning

1. Types, Lot Size, and Distribution in the Municipality

The Township's most recent land use zoning map and regulations, published in 2008, are in **Appendix B**. The town's six zoning districts are

shown in **Table 9**. The bulk of Green Township falls in the Agricultural Residential zone. A large area of the Agricultural Industrial zone exists around Airport Road and at the intersection of Pequest and Brighton Roads. Two areas of the Rural Business zone occur around the Agricultural Industrial zone on the town's border with Andover Borough and Andover Township.

Residential districts occur around Lake Tranquility and at the intersection of Wolfs Corner and Mackarley Roads. There are small instances of the Neighborhood Commercial area at intersections along Kennedy Road.

Table 9. Green Township Zoning Districts

Zone Name	Primary Use	Minimum Lot Size (Acres)	Maximum Building Coverage
AR 5/2: Agricultural Residential	One-Family Dwelling	2	15%
AI-10: Agricultural Industrial	Very Light Manufacturing, Research Labs, Offices, Warehousing	10	60%
R1: Residential (1 acre)	One-Family Dwelling	1	20%
R1.5: Residential (1.5 acres)	One-Family Dwelling	1.5	20%
NC: Neighborhood Commercial	Stores, Shops, Offices	1.5	25%
RB: Rural Business	Shops, Inns, Offices, Labs, Restaurants	5	-

Making up the bulk of the municipality, the Agricultural Residential zone allows for single-family detached dwellings, with a minimum lot area of 2 acres and a maximum building coverage of 15%. All zones have required building setbacks.

2. Adopted Redevelopment Areas

As of this plan’s writing, there are no adopted or proposed redevelopment areas in Green Township.

3. Innovative Planning Techniques

There are mandatory and voluntary options a municipality can use to set aside land for farmland and/or open space. A few voluntary options are outlined below, but mandatory versions of these techniques, such as required clustering of lots, could also be used. If a municipality turned to mandatory techniques, its Agricultural Advisory Committee would need to work with its Land Use Board to ensure agricultural resources and land were set aside in a way that ensured viability of the farm in the future. Green Township does not currently use any of these

techniques. In order to do so, the Land Use Board and Township Committee would need to first approve them.

Cluster Zoning allows development to occur on a smaller percentage of a site while retaining the net development density permitted by local zoning. A common cluster zoning provision would allow (or require) 50% of a site to be preserved in its natural or agricultural state and would permit the other half of the site to be developed at twice the allowable zoning density. Some clustering ordinances require that certain sensitive natural areas or prime farmlands on a development site be preserved. Cluster zoning allows some sites to be developed to their full extent based on zoning, while preserving agricultural lands.

This option is often attractive to builders because there tends to be fewer infrastructure costs associated with roadway construction, power lines, and sewage connections in more compact developments. Clustering is attractive to residents and farmers because it retains some agricultural areas and the rural

character they create. Additionally, the undeveloped portions of clustered developments are permanently deed restricted, which helps to ensure the permanence of local farming. Clustering has added effectiveness when open space set-asides on adjacent properties are linked in a coordinated fashion. This requires planning on the part of the municipality. Cluster zoning may be used where there is minimal opportunity for new development in the higher density zones that accommodate residential development, such as Green Township's R1 and R1.5 zones.

Lot size averaging is another planning tool that maintains the net allowable zoning density on a site but does not enforce uniform lot size requirements or setbacks. This allows for some development lots to be very small to accommodate affordable housing units, neighborhood commercial stores, or "village" development densities, while other lots can be very large to encompass active farms or natural areas.

Transfer of Development Rights (TDR) is a growth management tool that allocates development rights from one location (the preservation or "sending" area) to another (the development or "receiving" area). These development rights are purchased by developer and allow them to build at higher densities within the receiving zone than existing zoning permits. Viewed as an equity protection mechanism, transfer-of-development rights provides for the preservation of important agricultural lands while fully compensating landowners and minimizing public expenditures.

The New Jersey State Transfer of Development Rights Act (N.J.S.A. 40:55D-140) authorizes the transfer of development rights by municipalities and outlines what a town must do to adopt or amend a TDR ordinance. First, the municipality must amend its master plan to include a Development Transfer Plan Element that outlines a mechanism for assigning development credits to areas in the sending zone and reapplying them to areas in the receiving zone. An updated Utility Service Plan and Capital Improvement Program for the receiving zone should be adopted as well. The municipality must also prepare a Real Estate Market Analysis (REMA) that quantifies the development potential of the sending zone(s) and the capacity of the receiving zone(s) to accommodate additional development. Finally, a town must receive approval from the State Planning Commission to adopt the TDR ordinance. (N.J.S.A. 40:55D-140)

4. Buffer Requirements

In accordance with state and county regulations, there are multiple mechanisms through which agricultural uses are separated from other uses. At the state level, both the NJDEP and the New Jersey Department of Agriculture (NJDA) offer guidelines. NJDEP's Freshwater Wetlands Protection Act Rules provide permit and other administrative exemptions for a range of farming activities, which helps to protect inland water resources. Similarly, NJDEP's Flood Hazard Area Control Act Rules, most recently amended in February 2015, now include numerous agricultural

permits-by-rule. The following agricultural activities are included:

- Continuing ongoing agricultural activities that result in no fill,
- Commencing new agricultural activities that result in no fill,
- Undertaking soil conservation practices outside a floodway, and
- Constructing an agricultural building of no more than 1,000 square feet outside a floodway.

There are seven general permits which allow the continuation of agriculture activities, including soil erosion control, bank stabilization or bank restoration, channel cleaning, constructing a roadway across a water body, filling a manmade water body for freshwater wetlands restoration, creating a ford across a water body to manage livestock, constructing a fence across or along a water body to manage livestock, and constructing a pump or water intake for livestock, in otherwise regulated areas. Green Township does not have its own agricultural buffer laws.

5. Development Pressure and Land Value

Green’s population as of 2021, based on U.S. Census Bureau data, is 3,610 individuals. (**Figure 21**) This is approximately the same as the

Population, Green Township, 2000-2021

Source: NJ Department of Labor, U.S. Census Bureau

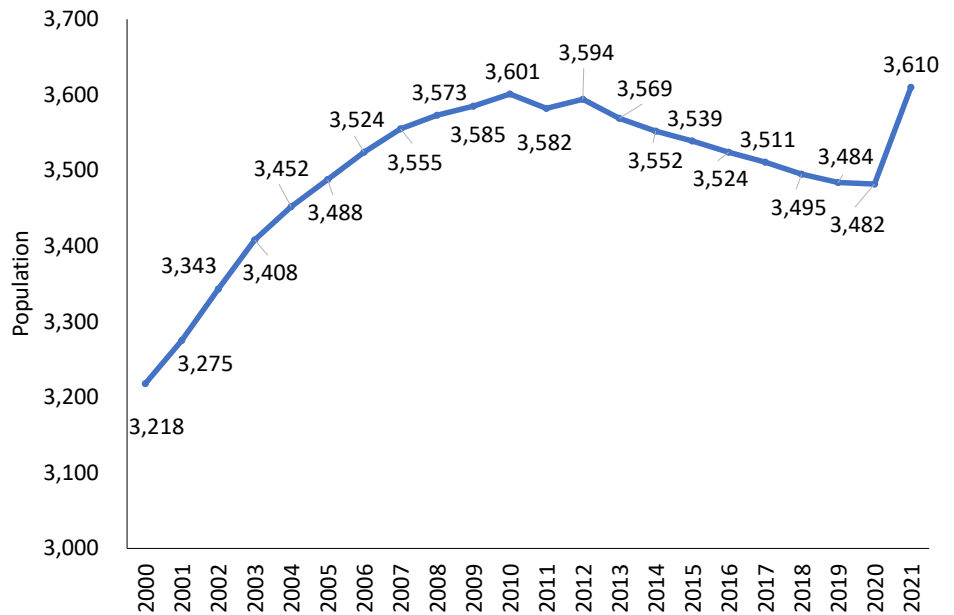


Figure 21. Population, Green Township, 2000-2021

Township’s 2010 population peak of 3,601 people. However, after 2010 Green’s population sunk as low as 3,482 in 2020 before experiencing rapid growth to 2021 levels, likely in connection with the Covid-19 pandemic and associated land rush. Locally, an increase in land value was also observed during this time. It is unknown whether these trends will continue to hold. They may also be underestimated in census statistics. Only 5-year estimates are available for smaller geographies like Green Township, meaning the census bureau’s 2021 population estimate actually represents an average for the years 2017-2021.

Green’s population trends are consistent with county-wide trends of individuals leaving since the early 2000s. However, Covid-19 also had an impact on Sussex County overall, with a 2.7% increase in only one year from 2019 to 2020 and a continued increase through 2021. (**Figure 22**)

Population, Sussex County, 2000-2021

Source: NJ Department of Labor, U.S. Census Bureau

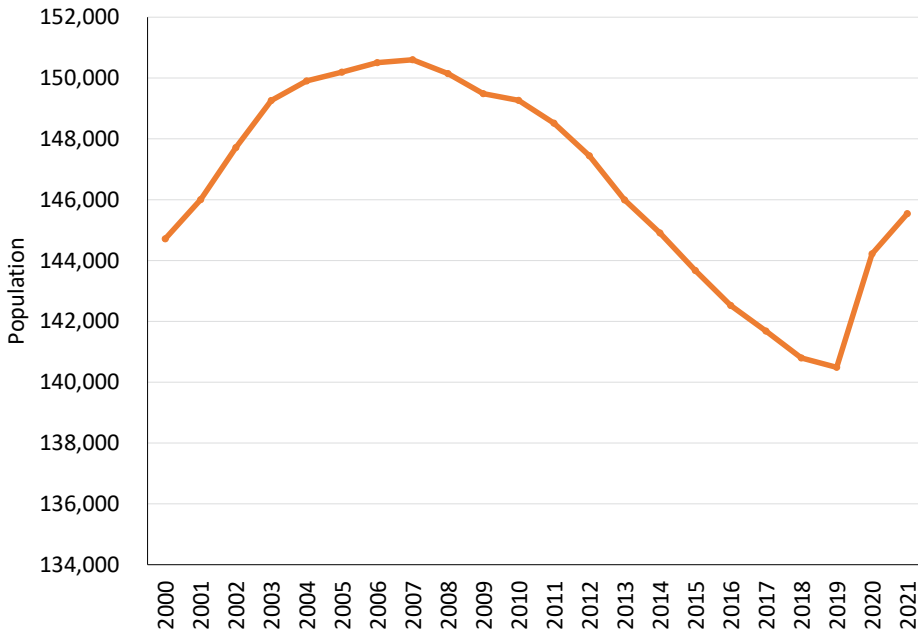


Figure 22. Population, Sussex County, 2000-2021

Many residential construction projects in Green Township received building permits from 2000 to 2007, but since 2008 there have been only a few building permits granted per year. (**Figure 23**) Sussex County has experienced a similar trend, with issued permits peaking in 2001. The number of permits issued in 2021 numbered 21% of the permits issued in 2000. Since 2004, all building permits in Green have been for single or double homes.

Any increase in population related to Covid-19 has not yet resulted in a building boom—in the years 2019, 2020, and 2021 only one construction

permit was issued in total. Residential growth does not currently appear to pose a major threat to the town's farming activity.

G. Density Transfer Opportunities

An intra-municipal TDR is one in which sending and receiving areas are located within the same town. Alternatively, inter-municipal TDR programs establish sending areas in one municipality and receiving areas in another.

Residential Building Permits, Green Township, 2000-2021

Source: NJ Department of Community Affairs

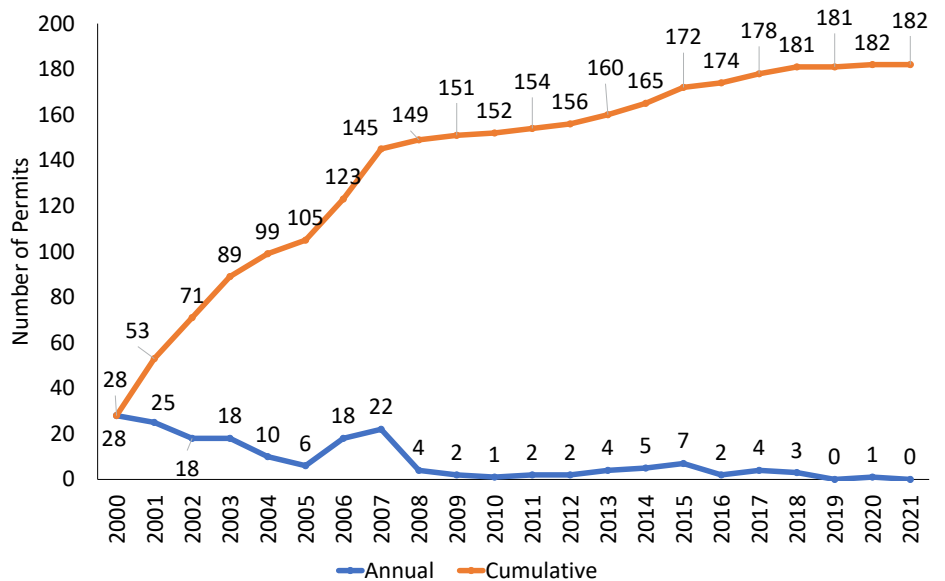


Figure 23. Residential Building Permits, Green Township, 2000-2021

Some form of tax-based revenue sharing may be necessary with inter-municipal TDR programs.

Regional programs are an alternative that may be proposed at the regional or state level, such as the program introduced as part of the Highlands Regional Master Plan. The New Jersey TDR Bank and the Office of Planning Advocacy (Smart Growth) are facilitating TDR activities statewide. They offer Planning Assistance Grants and technical assistance to municipalities looking to establish municipal TDR programs and may provide funds for the purchase of development credits. The State TDR Bank will also provide financial banking on loans secured using development credits as collateral and keep records of all development credit transfers within the State. Green Township may benefit from participating in a TDR program, primarily as a municipality with sending areas.

Non-contiguous cluster zoning is a planning technique that allows one parcel to be preserved while its density is transferred and developed instead on a different, noncontiguous parcel. This technique, first authorized in 1996, allows a municipality to approve “planned developments” consisting of two different parcels, where the “sending area” parcel is preserved, for example, as farmland or open space, and the “receiving area” parcel is developed at a higher than otherwise normally permitted density. Non-contiguous cluster zoning is not currently used in Green Township, where there is minimal opportunity for new development in the higher density zones that accommodate residential development.

On the local level in Green, density transfer programs may be beyond the capacity of municipal government.



Preserved Farmland

Chapter 4.

Farmland Preservation Program

There are 5,011 acres of farm-assessed land in Green Township. Farms in the Township have been preserved using a variety of programs, and the town is firmly committed to farmland protection.

A. Sussex County Agricultural Development Area (ADA)

1. Statutory and County Criteria

The Sussex County Agriculture Development Board (CADB) developed the Sussex County Agriculture Development Area (ADA) based upon both statutory and county criteria. The ADA designates land that has potential for long-term agricultural viability, with agriculture being the preferred, but not the

exclusive, use within the ADA. The statutory criteria are as follows:

- The land must be agriculturally productive or have future production potential. Also, zoning for the land must permit agriculture or permit it as a nonconforming use.
- Suburban and/or commercial development must be reasonably non-existent in the ADA area.
- The land must comprise no greater than 90% of the agricultural land mass of the County.
- Any attributes deemed appropriate by the Board must also be incorporated.

The County criteria are as follows:

- All farm assessed property in Andover, Frankford, Fredon, Green, Hampton, Hardyston, Lafayette, Montague, Sandyston, Sparta, Stillwater, Vernon, and Wantage Townships as cited by tax assessments as of July 2006.
- The ADA does not include farm assessed property that is in an existing sewer service area or designated Center as per State Development and Redevelopment Plan.
- Land is currently in agricultural production or has strong potential for agricultural production or is farm assessed through a woodland management plan.
- Agriculture is the preferred, but not necessarily the exclusive use.
- Agriculture is permitted by current municipal zoning ordinance or is a protected, pre-existing, non-conforming use.

The current County ADA, as approved by the SADC in July 2007, comprised 80% of the county's non-preserved farmland at the time of its adoption. The ADA is focused on the most agriculturally productive land in the county, and excludes town centers, proposed or existing sewer service areas, and densely wooded farm-assessed property.

2. Agricultural Development Area: Green Township

Most of the Township, excepting areas of residential development and already preserved land, lies within the Sussex County ADA. (**Map 3**)

B. Farmland Preserved to Date by Program

As of June 2023, there are 14 farms totaling 1,422 acres preserved in Green Township, at an average cost of \$5,072 per acre. The first farm in Green was preserved in 1989. (detailed in **Table 10, Map 1** and **Appendix D**)

- The State of New Jersey, through the SADC, has provided \$3,048,814, or 42% of the total cost share.
- The County has spent a total of \$4,036,996, or approximately 56% of the total cost share.
- Green Township has spent a total of \$127,734, or approximately 2% of the total cost share.

As of June 2023, there is 1 farm pending preservation through the County Planning Incentive Grant program in Green.

Since Green's 2012 Farmland Preservation Plan, 3 more farms making up 162 acres have been preserved.

The town, county, and state have been active participants in the farmland preservation program in Green Township. **Table 10** identifies the different programs used to protect farmland in the municipality, and they are detailed below.

1. County Easement Purchase

County Easement Purchases (EP) involve the sale of farmland development rights to the County by the landowner. To be eligible for

Table 10. Farm Preservation in Green Township by Program

Abbreviation	Program Name	Number of Farms	Acres	Percent of Preserved Farm Acres in Green Township
County EP	County Easement Purchase	9	1,160	82%
County PIG	County Planning Incentive Grant	3	148	10%
SADC EP	State Easement Purchase	1	83	6%
Muni PIG	Municipal Planning Incentive Grant	1	32	2%

the County Easement Purchase program, the land must be in the ADA and be eligible for farmland assessment. 82% of the farmland protected in Green has been preserved through the County EP program (9 farms, 1,160 acres).

2. County Planning Incentive Grants

The goal of County Planning Incentive Grants (PIGs) is to protect and preserve large pieces of contiguous farmland through the purchase of development easements. Sussex County last updated their Comprehensive Farmland Preservation Plan in 2008. Sussex County has preserved 3 farms through the PIG program in Green Township (148 acres).

3. Municipal Planning Incentive Grants

Municipal Planning Incentive Grants (PIGs) are very similar to the County PIGs in their goals, requirements, and implementation. Like the County PIGs, Municipal PIGs require a local financial commitment for preserving farmland.

To qualify for this program, the municipality must have an agricultural advisory board, and their municipal code must include a Right to Farm ordinance. Municipalities also must establish and maintain a dedicated source of funding for farmland preservation pursuant to P.L.1997, c.24 (C.40:12-15.1 et seq.), or any alternative means of funding for farmland preservation that demonstrates a continued commitment to farmland preservation. It can be funding such as an open space tax that has money dedicated to farm preservation, repeated annual appropriations, or repeated issuance of bonded indebtedness that demonstrates commitment on the part of the municipality. There is no minimum qualifying amount for the dedicated source of funding; The funding just needs to cover a cost share for any applications.

Farms to be preserved through a municipal PIG need to be approved by the CADB. For municipal PIG preservation, the SADC generally funds 60% of the development easement purchase while the County and the municipality split the remaining cost. Green Township is

currently enrolled in the Municipal PIG program and will maintain eligibility through this Farm Plan Update. The town has preserved 1 farm through the Muni PIG program (32 acres).

4. SADC Direct Easement Purchase

The SADC Direct Easement Purchase is a program that allows a landowner to apply directly to the SADC for the sale of development rights. In most cases, the State will pay up to 100% of the certified appraised easement value in the direct easement purchase program. 1 farm in Green Township (83 acres) has been preserved through this program.

5. Other Programs and Partnerships

Various other forms of preservation can be used for farmland. In an SADC Fee Simple preservation, the SADC acquires a farm in fee simple, then auctions the property with a deed restriction for farmland preservation. In a Non-Profits Easement or Fee Simple preservation, a non-profit organization can preserve farms through easement purchase or fee simple, with the SADC covering 50% of the cost. In a Transfer of Development Rights program (TDR), development rights are transferred from one location, a sending or preservation area, to another, an identified growth or receiving area. To date, none of these programs have been used in Green Township to preserve farmland.

C. Term Farmland Preservation Programs

Term Farmland Preservation Programs are cost sharing programs for soil and water conservation projects, in which farmers receive up to 50% of the costs for these projects, as well as protection against nuisance complaints, emergency fuel and water rationing, zoning changes, and eminent domain actions. In return, farmers sign an agreement that restricts their land to agricultural use for either eight years or sixteen years. For entrance into these programs and to qualify for benefits, a farm must be located within the county ADA. Technical assistance for the soil and water practices comes through the Natural Resource Conservation Service. In Green Township, no farms currently participate in the Term Farmland programs.

D. Coordination with Open Space Preservation Initiatives

Farmland preservation and the identification of targeted farms should be coordinated with open space planning efforts. Trail easements and adjacency to proposed and existing active recreational facilities are potential areas of concern for farmers. Green Township has a Municipal Open Space, Recreation, Farmland, and Historic Preservation Trust Fund. The Township last completed an Open Space and Recreation Plan in 2009 and would need to renew this plan to be eligible for state grants for open space preservation.

E. Farmland Preservation Program Funding Expended to Date by Source

The Green Township Open Space, Recreation, Farmland, and Historic Preservation Trust Fund was approved in 1997 by voter referendum. This approval allowed the governing body to authorize an Open Space tax levy, not to exceed 3 cents per \$100 of assessed valuation. The current rate (2023) is one and a half cents (\$0.015) per one hundred dollars (\$100) of assessed property value. The Fund currently generates approximately \$65,000 per year in tax revenue. As of June 2023, the Fund has a balance of \$1,849,930. **Table 11** details the amount generated per year for the past several years.

To date, the town has expended \$777,063 in funds from their Open Space Trust Fund to cover the cost of open space acquisition and maintenance, as well as cost-share on farmland preservation including the costs of appraisals, survey, and title work. In 2017 a referendum was passed which allowed for up to 30% of the Fund at the beginning of each year to be used for construction and maintenance of open space.

F. Monitoring the Easements

The Sussex CADB monitors preserved farms in Sussex County. For the County, these monitoring visits serve not only to ensure that all requirements of the deed of easement are being met, but also to ask questions about the farmer's conservation plan and distribute NRCS materials as well as information about state and county opportunities for funding and assistance.

G. Coordination with Transfer of Development Rights Programs

TDR may be used in conjunction with the traditional Purchase of Development Rights (PDR) program; these two programs are not mutually exclusive. As previously discussed, Green Township is not currently enrolled in or developing a TDR program.

Year	Tax Rate (cents per one hundred dollars assessed value)	Revenue Generated (dollars)	Interest Generated (dollars)
2016	1.5	63,145	3,479
2017	1.5	63,358	4,276
2018	1.5	63,715	12,765
2019	1.5	63,841	30,653
2020	1.5	64,453	28,327
2021	1.5	64,931	18,515



Komsa Field

Chapter 5.

Future Farmland Program

A. Preservation Goals

Green Township is 16.3 square miles (10,432 acres) in size (US Census). Of this, 5,011 acres (49% of the town) are under farmland assessment, which includes croplands, woodlands, farm structures and wetlands/waterways that occur on agricultural properties. Since starting in 1989, Green has preserved 14 farms (1,422 acres) of farmland. **(Appendix D)**

Based upon the State's Minimum Eligibility Criteria for soils and tillable land, 34 farm assessed properties totaling 1,391 acres are potentially eligible for farmland preservation in Green Township and are located within the ADA. This includes individual parcels which qualify, as well as farm units which

consist of multiple parcels that, when considered together, meet SADC eligibility requirements for preservation. These are the "targeted" farms for the municipal Planning Incentive Grant program.

The town's goal for farmland preservation is to protect an additional 500 acres over the next 10 years. Based upon the available funding to purchase and preserve farmland, and the amount of farmland potentially eligible for preservation, the following preservation goals are identified for Green Township:

- Year 1 target: 50 acres, 1 farm
- Year 5 target: 250 acres, 4 farms
- Year 10 target: 500 acres, 8 farms

B. Description of Project Areas

Most of Green Township is included in the Sussex County ADA (as described in **Chapter 4.**). In the 2008 Sussex County Comprehensive Farmland Preservation Plan Update, the CADB designated ten project areas, dividing up all lands in the county's ADA. The ADA within Green Township is located entirely in the Western Highlands 1 Project Area. (**Figure 24**)

C. Minimum Eligibility Criteria

Minimum Eligibility Criteria are based upon the SADC's rules for farmland preservation and project eligibility (Adopted by the SADC May 21, 2007 and July 25, 2019). In order to be eligible for preservation the site must be developable, have soils capable of supporting agricultural or horticultural production, and meet minimum tillable land standards (N.J.A.C. 2:76-6.20).

To determine farms that are potentially eligible for preservation, a series of queries were made using ArcGIS digital mapping software for soils and table land. The minimum eligibility analysis involved a parcel-based screen of tax lot characteristics, followed by a farm unit-based analysis which combined multiple farm-assessed parcels in cases where they were in close proximity and had the same owners. **Appendix E** describes the state's requirements and the methodology for mapping these on ArcGIS.

For a farm application to qualify for SADC cost share, the farm must have at least one parcel listed on the targeted farm list; comprise an assemblage of substandard

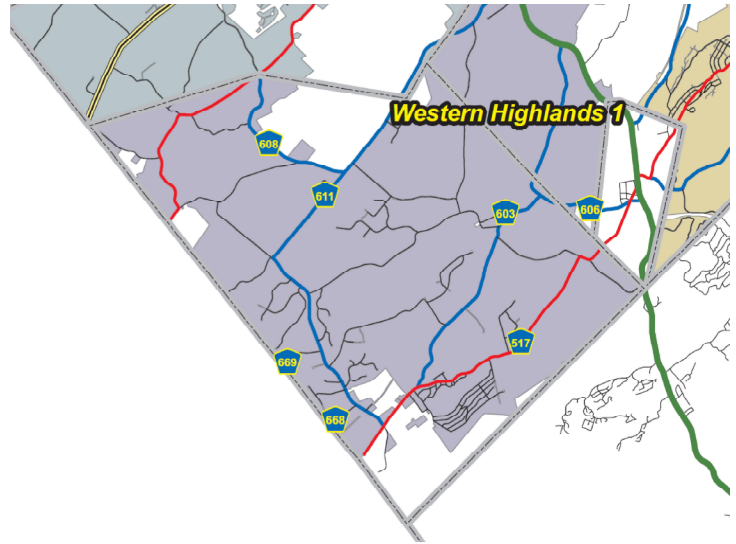













Figure 24. Western Highlands 1 Project Area (Green Township)

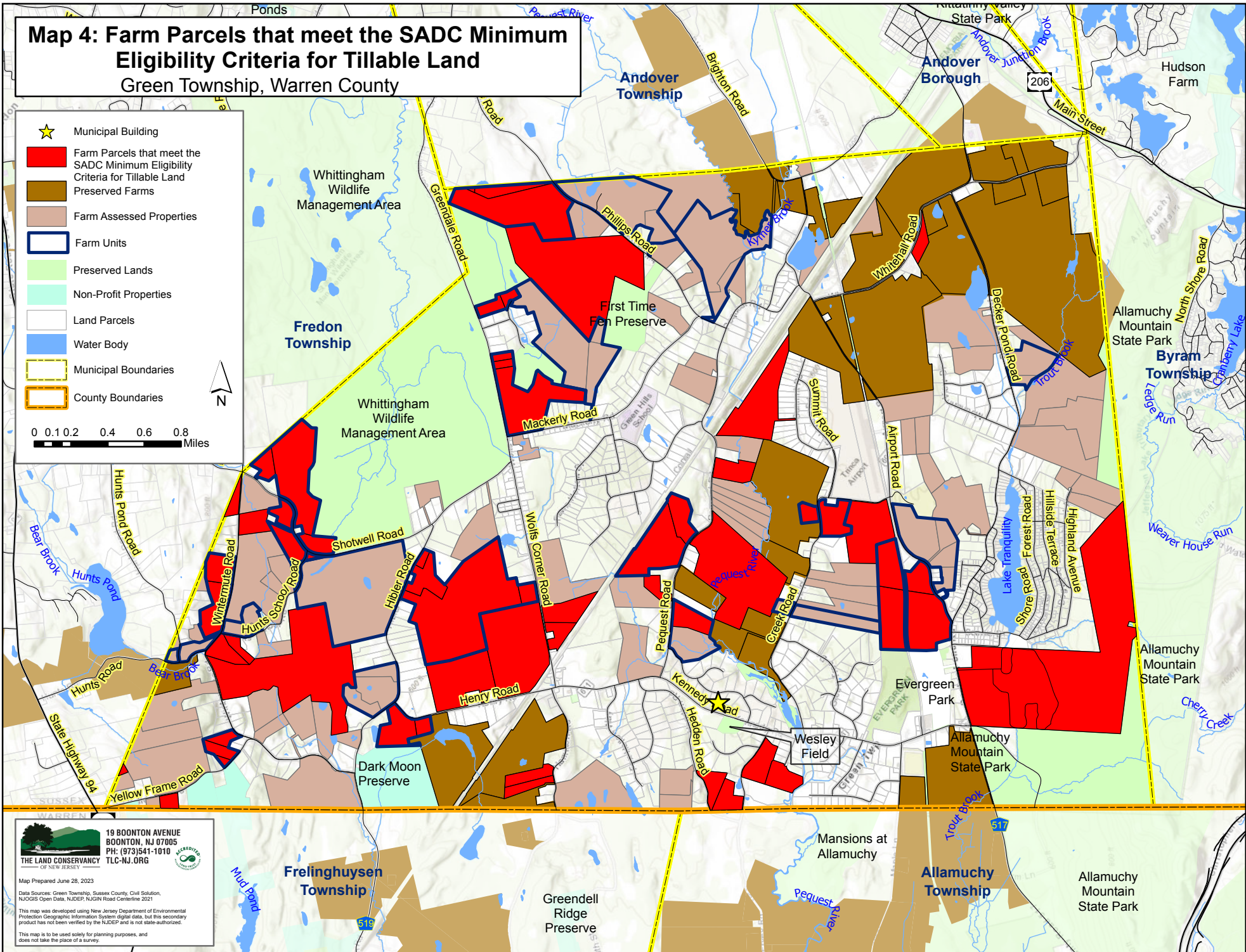
parcels which together meet SADC minimum standards; or have sufficient justification by the municipality and the Sussex CADB that the parcels were not identified as targeted due to a specific mapping issue or other error.


The town may proceed without state funding on projects that do not meet these minimum eligibility standards, but as a rule, the CADB will not cost share on applications that do not meet SADC minimum standards. In all cases, the Green Township AAC will work closely with the Sussex CADB to review and process applications from landowners for farmland preservation. The Green Township AAC will follow all county and state procedures to ensure consistency in application review and processing.

Farms which meet the minimum eligibility criteria for tillable land in Green Township are shown on **Map 4**, and those which meet the minimum criteria for soils are shown on **Map 5**. Target farms, which are potentially eligible for preservation and meet the minimum eligibility

Map 4: Farm Parcels that meet the SADC Minimum Eligibility Criteria for Tillable Land Green Township, Warren County

-  Municipal Building
 -  Farm Parcels that meet the SADC Minimum Eligibility Criteria for Tillable Land
 -  Preserved Farms
 -  Farm Assessed Properties
 -  Farm Units
 -  Preserved Lands
 -  Non-Profit Properties
 -  Land Parcels
 -  Water Body
 -  Municipal Boundaries
 -  County Boundaries
- 0 0.1 0.2 0.4 0.6 0.8 Miles



 19 BOONTON AVENUE
BOONTON, NJ 07005
PH: (973)541-1010
TLC-NJ.ORG

Map Prepared June 28, 2023
Data Sources: Green Township, Sussex County, Civil Solution, NJOGIS Open Data, NJDEP, NJGIN Road Centerline 2021

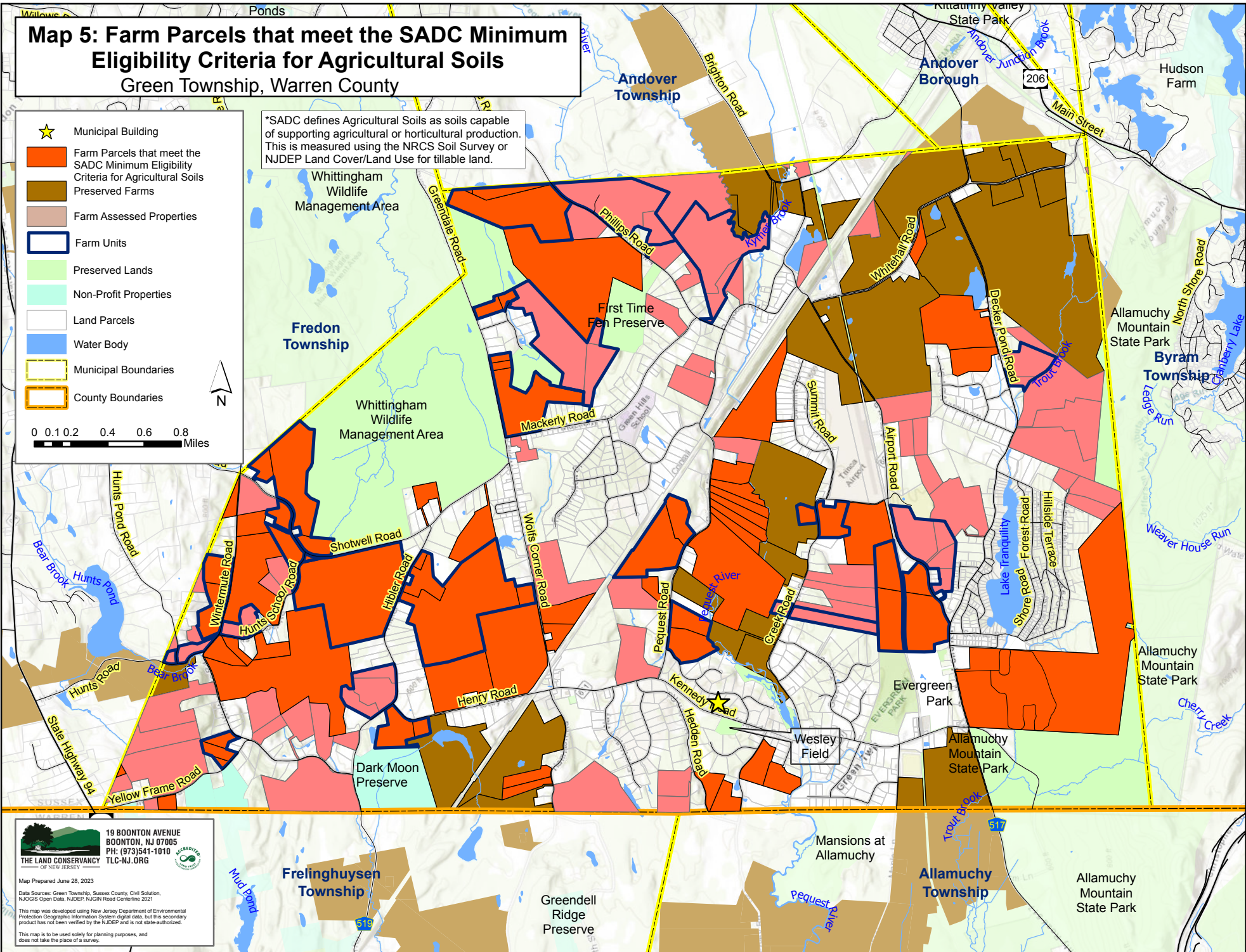
This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by the NJDEP and is not state-authorized.
This map is to be used solely for planning purposes, and does not take the place of a survey.

Map 5: Farm Parcels that meet the SADC Minimum Eligibility Criteria for Agricultural Soils Green Township, Warren County

- ★ Municipal Building
- Orange Farm Parcels that meet the SADC Minimum Eligibility Criteria for Agricultural Soils
- Brown Preserved Farms
- Light Brown Farm Assessed Properties
- Blue outline Farm Units
- Light Green Preserved Lands
- Light Blue Non-Profit Properties
- White Land Parcels
- Blue Water Body
- Yellow dashed line Municipal Boundaries
- Orange dashed line County Boundaries

0 0.1 0.2 0.4 0.6 0.8 Miles

*SADC defines Agricultural Soils as soils capable of supporting agricultural or horticultural production. This is measured using the NRCS Soil Survey or NJDEP Land Cover/Land Use for tillable land.



THE LAND CONSERVANCY OF NEW JERSEY
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 BOONTON, NJ 07005
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 TLC-NJ.ORG

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 Data Sources: Green Township, Sussex County, Civil Solution, NJOGIS Open Data, NJDEP, NJGIN Road Centerline 2021

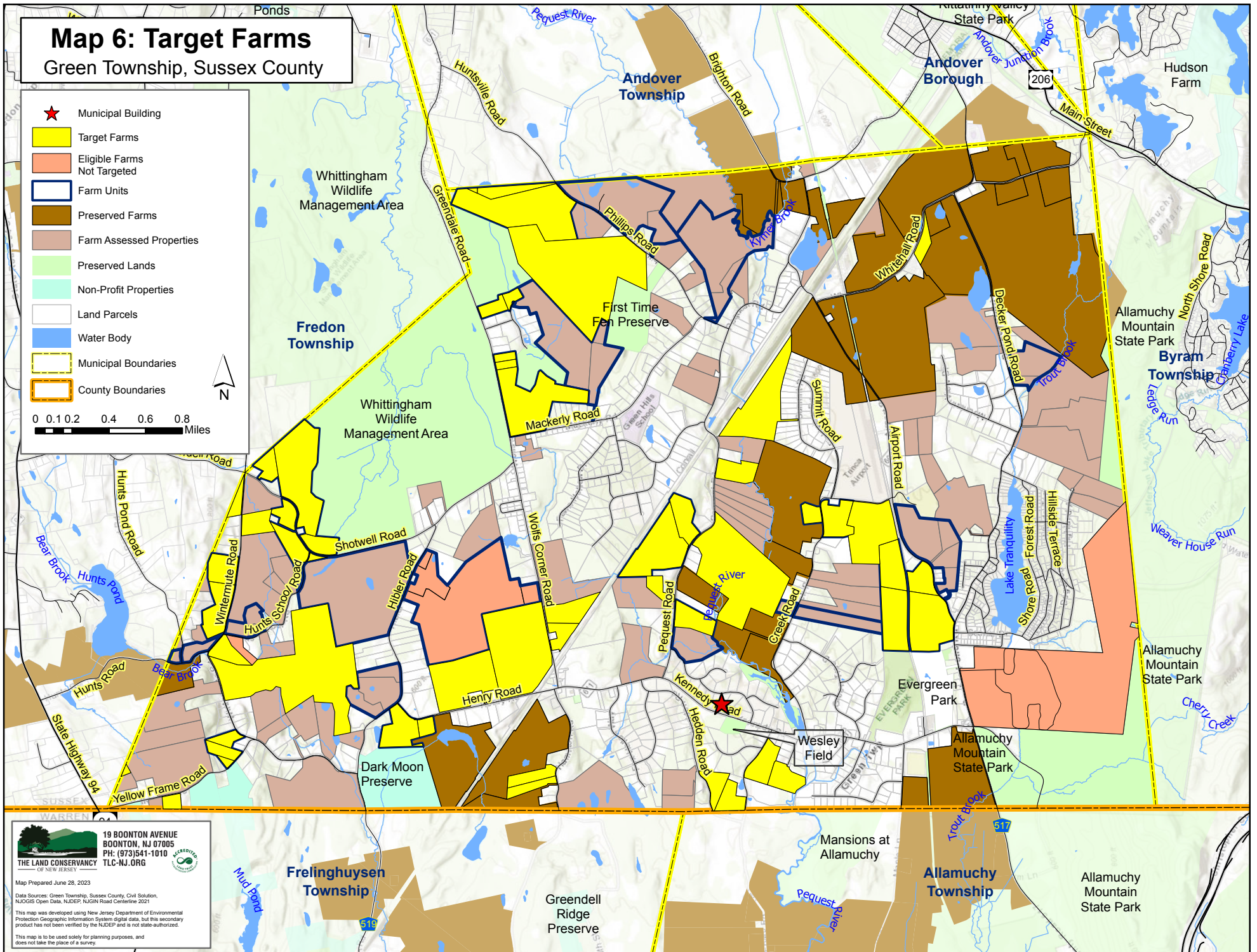
This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by the NJDEP and is not state-authorized.
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Map 6: Target Farms

Green Township, Sussex County

- ★ Municipal Building
- Target Farms
- Eligible Farms Not Targeted
- Farm Units
- Preserved Farms
- Farm Assessed Properties
- Preserved Lands
- Non-Profit Properties
- Land Parcels
- Water Body
- Municipal Boundaries
- County Boundaries

0 0.1 0.2 0.4 0.6 0.8 Miles



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criteria, are shown on **Map 6** and listed in **Appendix F**. This analysis was run on an individual parcel and a farm unit basis. According to the established method for Sussex and Warren Counties, target farms were identified based on the criteria for tillable lands without eliminating those which do not meet minimum criteria for agricultural soils.

The target farms list and map differs from the tillable lands map on two notable properties. The Guidi farm consists of 169 acres across the following parcels: Block 6, Lots 16, 5.01, 5.05, and 4.03. It meets eligibility criteria for tillable lands; however, it was designated as inclusionary zoning for affordable housing development in the Township's 2016 affordable housing settlement. If the Township sought to preserve this farm, they would need to replace the proposed 5 units with another proposal elsewhere in the Township. Before taking action, the Township Attorney would need to investigate the implications and process required to replace the inclusionary zone and units.

A 350-acre parcel at Block 34, Lot 18 also meets eligibility criteria for tillable lands. However, as part of the 7th Day Adventist Tranquil Valley Retreat Center, it is excluded from the Sussex County ADA; this property could be considered for farmland preservation, but the Sussex CADB would need to first review the case and amend the ADA.

D. County and Municipal Ranking Criteria

The Sussex CADB uses the SADC's ranking criteria as the basis for qualifying farms for preservation.

For the County Planning Incentive Grant Program, the CADB performs site visits for each application and evaluates farms based on SADC criteria as well as an understanding from the site visit of how the preserved farm would fit into the overall agricultural picture of Sussex. The County will work with the municipalities to preserve farms which do not qualify for County preservation.

Green Township's AAC and Township Committee are committed to preserving as much of the Township's agricultural land base as possible and support innovative funding mechanisms and preservation tools. The AAC follows the County and State criteria when prioritizing farms for preservation in the Township as part of the Municipal PIC program. They consider the preservation of farm units and, as a rule, do not turn away any application before reviewing it. Given the remaining unpreserved farmland with owners who may be willing to preserve, the AAC is open to preservation based on farm units and preservation of smaller farms less than 20 acres.

E. Municipal and County Policies Related to Farmland Preservation Applications

Green Township follows the policies established by the SADC and adopted by by Sussex County regarding housing opportunities, division of premises, and exception areas. These policies are documented in the [2008 Sussex County Comprehensive Farmland Preservation Plan Update](#).

1. Approval of Housing Opportunities

House Replacement is permitted by the SADC once requests for replacement of a residence on permanently preserved land have been reviewed and approved on an individual basis by the CADB and the SADC. The Sussex CADB and Green Township AAC support this policy.

Residual Dwelling Site Opportunities (RDSOs) are lingering potential housing prospects located within a deed-restricted farm. By designating an area as an RDSO, the landowner is implying that the land will be used for a residential unit or other structure as referred to in N.J.A.C. 2:76-6.17. The purpose of the building in question must be for single-family residential housing and its appurtenant uses. To qualify as an RDSO, the SADC requires that the use of the residential unit be for agricultural purposes and at least one person residing in the residential unit shall be regularly engaged in common farm site practices. The maximum permitted RDSO density is one residential unit per 100 acres, including existing and proposed residential buildings. The Sussex CADB does not regularly approve RDSOs. The Green Township AAC supports these policies. RDSO units must be requested at the time of application and approved by the Sussex CADB and SADC prior to closing according to SADC Policy P-31.

Agricultural Labor Housing is a protected use on preserved farmland as per NJAC 2:76- 3.12. The requirements for constructing agricultural labor housing are less stringent than RDSOs, provided that the house is for non-family

related farm labor. Any number of agricultural units may be constructed on permanently preserved farmland and any improvements to agricultural labor housing is permitted, provided at least one tenant/resident actively works on the farm and there are no blood relatives to the landowner residing in the house. Once an agricultural labor unit is no longer inhabited by an agricultural laborer, the unit must be vacated. When labor housing issues are brought before the CADB, the board looks closely at the application to prevent potential misuse.

2. Division of the Premises

The goal of the SADC, supported by the Sussex CADB and Green Township AAC, is to preserve large tracts of farmland, so a division of the premises is not an encouraged practice. However, when division occurs, it must be for agricultural purposes and must result in agriculturally viable land parcels. A landowner wishing to divide permanently preserved farmland must submit a written request. The application must be approved, in writing, by both the SADC and the CADB. Many landowners use this practice for estate planning purposes.

3. Approval of Exception

Exceptions are defined by the SADC as areas which are not subject to the terms of the deed of easement. When an exception is made, the landowner does not receive any compensation in the excepted area. There are two types of exceptions that can occur: severable and non-severable.

A **severable exception** is defined by the SADC as an area that is part of an existing lot owned by the applicant which will be excluded from the restrictions of the Deed of Easement and may be sold as a separate lot in the future. A severable exception is made if a landowner wants to be able to sell the excepted area separate from the deed-restricted farm.

Non-severable exceptions are defined by the SADC as area that is part of an existing lot owned by the applicant, which will not be subject to the restrictions of the Deed of Easement but cannot be sold separately from the remaining premises unless it is part of a larger area which is deemed to be agriculturally viable. Unlike a severable exception, a non-severable exception is always attached to the protected farm.

The SADC discourages the preservation of farms that do not have at least one exception, and it is important to take the number, size, location, and purpose of the exception into consideration. Exceptions may be granted in some circumstances, especially in the case of non-severable exceptions, or where the exception might be justified (e.g., to allow for the expansion of pre-existing non-agricultural uses, for trail easements, etc.). It is critical to make decisions about exceptions at the time of application, as exceptions cannot be granted, expanded, or moved once the farm has been preserved.

Exceptions made to farmland have the potential to impact the value of the property. When an appraisal occurs, both severable

and non-severable exceptions are considered in the determination of the restricted/after value of the property. The Sussex CADB and Green Township AAC follow the exception policies identified by the SADC. The AAC will work with applicants to the municipal PIG program to minimize the impacts of exception requests on the agricultural operation to the greatest extent possible.

F. Funding Plan

The Preserve New Jersey Act of 2014 established a policy that a portion of the Corporate Business Tax revenue is to be dedicated to preservation efforts. Of this revenue, 60% is allotted to Green Acres, 4% to Blue Acres (administered by Green Acres), and 5% to the New Jersey Historic Trust. 31% is set aside for farmland preservation through the SADC.

1. Municipal and County Funding Sources

Sussex County has an Open Space, Recreation, Farmland, and Historic Preservation Trust Fund funded by a tax levy set at \$0.0021 per \$100 of assessed value. The Trust Fund receives approximately \$400,000 annually. Since 2008, the majority of the Trust Fund has been used for staffing, maintenance, and acquisition of recreation and conservation lands. None has been used for the acquisition of farmland. Prior to 2008, however, over \$1 million from the Trust was appropriated annually to farmland preservation, with much of it being set aside for future use.

The Green Township Open Space Trust Fund collects one-and-a-half cents (\$.015) per one hundred dollars

(\$100) of assessed property value. In addition to farmland preservation, the municipal Trust Fund is used for the maintenance and acquisition of open space.

2. Financial Policies – Cost-Share Requirements

Green Township works with Sussex County according to its current cost-share requirements for preserving farms through the Municipal PIG Program. Typically, the SADC covers a maximum of 60% of the easement price, and the County and municipality each pay 20%. However, the cost-share match is established based upon the SADC's sliding scale criteria, which varies depending upon the cost of the easement.

Green Township is supportive of donation/bargain sales and would consider installment purchases, if requested by the landowner. These tools serve to leverage limited funding resources.

Donation and bargain sales involve donation by the landowner. If the landowner donates a portion of the value of the development rights when an easement is sold, this is called a bargain sale. A bargain sale can result in substantial tax savings for the landowner and can stretch farmland preservation funds. The landowner donation is a reduction in the amount of gain that is subject to the capital gains tax, and the landowner can take a tax deduction for the amount donated against his or her federal and state income taxes.

Through an **installment purchase** agreement, development rights may be acquired by the Sussex CADB through a payment plan that

provides payments to the landowner over time. Receiving the income from the sale in installments may provide the landowner with financial management and/or tax advantages.

3. Cost Projections and Funding Plan Associated with Preservation Goals

As of the beginning of Fiscal Year 2023, the Township had collected \$2,488,065 and expended \$777,063 in funds from their Open Space Trust Fund. The balance in the fund in June 2023 was \$1,849,930. The average cost per acre to purchase a development easement in Green has been \$5,072 over the course of the Township's farmland preservation program. However, due to the rising cost of land, the cost per acre may be higher for future preservation. The Township looks to leverage municipal funds with county and state cost-share grants on farmland projects.

In past project financing, the municipal cost share has averaged less than 5%. The traditional Muni PIG program has a funding breakdown of 60/20/20 where the SADC contributes 60% of the total cost, with the county and town splitting the remaining balance equally. For the purposes of this analysis, the Township assumes its cost could be upwards of 20% although past financing indicates it would be less.

Cost projections to preserve farmland in Green Township include the following assumptions:

- The Trust Fund will generate \$65,000 annually and will remain relatively stable over the next 5 to 10 years.

- Average price per acre will be \$5,072 and will increase 5% over the next five to ten years.
- The town will purchase land in partnership with the county and state (no direct purchase by the municipality).

G. Administrative Resources

1. Staff/Consultant Resources

The AAC meets to discuss farmland projects and issues throughout the year. It works with their municipal professionals (clerk, engineer, planner, attorney) to complete farmland projects.

2. Legal Support

Legal support for Green Township’s farmland preservation program is provided by the municipal attorney, up to the point of contract signature, after which the county attorney is used.

3. Database Development

The AAC maintains the database of farmland in the municipality and works with the Sussex CADB on projects and data issues, as needed.

4. Geographic Information System (GIS) Capacity

The Land Conservancy of New Jersey has provided Geographic Information System mapping services for Green Township for the Comprehensive Farmland Preservation Plan.

H. Factors Limiting Farmland Preservation Implementation

The County’s Direct Easement purchase program has been the most effective farmland program for the town. However, most of the larger farms that qualified for this program have been preserved. Many of the remaining unpreserved farms of substantial size in Green are unpreserved because their owners do not feel they are offered adequate value through farmland preservation, or because they do not wish to go through a bureaucratic process and place restrictions on their land.

The average size of target farms in Green Township is 46 acres for individual parcel farms, and 64 acres for farm units. The AAC considers these to be “infill” farms closing the gap in the larger preserved farm belts in the community. The average size of already preserved farms in Green is approximately 100 acres.

Green Township is open to all applications, meaning the AAC does not turn away any applicants. The state’s tillable land requirement is the limiting factor for many of these applications and the AAC would like to see the SADC loosen its requirements to allow more farms to become eligible for the program.

The town’s goal of preserving 1,000 acres of additional farmland will provide the basis for ensuring a sustainable agricultural economy and infrastructure in Green Township. This will allow the practice of farming and its livelihood to thrive and grow into the future.

Preservation Goals



Chapter 6.

Economic Development

I. Economic Development Plans and Initiatives

Green Township continues to be mainly agricultural, with 5,011 acres of farm assessed land. The primary crops are hay, alfalfa, and corn. Throughout the state, the marketing and profitability of the agricultural industry has gained renewed focus. The farmland preservation program is a critical component of the farming industry, and the success of the farmland preservation program in Green is measured not by acres preserved but also by the programs put in place to support the farmers and their businesses.

The future of agriculture in Green Township is shaped by market forces and social trends that are occurring throughout New Jersey. The combination of traditional agricultural markets declining and land costs increasing will likely promote innovation in the ways farmers supplement their incomes. As traditional farming practices become less economically feasible, exploring opportunities for niche farming will be increasingly important for Green Township farmers.

Farmland prices in Sussex County have remained relatively stable for the past 5 to 10 years, although home prices have increased due to pandemic related shifts and low

inventory. Development continues for commercial and light industrial purposes and can take land out of agricultural production. The combination of declining traditional agricultural markets and increasing land pressure will likely promote innovation in the ways farmers supplement their incomes.

New Jersey offers Green Township farmers several support agencies and programs ranging from technical advice to farm loans. The NJDA Smart Growth Tool Kit (2006) provides information to support municipal and county government, businesses, non-profit groups, and local citizens in their efforts to achieve their goals and objectives. The Tool Kit embraces the five linked components that have been identified by NJDA as critical for the future of farming:

- Farmland Preservation
- Innovative Conservation Planning
- Economic Development
- Agriculture Industry Sustainability
- Natural Resource Conservation

Additionally, the NJDA released a 2011 Economic Development Strategies report to expand and strengthen various sectors of the agriculture industry in New Jersey, including strategies for produce, horticulture, dairy, livestock and poultry, field crops, organic, equine, and agritourism.

The Sussex CADB is directly and administratively involved with the preservation and enhancement of farming in the County. This includes acquisition, monitoring, assisting with Right to Farm disputes, working with municipalities to create farm-friendly atmospheres where possible,

and coordinating with the state, county, and other organizations to maximize the agricultural potential in Sussex County, including an awareness of the need to support agriculture from an economic development perspective.

In 2017, 35 of Sussex County's 1,008 farms, or 3.5% of all farms, had sales of more than \$100,000, accounting for 86% of the total revenue. This leaves 94% of farms accounting for 14% of the remaining total sales, indicating a wide disparity in revenue between a large majority of smaller farms and a small minority of larger farms. The average farm market value of \$18,081 in 2017 was lower than what was reported in 2007.

(Table 12)

Using the Census of Agriculture, crop sales in Sussex County have shown a steady increase from 1987 to 2012, with a slight decline in 2017:

- 2002: \$8,100,00
- 2007: \$11,800,000
- 2012: \$11,600,000
- 2017: \$10,800,000

Within the crop sector, hay and other crops was the largest sub-sector in 2017 with 30% of the market share, more than the 10% market share in 2012. The nursery/greenhouse sub-sector came in second with 18%, vegetables and grains were third with 17%, and fruits and Christmas trees lagged at 14% and 2% respectively.

Over this same 15-year period (2002-2017), livestock sales were \$6.7 million in 2002 before increasing to \$9.4 million in 2007 and declining to \$7.4 million in 2017.

The NJDA observes that local access to large affluent markets has long been an advantage for the marketing of those products. Using recommendations outlined in the 2011 Economic Development Strategies report, Sussex County municipalities, including Green Township, can investigate ways to expand and/or diversify into more profitable sectors to ensure sustainable agriculture practices and profitability.

For each of the sectors, the 2011 report encourages farmers to continually seek new local, state, and interstate markets to strengthen market share.

Produce

Major efforts by the NJDA are directed at increasing the demand for New Jersey grown produce through branding, agritourism, farm direct sales programs, and farm markets. NJDA is committed to promoting agritourism through the Jersey Fresh website, the distribution of printed materials, and other forms of advertisement and promotion including collaborating with Rutgers University through the New Jersey Agricultural Experiment Station, and promotion of the work of other organizations such as the New Jersey Farmers Direct Marketing Association. Green Township farms with appropriate activities benefit from such promotion.

Table 12. Sussex County Agricultural Economic Overview

	2007	2017	% Change to 2017
Market Value/Products Sold (\$1,000)	\$21,242	\$18,226	-14%
Average/Farm (\$)	\$20,040	\$18,081	-10%
Production Expenses (\$1,000)	\$25,917	\$24,532	-5%
Average/Farm (\$)	\$24,450	\$24,339	-0.5%
Net Income (\$1,000)	1,342	-992	-174%
Average/Farm (\$)	1,266	-984	-178%
Farms w/Net Gains	362	351	-3%
Average/Farms (\$)	\$25,445	\$26,068	2%
% of All of Farms	34%	35%	3%
Farms w/Net Losses	698	657	-6%
Average/Farm (\$)	\$11,273	\$15,436	40%
% of All of Farms	66%	65%	2%
Total Acres	65,242	59,766	-8%
All Farms	1,060	1,008	-5%
Average Acres/Farm	62	59	-5%
Source: Census of Agriculture			

The 2011 Economic Development Strategies for produce focused on the Jersey Fresh program and food safety. NJDA's Jersey Fresh labels program is promoted throughout the state, to strengthen the appeal of the Jersey Fresh brand to supermarket chains and other retailers. This has been largely successful, with major retailers such as Wegmans, ShopRite, Trader Joe's, Target, ACME, and Foodtown (among others) carrying and promoting produce from the Jersey Fresh program.

Produce, which includes vegetables and fruits, is a leading agricultural commodity in New Jersey. In 2017, Sussex County vegetable growers on 101 farms harvested 564 acres, with resulting sales of \$1,877,000. Fruit, tree nut, and berry combined sales totaled \$1,545,000 in 2017, an increase of 85% from 2012. Total produce sales increased after 2007, from \$2,971,000 in 2007 to \$3,422,000 in 2017, a 15% increase.

Green Township had a total of 130 acres which were harvested for fruits and vegetables in 2018, a decrease from 184 acres in 2015. The most prominent fruit and vegetables crops in 2018 were apples (7 acres), pumpkins (64 acres), and sweet corn (36 acres). Some of these crops do not require as much land as field and forage crops such as soybeans and hay, making them a positive match with the trend towards smaller farms over the years, especially those that follow organic or sustainable practices. However, these crops also have higher input costs than crops such as hay, and in that respect can benefit from economies of scale.

In Sussex County, many produce growers market their products at

their own roadside stands or at farmers markets. Farmers with roadside stands or markets should have their own websites, and utilize other websites and regional events, to gain visibility. Opportunities for promoting produce (and, in many cases, numerous other agricultural products) include:

- NJDA Jersey Fresh website listings have recorded 8 farms in a 5 miles radius of Green Township, including 7 on-farm markets and pick-your-own farms.
- Jersey Fresh also offers community-supported agriculture (CSA), where residents can pledge to support a farm in advance of the growing season, where they receive shares of the total harvest in return. Green Township has two CSA farms: Agrestic Acres, Genesis Farm, and Growing Dirt.
- Rutgers New Jersey Agricultural Experiment Station Cooperative Extension (NJAES-RCE) created an educational website dedicated to agritourism for the public, planning and policy professionals, farmers, and educators.
- A training website was also developed by the Rutgers Agritourism Team for farmers and can be found on the Rutgers agritourism [website](#).
- Natural Jersey is a site promoting local natural health products and sustainable living. They highlight producers, such as farms, farm stands, and farmers markets throughout New Jersey which align with their mission and nearby farms and vineyards.
- The New Jersey State Fair and Sussex County Farm & Horse Show/Fair are hosted at the Sussex County Fairgrounds,

featuring many local farms offering products for sale, as well as 4-H youth shows, horse shows, and other attractions.

- Greenmarket is a network of New York City farmers markets designed to promote small family farms within the region. Over 50 Greenmarket locations are found within all five boroughs.
- Other resources listing direct marketing opportunities for produce in Green Township include VisitNJfarms.org, NJ Farmers Direct Marketing Association, LocalHarvest.org, and EdibleJersey.com (pick-your-own listings).

Nursery, Greenhouses, Floriculture and Sod

Nursery operations were the second highest-ranking category of agricultural commodities in Sussex County in both 2012 and 2017. This sub-sector has exhibited steady growth since 1987:

- \$5.7 million in 1987
- \$24.8 million in 2002
- \$2.5 million in 2012 (14% of agricultural sales)
- \$2 million in 2017 (11% of agricultural sales)

Sussex County experienced a large increase in revenue from nursery and greenhouse products from 1987 to 2012, and a 22% decrease from 2012 to 2017. The sales increase is attributed in part to businesses taking advantages of market niches and new technologies, supplying specialty products to customers throughout the region.

Green Township had a total of 77 acres dedicated to nursery (including cultivated sod and floriculture) in 2018, down from 194 acres in 2015, and 93 acres in 2010. There are 17 garden centers and nurseries certified to market the Jersey Grown branding in Sussex County, as listed on NJDA's Jersey Grown website, though none of these are in Green Township.

In addition to those strategies listed above where nursery, greenhouse, floriculture and sod products may be applicable, other strategies to follow may include:

- Increase consumer awareness of the Jersey Grown brand; utilize the resources of the NJDA for advertisement and marketing purposes.
- Seek and/or expand contracts with large box store operations such as Home Depot, Lowe's, and Walmart; contact Sussex County for opportunities.
- Promote "drive up" operations where consumers can buy directly from the nursery or greenhouse.

Field and Forage Crops

The NJDA Economic Development Strategies for field and forage crops provide strategies to improve production, yield per acre, and management practices. It also supports organic crop production plans for a green energy initiative involving biofuel production that could provide a new local market for New Jersey agricultural products. The two prominent crops in Green Township are hay (both alfalfa and other hay) and corn for grain.

For Sussex County:

- Grains, oilseeds, dry beans and dry peas: \$1.9 million (22% decrease since 2012)
- Hay and other crops :\$3.3 million (17% increase since 2012)

Together these agricultural sectors represent approximately 29% of total agricultural sales in Sussex County.

Corn In 2017, Sussex County ranked seventh in the state for corn, with a total of 3,890 harvested acres (2,697 for grain and 1,193 for silage) which brought in a total of \$1.6 million in sales. In 2012, Sussex County harvested 5,089 acres of corn (3,250 acres of corn for grain, and 1,839 acres of corn for silage), resulting in sales of \$2.3 million. Though the total monetary amount for corn sales is not released on a municipal level, Green Township farmers harvested a total of 353 acres of corn (230 acres of corn for grain, and 123 acres of corn for silage) in 2018, relatively similar to 2015 when the total acres of corn harvested was 389 acres (289 acres of corn for grain, and 100 acres of corn for silage).

Hay Green Township harvested 1,153 acres of hay, including alfalfa hay, in 2018, an increase from the 966 acres harvested in 2015. Sussex County on a whole harvested 11,756 acres of hay (including alfalfa hay, excluding haylage) in 2017, bringing in a total of 24,130 tons, a decrease from 14,031 acres harvesting 25,942 tons in 2012.

Soybeans Sussex County ranked 11th in the state for soybeans in 2017, with 10 farms harvesting 666 acres of soybeans, bringing in a total of \$232,000 in sales. The number of acres harvested and sales in 2012 are not disclosed in the Census of

Agriculture data. Soybeans are a relatively new crop introduced to Green Township, with zero acres harvested from 2005 to 2010. In 2018, farmers harvested a total of 51 acres of soybeans.

Field and forage crop strategies to consider include:

- Utilize improved management practices to boost yield per acre.
- Capitalize on workshops on cropland and pasture management from the county or state.
- Diversify to row crops that meet markets with increasing demand (such as spelt as a dietary substitute for wheat or switchgrass for pelletized energy) and pursue to value-added marketing opportunities (such as sorghum for homemade jams and jellies that can be marketed from roadside stands, at community markets, and over the internet).
- Transition to certified organic or naturally grown bean and grain crops to increase their value
- Utilize county assistance to investigate alternative crops for local production and new markets (such as hops, specialty small fruits, small-scale animal products).

Dairy

In 2017, Sussex County had 12 farms with milk cows, bringing in a total of \$4.4 million. As of 2018, Green Township had 77 mature head of dairy cattle compared to 104 head in 2010, and approximately 191 in 2000.

Livestock and Poultry

The 2011 Economic Development Strategies for livestock focused on animal health, ensuring safe and legal sales of poultry and eggs at community farmers markets; and supporting youth programs involving livestock. Operations in Green Township include beef and dairy cattle, sheep, goats, hogs, bees, poultry, and eggs. **(Table 13)**

Between the years 2005 and 2018, the cattle stock increased by 38%, reflecting a decrease in dairy but a sharp increase in beef cattle. Livestock that show downward trends in Green Township are beehives, goats, and ducks, following national and state cultural shifts. The fastest growing animal industry is meat chickens, with a 1,176% growth between 2005 and 2018. Other growing animal herds are turkeys (862% growth), swine (647% growth), and sheep (148%). These specialized products are easily sold directly to consumers.

While sheep numbers increased 148% over this 13-year period, sheep farming remains a niche sector for farmers to explore to provide specialty meat and value-added products to nearby markets. The national price for wool in 2019 was \$1.89 per pound and the average yield per fleece was 7.2 pounds. Goat and sheep herds bring the opportunity for value-added products such as cheeses made from sheep's milk.

Goats are easier to manage and less costly to raise than many livestock, with a variety of end products: milk, cheeses, mohair or meat, depending on the type of goat. Growing populations of ethnic groups that favor goat meat spur demand, and goat milk can be used to make artisan goat cheeses, soaps, and other value-added products.

To strengthen and expand its place in the Green Township agricultural economy, some livestock and poultry strategies may include:

Table 13. Livestock and Poultry in Green Township

	2005	2010	2015	2018	% change (2005-2018)
Cattle and Calves	372	402	291	513	38%
Sheep	102	108	155	253	148%
Swine	15	18	27	112	647%
Bees	35	19	16	12	-68%
Goats	110	77	31	23	-79%
Ducks	323	116	48	39	-88%
Meat Chickens	196	289	411	2,501	1,176%
Egg Chickens	1,451	981	1,032	2,500	72%
Turkey	13	5	53	125	862%
Other Livestock	16	14	104	12	-25%

Source: Farmland Assessment Data (SADC)

- Encourage USDA inspections in area farms to permit more direct sales of cuts of beef to consumers.
- Explore various additional markets and increased outlets for meat sales at regional community markets and special events.
- Seek opportunities for production contracts with poultry and livestock processors.
- Investigate outlets for dairy products for goats and sheep.
- Explore increased marketing opportunities for goat meat to meet the preferences of growing ethnic populations in the state.
- Promote the agritourism potential of livestock and livestock products.

Organic Farming

Organic crops and animals have the potential to be an important market for Green Township and Sussex County. With an increasing population, potential markets in Pennsylvania, and New York State (including Philadelphia and New York City), and increased consumer awareness regarding food production, organic products and the markets that support them should continue to gain a stronghold and become more mainstream as people demand high quality, readily accessible and affordable organic products. Certification of organic farms is regulated by the USDA via the Organic Food Production Act of 1990 (OFPA) through a National Organic Program (NOP) and can be somewhat costly and time consuming as compared to non-organic farming. This may dissuade some farmers otherwise amenable to this type of farming.

“Natural” farming is a type of farming that seeks to emulate organic farming, but is not overseen by laws or regulations, as is organic farming. Natural farming is somewhat less costly and time consuming than “organic,” and therefore may be a viable option for some farmers and their potential customers.

Another alternative, for farmers transitioning to organic production, is the ability to market their products under the NJDA’s newly introduced “Transitional Sustainable” label, eliminating the need to wait 36-months to profit from this niche market. With its strong produce sector, Sussex County is in an excellent position to facilitate the market growth of organic and natural agriculture products. Certified Naturally Grown (CNG) is a non-profit organization that offers certification for small-scale, direct-market farmers and beekeepers using natural methods. CNG uses a peer-review process, as it is more affordable for small operations than certifying through the state program.

Small organic operations (growers or processors), those with gross sales of less than \$5,000 per year of unprocessed organic product and/or less than \$5,000 of processed organic products (such as jam), can be exempted from the NOP certification process. They can market their products as organic if they follow the national organic standards for production, labeling and record keeping, but they cannot use the USDA Organic seal, which can only be used on certified products. They can also sell their products to the retail market, which can sell them as organic if the retailer does not re-package or process the product.

In 2017, the Census reported four Sussex County farms with the USDA NOP certification, three farms making the transition to NOP certification, and five farms which were listed as exempt from certification. On the state level in 2017, 102 farms reported \$13 million in sales of NOP certified or exempt organically produced commodities. There is an opportunity for other farms to invest in this practice to satisfy the continually growing trend.

Equine

The 2017 Census of Agriculture indicates that New Jersey produced over \$28 million in equine sales. Sales and farm sizes have varied since the category was created:

- 2002: 89 farms with average sales of \$5,899 per farm
- 2007: 85 farms with average sales of \$8,647 per farm (largely due to a spike in total equine revenues of \$735,000)
- 2012: 67 farms with average sales of \$8,776 per farm
- 2017: 63 farms with averages sales of \$8,890 per farm

The New Jersey Equine Advisory Board does not report any equine facilities in Green Township.

There are two equine facilities in Sussex County offering such services as training, driving, sales, breeding, boarding, turnouts, rehabilitation, shows/clinics, and lessons/instructions. Farms which have breeding services can make use of the Jersey Bred logo when marketing their animals.

Wine

In January 2012, Governor Christie signed into law in a bill permitting direct shipping by New Jersey wineries, and on July 2, 2014, the Governor signed into law another bill that established a pilot program through March 1, 2018, to allow wineries on preserved farms to conduct special occasion events under certain conditions as defined by the appropriate CADB. S757, signed into law on February 3, 2023, established permanent rules for special occasion events on preserved farmland. Up to 26 events per year may be held on preserved farms whose operation produces products worth more than \$10,000 annually. 6 events per year may involve 250 attendees or more. This legislation allows preserved farms access to another major source of revenue which may help them continue farming operations.

According to the NJDA, the state has 50 licensed wineries versus 25 in 2007. One Sussex County winery is listed on both the Jersey Fresh site and on visitnj.org (the Official Tourism Website of New Jersey), though none are in Green Township. In 2018, Green Township had two acres dedicated to growing grapes, an increase from six acres in 2005. Hampton Township had the highest number of acres for grapes in Sussex, at 8 acres in 2018. Sussex County had a total of 22 acres growing grapes in 2018, a decrease of 60% from the 55 acres in 2005.

Green Township may consider exploring the feasibility for additional Sussex County and Green Township farmers to diversify into grape production (or other fruits suitable for wine making).

Agritourism

Agritourism is one potential link in the long-term sustainability of the agriculture industry in Green Township and Sussex County. A successful example of agritourism is the Sussex County Farm Fair and Horse Show held annually. The Fair, which highlights the past and present agriculture heritage of Sussex County and New Jersey, has been operating as the Sussex County Fair since 2000 after the dissolution of the Flemington Fair in 1999, and is extremely popular, drawing thousands of visitors each year.

One advantage for Green Township farmers is the proximity to Philadelphia and New York City’s metropolitan areas. Strategies include expanding roadside programs, including signage and eligibility for signage, consumer promotion through an agritourism brochure, press releases and promotion of agricultural fairs.

In April 2014, the state gave further support to agritourism as a recognized sector of the agricultural industry by adopting an Agricultural Management Practices (AMP) for On-Farm Direct Marketing Facilities, Activities and Events into the New Jersey Register (N.J.A.C. 2:76-2A.13). Additionally, as aforementioned, NJ Bill S757, expanded the number of

private events which can be held on farmland, thereby providing farmers with another potential source of revenue on preserved land.

The 2017 Census reports that Sussex County had \$9.2 million in direct sales, representing 10% of total agricultural sales for the County. This is an increase of 811% over 1997, even while the total number of farms increased by only 25% (**Table 14**).

Agritourism helps change the perspective of the non-farming community and increases visibility, understanding, and appreciation of farming by residents and visitors. Agritourism can be an important contributor toward the long-term sustainability of Green Township’s agricultural industry. Visibility is given to agritourism opportunities through the many websites and publications available. For every dollar in agritourism sales, \$0.58 of additional sales are generated in other businesses (e.g., restaurants, construction companies, insurance providers).

Among the recommendations included in this report are:

- Marketing and promotion.
- Liability protection and insurance.
- Regulatory guidance for operators.
- Training and information workshops for farmers.

Table 14. Direct Sales in Sussex County: 1997-2017

	1997	2002	2007	2012	2017	% Change '97- '17
Farms	71	97	82	96	96	35%
Sales (\$1,000)	\$961	\$1,249	\$1,173	\$6,474	\$5,873	511%

Source: Census of Agriculture

- Resources for farmers to obtain grant funding.
- School tours.

Green Township can work with the state and county to:

- Establish additional permanent, three season community markets.
- Establish event-specific cooperative farm stands at community events in the County.
- Create a regional harvest festival in the fall, a horticultural festival in the spring, or a farm itinerary tour.
- Work with schools and farmers to develop and promote an expanded curriculum.
- Expand participation in WIC & Seniors Farmers Market Nutrition Program as Certified Farmer Vendors.
- Implement a permanent signage program on a municipal or county level.
- Explore growth in other sections of agritourism such as hunting, fishing, and trapping.

Potential challenges to successful expansion of agritourism in Green and Sussex County include:

- Impediments to farmers making long-term investments in crop diversification.
- Market saturation.
- Lack of recognition for agriculture in regulations and master plans.

Farmers with direct sales or agritourism activities can post their listings in the following online. Farmers who want to learn more about running an agritourism operation can start with the resources available from the

Rutgers Sustainable Farming on the Urban Fringe website. Agritourism resources include information on selecting a venture, writing business, marketing and risk management plans, and information on the Right to Farm Act and Agricultural Management Practices. Additionally, the NJAES-RCE has publications available on its website on specific agritourism topics, such as how to budget for a corn maze.

General Strategies

Strengthened communication and coordination between agencies and programs can result in multiple benefits for the agricultural community. Areas which would benefit include:

- Farmland Assessment.
- Crop Insurance.
- Technical Assistance.
- Recycling and Food.
- Motor Vehicle Requirements.
- Financing.

J. Agricultural Industry Retention, Expansion, & Recruitment Strategies

There are many techniques to support the economic expansion, development, and solidification of Sussex County's agricultural industry (**Table 15**). Diversity of agricultural commodities to broaden the agricultural base now dominated by corn, alfalfa, and soybeans would help to ameliorate any economic downswing in either the general economy or a specific sector of the county's agriculture industry. The AAC and the Township stand behind the local agricultural industry.

Table 15. Agritourism Websites and Publications

Source	Description
State	
NJDA Jersey Fresh Website	Roadside markets
	On-farm activities
	Wineries
SJAES-RCE	Agritourism education
NJDA Jersey Equine Website	Equine events
	Equine facilities
Visit New Jersey Farms Website	Farms, farm products, activities and events
	Ability for website visitor to build itinerary of farms to visit
Visitnj.org (Office Tourism Website of New Jersey)	Farms & orchards
	Wineries & vineyards
	Fairs
Regional	
Sussex County Website	Tourism page includes links to countrywide and regional attractions
Organizations	
NJ Farmers Direct Marketing Association, Inc.	Farms and farm markets
New Jersey Christmas Tree Growers' Association	Christmas Tree farms

1. Institutional

Minimum Wage – The State minimum wage increases every year from 2022 until 2027, when the minimum wage reaches \$15.00 per hour. This minimum wage applies to farm workers and exceeds the federal minimum wage of \$7.25. Pennsylvania still has an exception for farm workers, particularly seasonal workers, giving it a competitive advantage in operations that are hired-labor intensive. Generally, the production of vegetables and fruits (produce) requires the highest amount of hired farm labor, mainly at harvest time, to pick and process the vegetables

and fruits. Other products that are prevalent in Sussex such as corn and alfalfa require little or no hired farm labor (most labor is done by farm families). As such, farm labor costs are not as large a problem for Sussex farmers as they are for farmers in parts of the County or State that have major produce agriculture industries.

Farmer Support—A variety of resources exist at the state level, published on the SADC website. These include:

- Agriculture credit and finance.

- Business development for agriculture, food manufacturing, and related industries.
- Farm building construction.
- Motor vehicle regulations for agriculture.
- Real property appraisal manual, farm building section.
- Recycling for agriculture.
- Risk management and crop insurance.
- Sales and use tax on farmer's purchases.
- Trespass, vandalism, and liability on farms.

One program, Farm Link, serves as a resource and referral center for new farmers, farmers seeking access to land and farming opportunities, landowners seeking farmers, and farmers working on estate and farm transfer plans. In 2015, the SADC launched "NJ Land Link," an interactive website connecting farmers seeking land or farming opportunities with those who have existing farmland or farming opportunities. Farmers interested in land or partnership/job opportunities, as well as those wanting to advertise available land and opportunities, sign up and create and manage their own listings. As of 2023, NJ Land Link had 122 farmers located on 151 active farmland listings, with 6 farms located in Sussex County.

Resources specific to estate planning and retirement planning are available through the Farm Link.

Two resources available to farmers through the SADC are the New Jersey Farmland Leasing Guidebook, and an Agricultural Mediation Program Handbook. The state,

NJAES-RCE and supply companies, provide other workshops for farmers, keeping them up-to-date on various issues related to the agricultural community.

Another opportunity is the New Jersey Agricultural Society's New Jersey Agricultural Leadership Development Program (NJALDP), administered by Burlington County College. NJALDP is a two-year professional development opportunity, for individuals in farming and agribusiness.

One program which could be expanded to Sussex County is the School Gardens initiative, funded by Team Nutrition Training mini-grants provided by the U.S. Department of Agriculture, the NJDA, and Grow Healthy – a program of the NJAES-RCE. This is a hands-on way to educate children about the importance of farming. Expanding this program to schools in Sussex County would be a great way to increase the awareness of both students and their parents about the benefits and value of the agricultural industry in the County.

Marketing, Advertising, Public Relations Support

Some farmers do opt to use paid advertising, but many, particularly those with smaller farms, hesitate to consider advertising, believing that the costs outweigh the benefits. They prefer to take advantage of free or less costly opportunities to market their products. Several embrace the opportunities of direct marketing, from roadside stands and from their own websites.

Signage

Signage promotes visibility and awareness of agriculture in general, as well as benefiting the individual farmers. Municipal considerations of farming needs when drafting their sign ordinances can be helpful in supporting farmer efforts to promote their products. Farm stands are often seasonal businesses that need to capture potential sales at harvest time. Signs that give directions to the farm stand and let customers know what is available are important. Having farm-friendly ordinances in place can make it easier for farmers to promote their products and can minimize right-to-farm complaints in cases where farmers run up against opposition to their signage, whether from neighboring residents or municipal officials. Farm signage can also benefit the municipality by drawing more visitors and dollars to the area, benefiting other businesses in the community as well as the farmer. Signs should conform to local, county, or state right-of-way and sight standards.

For farmers who qualify for the Jersey series of marketing programs, signage is available. This ranges from free price cards to banners and stickers, hats, and T-shirts. Jersey Fresh point-of-sale signs and other materials, both free and fee-based, can be ordered using the point-of-purchase application on the NJDA's Marketing and Development Jersey Fresh page.

Farm Markets

As of 2023, 7 community farm markets were operating in Sussex County. It is suggested that the County consider establishing a three-season market.

Community Supported Agriculture (CSA)

Economic support of the Green agricultural community also comes from local grass roots groups. This support is embodied in Community Supported Agriculture, which consists of:

- A community of individuals who pledge support to a farm operation so that the farmland becomes the community's farm. In such an arrangement, the growers and consumers provide mutual support, and share the risks and benefits of agriculture.
- Members or "share-holders" of the farm pledge in advance to cover the anticipated costs of the farm operation and farmer's salary
- Members receive shares in the farm's products throughout the growing season.
- Members also receive the satisfaction gained from reconnecting to the land and participating directly in food production.
- Members also share in the risks of farming, including poor harvests due to unfavorable weather or pests.
- Generally, growers receive better prices for their crops, gain some financial security, and are relieved of much of the burden of marketing

Agricultural Education and Market Research Coordination

Green Township may want to consider coordinating with Sussex County and the Rutgers Cooperative Extension (RCE) of Sussex County to identify and integrate market

research on agriculture and economic trends. The NJAES website offers additional information relating to animal agriculture, farm management and safety, pest management, plant agriculture, and other elements of interest to those involved in commercial agriculture. The Sussex County NJAES-RCE traditionally has been a sponsor of workshops, often funded through grants secured by the NJAES-RCE, and a helpful resource for local farmers in many other ways.

2. Businesses

Input Suppliers and Services

Without an adequate number of suppliers within reasonable driving distances of farms, the business of farming can become so expensive and time consuming to not be profitable. As agriculture in Sussex County becomes more “permanent” through increased preservation efforts, former suppliers who have left the area may return if they sense that a profitable supply business can be operated in the area. The county agricultural community can pursue options, which may include tax incentives, to entice other suppliers to return to the area. The Township welcomes agriculture-related businesses within the confines of its existing zoning.

Equipment and supply stores in Sussex County include (but are not limited to):

- Tractor Supply Company, in Sussex
- Farmside Supplies, in Sussex
- Outlaw Outfitters, in Newton
- Brodhecker Farm, LLC, in Newton

Product Distributors and Processors

Processing facilities such as creameries, slaughterhouses, and lumber mills are absent in Sussex County, and therefore Green Township as well, forcing local farmers to ship their products out of town to be processed.

The majority of produce is sold through retail markets to maximize profits, and some are sold either directly to consumers or through roadside stands. Some farmers may travel to metropolitan areas, including New York City, to sell produce at farmers markets and/or greenmarkets. Additionally, some produce is wholesaled to local supermarkets.

Produce is sold through a variety of channels. The majority is sold through retail markets, and some is sold either directly to consumers or through roadside stands. Some farmers may travel to metropolitan areas, including New York City and Philadelphia, to sell produce at farmers markets and/or greenmarkets. Additionally, some produce is wholesaled to local supermarkets.

Some animals are sold in their entirety directly to consumers (whether still alive or previously slaughtered); this includes sheep and goats to growing regional ethnic markets. The USDA must certify cuts of cattle before they can be sold directly to the consumer, otherwise they may be sold as a whole without inspection

3. Anticipated Agricultural Trends

Product Demand

From a county historical perspective, total agricultural sales were:

- \$15 million in 2002
- \$21 million in 2007
- \$18 million in 2012
- \$17.5 million in 2017

Looking forward, the nursery, greenhouse, grain and vegetables sectors of the agricultural industry should continue to be healthy and viable sectors in Sussex County and Green Township since they often serve the needs of increasing livestock practices such as sheep, goats, and poultry in the face of a declining cattle industry, as well as a burgeoning population of homes and businesses within the County and the region.

Value-added products can bring additional income to farms involved in direct marketing through farm stands and websites. Direct marketers can capitalize on the advantages of selling at retail rather than wholesale, selling from their own location rather than having to pay transport costs, and of generating additional income by developing value-added products such as pies, cheeses, jams, honey, and other products that serve the increasing numbers of customers who want the advantages of ready-made and the appeal of items “home-made” by someone else.

An increased demand for organic products may encourage farmers to adopt more natural farming methods. Since federal certification requires a three-year commitment,

many farmers may lean toward “natural” farming methods for food crops and for livestock, such as grass-fed beef raised without hormones or antibiotics.

One emerging trend is the emerging resurgence of hemp (*Cannabis sativa*). The growing support for hemp products, and the recent legislative actions which removed it from the Schedule I list of Controlled Substances Act, have created a new market. The “New Jersey Industrial Hemp Pilot Program” was signed in 2018, for hemp that is cultivated and tested to ensure that THC content does not exceed 0.3 percent.

Market Location

Green Township is located near the large population centers of New York City, and Philadelphia, with a route to New York City via Route 206 and Interstate-80. Green Township farmers can consider taking advantage of these large population centers, the growing ethnic diversity and dietary trends, and the growing agritourism sentiments, and adapt their farming as practicable for potential increased profitability and viability. Maximizing the use of nearby highways can increase the number and type of consumer markets to be reached by Green Township farmers.

Future of Agriculture

Among the most substantial trends reshaping the town’s agriculture base is the rapid rise of the crops sector. Since the 2002 Census, crop, nursery, and greenhouse products have outpaced livestock and poultry sales. Niche products such as packaged and organic goods that generate “value added”

revenue streams are likely to increase. Challenges facing Green's farmers are land prices and property taxes. Higher land prices threaten to replace farmlands with residential and commercial developments that are less compatible with agricultural production.

4. Agricultural Support Needs

Agricultural Facilities and Infrastructure

The County lacks enough permanent suppliers of items such as seeds, feed, and chemicals required to keep farms productive. Most of these services involve local farmers selling these items to one another, hampering the stability of these support services. An increase in permanent agricultural suppliers would work to guarantee the stability of these services.

Flexible Land Use Regulations

State Level – Examples where regulatory flexibility is important include the NJDEP's Freshwater Wetlands Protection Act Rules (N.J.A.C. 7:13-et. seq.), which grants exemptions for agricultural activities, and the Flood Hazard Area Control Act Rules (N.J.A.C. 7:13). The latter was adopted in 2007 and amended last in June 2019, with amendments for agriculture effective June 2016, including for agricultural permits.

Municipal level – Building an awareness of and provisions supportive of agriculture into municipal master plans and zoning ordinances to support agriculture as an economically viable sector. Green farmers benefit from having a Right to Farm ordinance enacted in their town.

Other areas where municipal sensitivity to the land use needs of agriculture can be helpful include consideration of the following issues when creating municipal regulations:

- Setting specific buffer standards for non-farm development adjacent to working farms that help to limit trespassing and littering and protect the residential landowner from dust and spray materials spread during farm activities.
- Code or ordinance provisions requiring developers to notify purchasers of the proximate existence of active agriculture.
- Exemptions for certain farm structures from building height restrictions.
- Allowing additional principal dwelling units on farms to meet the needs of farmers for additional housing for their children or for farm managers.
- Exemptions from setback requirements when farmers seek to expand an existing nonconforming structure.
- Flexible fencing ordinances that make allowances for types of fencing on farms that might not be desirable in residential zones, in consideration of the farmers' needs to prevent wildlife damage.
- Construction fee reduction for agricultural buildings.

Incorporating agriculture into local planning and zoning documents will help the Township protect its farmlands and rural character in the face of development pressure. Green Township passed a Right to Farm ordinance to ensure farmers can practice accepted agricultural operations. In addition, Green

Township supports farms, processing and packaging agricultural output, irrigation pumps and equipment, using tractors and other necessary equipment, and hiring and utilizing necessary farm labor. The Township's zoning is supportive of agriculture.

Agriculture Representation in Economic Development

5. Agricultural Support Implementation

The NJAES-RCE of Sussex County has always been a source of support to local farmers, helping them adapt to new technologies, introducing new farming practices to improve efficiency, and keeping farmers up to date with market trends. With the rise of online shopping, more and more people are choosing to order products, including agricultural products, from the comfort of their own homes. The NJAES-RCE can work with local farmers in expanding their presence to the web in addition to traditional advertising such as signage and roadside stands.

The average age of farmers is increasing as well, with a large need for new generations of farmers to come in and take over agricultural operations in the years to come; the NJAES-RCE can reach out to those interested in or just beginning their own farming operations, assisting them in reaching the point where their operations become profitable.

The Township, as well as the County, can continue to promote agritourism, helping to boost farm revenues and raise local awareness of, and support for, farming operations. This can be done in conjunction with the non-farming community, such as local artists, who

can help in attracting people who may primarily be more interested in artwork or music than agriculture and end up gaining exposure to farming activities and products when visiting art exhibits or concerts.

Sustainable Agriculture Research and Education (SARE) is a USDA competitive grants program that helps build the future economic viability of agriculture in the United States.

State agriculture support includes the 2020 Specialty Crop Block Grants, New Jersey Wine Industry Project Grants, Soil and Water Conservation Grants, New Jersey Risk Management and Crop Insurance Education, New Jersey Junior Breeder Loan Fund, Organic Cost Share, and Farm to School Mini Grants.

Farmland Preservation Programs support include State Acquisition, County Planning Incentive Grants, Municipal Planning Incentive Grants, and Grants to Non-Profits.

New Jersey Farm Bureau

The NJFB advocates for farmland preservation and legislation relating to agricultural labor and the Right to Farm. The NJFB educates the public about the agricultural industry and participates in farmer training and education programs.



Hunts Mill Waterfall

Chapter 7.

Natural Resource Conservation

A. Natural Resource Protection Coordination

1. Natural Resources Conservation Service (NRCS)

An important partner in support of natural resource conservation for the agricultural community is the USDA NRCS. The NRCS provides assistance in the conservation and management of soil, water, and other natural resources for farmers and landowners. The NRCS provides technical assistance suited to the natural resource issues that are specific to a farmer's needs, with ample opportunities for cost-shares and financial incentives.

Green Township farmers may utilize their local NRCS office for assistance.

NRCS also will reach out directly to landowners if they know of a farmer who needs technical assistance or could use the guidance of the NRCS staff. The local NRCS office serving Sussex County:

Address: Building 1, 101 Bilby Road, in Hackettstown Commerce Park.

Phone and Website: 908-852-2576, www.nj.nrcs.usda.gov

Within one year of selling their development easement, owners of preserved farms are required to develop a Conservation Plan. This is also required when applying for the Environmental Quality Incentive Program (EQIP).

The NRCS Field Office Technical Guide is used to develop conservation and resource management plans. Conservation practices discussed in the Guide that are pertinent for Green include, but are not limited to:

- Riparian buffers, including necessary buffer widths and plant species.
- No till and minimum till practices.
- Prescribed grazing and pasture management.
- Nutrient management, including manure and fertilizers.

In November of 2020, the USDA NRCS completed an update to its National Conservation Practice standards. The 2018 Farm Bill required the NRCS to review these practices. They provide guidance for planning, designing, installing, operating, and maintaining conservation practices. Some of the main areas of interest they cover are:

- Irrigation water management.
- Heavy use area protection.
- Composting facilities.

Two new conservation practices which deal with wastewater treatment and wildlife habitat planning were added, and an additional 18 conservation standards are being tested to establish and document natural resources benefits. This update addresses changes in technology and added criterion for soil health, water conservation, drought tolerance, and resiliency.

2. Upper Delaware Soil Conservation District

The NJDA Division of Agricultural and Natural Resources includes the State Soil Conservation Committee (SSCC). Among its objectives are the protection of agricultural lands through farmland retention and productivity improvements, control and prevention of soil erosion and sedimentation on agricultural land, protection of water quality and control, and prevention of storm and flood water damages.

The SSCC coordinates and supports the work of the state's 14 local soil conservation districts (SCDs), including the Upper Delaware SCD (Warren and Sussex Counties). The SSCC are part of the New Jersey Conservation Partnership, which also includes the USDA NRCS and NJAES-RCE. The Upper Delaware SCD is charged with implementing natural resource conservation and assistance programs and services, which include agricultural conservation planning assistance, agricultural conservation cost-sharing program grants, application of organic materials on agricultural land, agricultural water supply and management, soil erosion and sediment control, storm water discharge authorization, and soil surveys.

The Upper Delaware SCD works with the NRCS in providing survey assistance, engineering designs and plans. For development easements which require a conservation plan for the farm to be obtained within one year, the NRCS will prepare a conservation plan at no cost to the farmer. It also provides administrative support to Conservation Assistance Program (CAP) in support of Federal

Farm Bill Conservation programs and the New Jersey Farmland Preservation Program, including the preparation and implementation of Conservation Plans. Its goal is to promote best management practices (BMPs) for soil erosion and sediment control, animal wastes, nutrient management, water quality improvement, and other natural resource management concerns.

Green's farmers may approach this local SCD office (as well as the local NRCS office) with a Request for Assistance (RFA) to apply for funds from the State Conservation Cost Share program and federal programs such as EQIP. If approved, the RFA is forwarded to the local NRCS office in Hackettstown for processing. The administration of the RFA includes preparation of a Conservation Plan and program contract. The Upper Delaware SCD is involved in review of Conservation Plans and program contracts and must give final approval to both.

The Upper Delaware SCD office serving Green in:

Address: 51 Main Street, Suite B in
Blairstown

Phone: 908-852-2579

Rutgers New Jersey Agricultural Experiment Station, Cooperative Extension of Sussex County (NJAES-RCE)

The NJAES-RCE of Sussex County provides field and technical research on Best Management Practices (BMPs) for farmers to ensure the long-term viability of the agricultural economy and the natural resources upon which it is based.

The NJAES-RCE of Sussex County offers the Agriculture and Natural Resource Management program to provide educational programs and services including soil testing, insect identification, plant disease diagnosis, and pest management recommendations for agricultural operations. The NJAES-RCE of Sussex County can be contacted at (973) 948-3040.

New Jersey Department of Environmental Protection

The NJDEP Division of Parks and Forestry oversees the Private Lands Management Program for the stewardship and retention of privately owned productive forest lands. This includes the private woodlands currently under Farmland Assessment, which totaled 228,000 acres statewide in 2020. Such tracts were added as "farm products" in the 1970s.

There are two classifications of woodlands: appurtenant (or attached) and non-appurtenant (or unattached). Requirements for non-appurtenant woodland tracts are listed in N.J.A.C. 18:15-2.7. These tracts must be utilized by the farmer as a sustainable "product," and require Woodland Management Plans (WMPs) to receive reduced local property taxes accorded properties in the farmland tax assessment program.

The Division of Parks and Forestry, Bureau of Forest Management (BFM), reviews farmland assessment applications that include WMPs prepared for farmers by private consultants. The BFM maintains a list of foresters approved for this purpose. Once a WMP is in place, a Woodland Data Form (WD-1) must

be submitted with the farmland assessment application yearly to certify compliance with the WMP.

Non-appurtenant woodlands are woodland acreage on a farm over and above total farmed acreage (tilled and pasture). For example, if 50 acres of a farm are tilled or pastured, and there are 125 acres of woodlands on the farm, 75 acres of woodlands would be non-appurtenant (125 woodland acres minus 50 farmed acres). In Green Township:

- 1,839 acres of non-appurtenant woodland in 2018.
- 1,814 acres in 2015.
- 1,775 acres in 2010.
- 1,604 acres in 2005. (**Table 16**)

Appurtenant woodlands are woodland acreage on a farm, less than or equal to, farmed acreage. In the preceding example, 50 of the 125 woodland acres would be appurtenant. Appurtenant woodland acres do not require a WMP to qualify for farmland assessment. In Green Township:

- 794 acres of appurtenant (or attached) woodland acres in 2018, down from 2015 and 2005.
- 779 acres in 2010.
- 888 acres in 2005.

The NJDEP’s Endangered and Nongame Species Program administers the Landowner Incentive Program (LIP). This program worked to improve habitat management and protection for threatened

Table 16. Woodlands in Green Township		
Year	Non-Appurtenant Woodlands (acres)	Appurtenant Woodlands (acres)
2018	1,839	794
2015	1,814	795
2010	1,775	779
2005	1,604	888
Source: Farmland Assessment (SADC)		

and endangered species on private lands, some of which were agricultural lands. Since 2014, there is no expectation of congressional reapproval of LIP. While LIP is no longer available, other incentive programs through NJDEP are listed on the NJDEP, Division of Fish and Wildlife website.

USDA, Forest Service’s Forest Stewardship Program

The United States Forest Service (USFS) sponsors the Forest Stewardship Program (FSP), administered locally by the BFM. In the summer of 2017, the Forest Stewardship Program transitioned to a new program that eliminated income requirements to qualify for the program and enhanced monitoring and management of enrolled acres.

This program supports landowners whose property has a FSP that recognizes and manages the wetlands, wildlife, aesthetics, soil, and water in addition to the woodlands on the property. This program, when fully funded, offers landowners cost-share initiatives of up to 75% of the cost of a new or revised FSP to allow the landowners to fully follow the guidelines in their plan.

As of June 2023, Sussex County has 12,205.6 acres in 250 plans enrolled in FSP; Green Township has 388 acres in 12 plans. The New Jersey Forest Service Regional office can be contacted at:

Address: 501 East State Street, 3rd Floor, Trenton, NJ 08625-0420

Phone: 973-786-5035

Website: <https://www.nj.gov/dep/parksandforests/forest/index.html>

North Jersey Resource Conservation and Development Council (NJRC&D)

NJRC&D works with communities to deliver agricultural sustainability and water resource protection. NJRC&D offers a River-Friendly Farm Certification, which is a voluntary certification program designed to provide technical assistance and recognize farms that protect our shared natural resources through responsible management. The program has expanded with the certification of 33 farms in the vicinity of Sussex County.

The NJRC&D offers no-till drill rental for cover cropping and pasture reseeding, rain garden design and rebates, and a small grant funding program to assist farmers in implementing best management practices through a Water Quality Restoration Grant from the NJDEP. NJRC&D is located at:

Address: 10 Maple Avenue in Asbury, Warren County

Phone: 908-574-5368

Private Non-Profit Groups and Private Citizens

The preservation of agriculture and agricultural resources requires not only the broad support of state, county, and local governments, but also the help of private non-profit groups and citizens. The Green Township agriculture community has the support of a variety of farming committees and organizations. Other local committees and organizations include the Sussex County Board of Agriculture, New Jersey Farm Bureau, 4-H, Future Farmers of America, and the Agricultural Fair.

B. Natural Resource Protection Programs

1. SADC Soil and Water Conservation Grants

The types of soil and water conservation projects funded by SADC include:

- Soil erosion and sediment control systems (terrace systems),
- Control of farmland pollution (stream protection; sediment retention, erosion or water control systems; animal waste control facilities; and agri-chemical handling facilities),
- The impoundment, storage and management of water for agricultural purposes (diversions; water impoundment reservoirs; irrigation systems; and drainage systems), and
- Management of land to achieve maximum agricultural productivity (land shaping or grading) while conserving natural resources.

These grants fund soil and water conservation projects approved by the Soil Conservation District, with the program administered by both the SCD and the local NRCS office. Once the SCD deems the conservation project necessary and feasible, applications are forwarded to the SCC, which recommends projects to the SADC for funding approvals. A permanent source of funding needs to be put in place to ensure that farmers can continue to participate in these beneficial programs.

2. SADC Deer Fencing Grant Program

Farmers can apply to the SADC for cost-sharing grants for the installation of high-tensile woven wire deer fencing on permanently preserved farms. Farmers who are successful in their applications can cover up to 50% of the cost of materials and installation. Assistance for this program is capped at \$200 per acre or a total grant amount of \$20,000.

3. Federal Conservation Programs

Farm Bill Programs

The Farm Security and Rural Investment Act of 2002 (2002 Farm Bill) was landmark legislation, with much of its focus on conservation funding and environmental issues. Since 2002, the legislature has drafted and instituted new Farm Bill programs in 2008, 2014, and 2018. Voluntary programs relevant to New Jersey and Sussex County, included the Conservation Reserve Enhancement Program (CREP), Conservation Innovation Grant Program (CIG), Environmental Quality Incentives Program (EQIP),

Farm and Ranch Land Protection Program (FRPP), Grassland Reserve Program (GRP), and Wetlands Reserve Program (WRP). These programs were continued under the Food, Conservation and Energy Act of 2008 (2008 Farm Bill). These programs were renewed in 2014 and 2018, with the most recent legislation being The Agricultural Improvement Act of 2018 (2018 Farm Bill). The 2018 Farm Bill will be active until 2023. These programs are administered by the local NRCS office.

In 2014, the Farm Bill repealed the 2008 Average Crop Revenue Election (ACRE) program. The USDA Farm Service Agency (FSA) replaced the ACRE program with two new programs: Price Loss Coverage (PLC) and Agricultural Risk Coverage (ARC), which are continued through the 2018 Farm Bill. These programs, pay producers who have eligible historical base acres when prices and/or yields of covered commodities fall below a certain amount, regardless of their current planting decisions. Since a significant acreage of field crops such as corn and soybeans are grown in Green Township, and are also covered commodities under these programs, such a revenue support system may well have a positive effect since it would help specialty crops and niche markets receive their fair share of payment support.

The 2018 Farm Bill, in effect since December 2018, made minor changes regarding conservation programs administered by the NRCS and the FSA. Some highlights include:

- Increases mandatory funding for conservation programs by 2% from 2019-2023.

- Increasing Conservation Reserve Program (CRP) acreage cap from 24 million acres to 27 million acres by 2023.
- Continuing the Conservation Stewardship Program (CSP), but at a reduced funding level, and replacing an acreage cap with a funding cap.
- Increases funding for EQIP, the Agricultural Conservation Easement Program (ACEP), and direct funding for the Regional Conservation Partnership Program (RCPP).

Conservation Reserve Program (CRP)

CRP is a land conservation program where farmers enroll on a volunteer basis to remove environmentally sensitive land from agricultural production. In exchange, participating farmers plant species that improve the environmental health of the land and receive a yearly rental payment. The contract period is between 10-15 years.

Conservation Reserve Enhancement Program (CREP)

The NJ CREP program is an offshoot of the CRP and establishes a partnership between the USDA and the state to address environmental impacts related to agricultural practices. In exchange for removing environmentally sensitive lands from production, and introducing conservation practices, agricultural landowners are paid an annual rental rate. Like CRP, farmers enter in a voluntary contract for 10-15 years. This program targets 30,000 acres of agricultural lands throughout the state, requesting \$100 million in federal funds and a state match

of \$23 million over the life of the program. 100% of the cost is paid to establish the conservation practices and annual rental and incentive payments to the landowner.

Environmental Quality Incentive Program (EQIP)

EQIP is a voluntary conservation program that offers financial and technical assistance to implement conservation practices on eligible agricultural land. Opportunities include:

- Funding opportunities for beginning farmers.
- Financial assistance to help agricultural producers and forest owners address specific natural resource concerns.
- Financial assistance to install high tunnels (similar to hoop houses) to protect high-value crops.
- Soil health initiative to provide technical and financial assistance for soil conservation practices.

As of 2014, portions of the Wildlife Habitat Incentives Program (WHIP), which was not reauthorized in the 2014 Farm Bill, have been folded into the EQIP program; anyone interested in applying for wildlife projects should apply through the Working Lands for Wildlife (WLFW) initiative through EQIP.

Across all NRCS programs in Sussex County, there were 1,706 contracted acres, with 35 contracts in 2020. These contracts totaled \$917,230 (amount available, not paid out). While some farms in Green Township may be assisted through EQIP, the number of farms enrolled is not tracked on a municipal level.

Conservation Innovation Grants (CIG)

Funded by EQIP, the aim of the CIG is to stimulate the development and adoption of innovative conservation approaches and technologies in conjunction with agricultural production. Funds are awarded as competitive 50-50 matching grants to non-governmental organizations, tribes, or individuals for projects with a one- to three-year duration. Each year, the NRCS announces a new round of competitive grants. NJRC&D was the most recent recipient of such a grant was in 2019 worth \$74,995 to assess the use of short season variety corn and soybeans to facilitate adoption of multi-species cover crop.

Conservation Stewardship Program (CSP)

The CSP, initiated in 2007, is a voluntary conservation program that provides technical and financial assistance to manage and maintain existing conservation systems, implementing additional conservation activities on land currently under production. CSP Provides two types of payments through five-year contracts: annual payments for installing new conservation activities and maintaining existing practices; and supplemental payments for adopting a resource-conserving crop rotation. Participants earn payments for conservation performance – the higher the performance, the higher the payment. Minimum annual payments amount to \$1,500. Participants can apply for renewal at the end of the five-year contract. The local NRCS administers this program.

Working Lands for Wildlife (WLFW) Program

Administered by the local NRCS, WLFW provides technical and financial assistance to agricultural producers to assist the implementation of conservation practices that benefit target species and priority landscapes. Green Township is situated in focal areas for all three target species in New Jersey, the American Black Duck, the Bog Turtle, and the Golden-Winged Warbler. The town's placement within this focal area provides an advantage to Green Township's WLFW applicants who will receive higher consideration.

Agricultural Conservation Easement Program (ACEP)

In 2014, the Farm and Ranch Land Protection Program (FRPP) was repealed and consolidated into the ACEP. Administered by the local NRCS, the ACEP merges three former programs – Wetlands Reserve Program (WRP), Grassland Reserve Program (GRP), and Farm and Ranch Land Protection Program (FRPP). It has two components:

- Agricultural Land Easements: prevents the loss of working agricultural lands to non-agricultural uses.
- Wetland Reserve Easements: There are two types available in New Jersey: permanent (100% of the value and 50-75% of restoration costs) and 30-year easements (50-75% of the value and of the restoration costs).

In February 2021, the USDA released a final rule to update ACEP as directed by the 2018 Farm Bill. Green Township may want to consider ALE

funding to pursue properties that do not meet the County cost-share requirements.

Regional Conservation Partnership Program (RCPP)

RCPP was introduced in the 2014 Farm Bill, and significant changes were made in the 2018 Farm Bill. This program encourages partnerships to implement solutions to conservation challenges. Partnerships can be formed by agricultural producer associations, farmer cooperatives, municipal entities, and non-government organizations. Significant changes that were made in 2018 to RCPP are:

- RCPP is now a standalone program with its own funding of \$300 million annually. Moving forward, landowners and agricultural producers will enter RCPP contracts and RCPP easements.
- Enhanced Alternative Funding Arrangement provision – NRCS may award up to 15 AFA projects, which are more grant-like and rely more on partner capacity to implement conservation activities.
- Partners must apply to either the Critical Conservation Area (CCA) or State/Multistate funding pool.
- Emphasis on project outcomes: all RCPP projects must now develop and report on their environmental outcomes.

Partnerships must apply for a project grant on a competitive basis during the grant applications period. There are two funding categories: critical conservation areas (CCA) (New Jersey does not fall within one of these eight areas), and state/multi-state. To apply for state funding, the

project must address at least one of the national or state priorities of soil erosion, soil quality, water quality, and wildlife habitat.

In 2022, the NRCS incorporated investment in two waves from the Bipartisan Infrastructure Law (BIL), also known as the Infrastructure Investment and Jobs Act. BIL provided the NRCS is \$918 million in Watershed Program funding spread between 240 projects across the country; none of these projects reside in New Jersey.

C. Water Resources

1. Supply Characteristics

Green is in the Upper Delaware Water Quality Management Planning Area. According to the Sussex County Open Space and Recreation Plan, the Watershed Management Area 1 Upper Delaware River Watershed comprises greater than half of the county's land area. Principal waterways in Sussex County's portion of WMA 1 include the Flat Brook, Paulins Kill, Pequest River, and the Musconectcong River.

The necessity of clean and plentiful groundwater is clearly stated in Sussex County's Open Space and Recreation Plan:

- Approximately 95% of Sussex County residents rely on groundwater for consumption
- Groundwater is pumped to County residents from aquifers through either private on-site wells, community wells, or municipal wells.
- The long-term sustainability of the county's groundwater supply

will depend on safeguarding water quality and quantity by employing the proper land use practices in areas with high groundwater recharge and aquifer productivity.

- Safeguarding community and municipal well heads is an important component of long-term sustainability.

Some potential contamination sources are pesticides, which are used in agriculture and at private residences, and underground storage tanks for various substances such as gasoline and diesel fuel. Underground storage tanks are sometimes used on farms as fuel sources for equipment.

2. Agricultural Demand & Supply Limitations

Agricultural lands are identified as cropland harvested, cropland pastured, woodland, equine, and permanent pasture. The 2018 farmland assessment identifies 5,011 acres of agricultural or horticultural land in the municipality, 270 acres less than the 2015 assessment. About 34% of this total is harvested cropland, land that requires the most amount of water for production.

As of 2018, hay and soybeans comprise roughly 76% of the field crops grown in the Township. However, because of the region's climate, only 2 acres of the town's field crops are irrigated. In some cases, population pressures and climate change can affect water supply in New Jersey towns. Increased development exacerbates water supply concerns, not only by increased water usage from occupants of the units, but also by

creating more impervious surface, causing more stormwater runoff (which often washes pollutants into waterways) and less opportunity for aquifer recharge. Lack of sufficient water recharge areas can compromise soil conditions and means less water stays in the area and flows away to other areas, adversely impacting the region due to the fluctuations in natural water distribution.

3. Water Conservation and Allocation Strategies

Droughts in recent years have highlighted the precarious nature of the agriculture (and general) water supply, and the need for water conservation systems and regimens. Historically, from 2008 to 2018, dry conditions occurred with greater frequencies than in years prior.

The dominant field crop in Green Township is hay, which is used primarily for feed on equine and livestock farms in the Township. Hay relies on rain and some groundwater for water needs, and as such water conservation strategies are difficult to implement. With nursery and greenhouse, sod, and vegetable farming, it is possible to implement conservation strategies such as drip irrigation, or watering crops in the cooler parts of the day to minimize evaporation. Water re-use is another possible option. For livestock, floats and timers in watering troughs can conserve water by negating the need for constantly running water to keep troughs full.

The NJDA encourages farmers to implement water-management practices as a routine part of their conservationist approach to agriculture. The faculty of NJAES-RCE

publishes annual crop production recommendation guides for multiple crop groups that include irrigation guidelines and recommendations.

The Office of the New Jersey Climatologist at Rutgers University operates the Weather and Climate Network of weather monitoring stations. Farmers can use the information from stations near them to assist with irrigation scheduling, as well as pest management and other conservation issues, temperature, precipitation, wind speed and gusts. Other stations measure barometric pressure and New Brunswick measures soil temperatures as well. Farmers can set favorite locales and view charts and tabular data.

D. Waste Management Planning

Livestock farmers in Green Township may opt to participate in SCD/ NRCS conservation programs that cost share the creation of animal waste facilities on their farms. By building these temporary holding tanks, usually concrete, the farmer accomplishes two purposes: preventing the waste from mixing with runoff and polluting streams and other water bodies and providing a ready source of manure or fertilizer for farm fields. When convenient, farmers can remove the waste from the temporary storage facilities and apply it to the fields, following BMPs.

Animal Waste

Waste production from horses and cows is a continuous focal point of conservation practice in the Township. Horse waste on farms can be a problem due in part to

the relatively small land area of horse farms, making the manure more difficult to distribute on fields effectively and safely. This can contribute to the spread of disease from the manure if not controlled. For dairy farms, however, manure concentration and distribution are less of a concern because of the relatively large land area dedicated to those operations assuming that manure is managed and applied in an appropriate manner and in accordance with New Jersey state regulations.

Sussex County farmers typically use all livestock waste on their agricultural fields in accordance with their Comprehensive Nutrient Management Plans (CNMP). For commercial livestock waste disposal services, Ag Choice LLC in Andover, Sussex County, picks up, accepts, and composts food and livestock waste on a commercial scale. It is then available as bulk pickup, sold to landscapers and garden centers, or bagged and sold at retail outlets. This type of operation not only helps control the problem of livestock waste on farms but is also a good revenue source for the owners

Animal feeding operations (AFOs) have the potential to cause water pollution since mismanagement of the animal waste can lead to soil and groundwater contamination via introduction of organic matter, nitrogen, phosphorus, and bacterial pathogens into nearby surface waters. The Criteria and Standards for Animal Waste Management (N.J.A.C. 2:91), which went into effect on March 16, 2009, set forth requirements for the development and implementation of self-certified Animal Waste Management Plans (AWMPs), high-density AWMPs

and Comprehensive Nutrient Management Plans (CNMPs) for farms that generate, handle, or receive animal waste.

In general, self-certified waste management plans will be coordinated through the NJAES-RCE, which continues to aid farmers who have not yet completed AWMPs or implemented environmental BMPs on their farms. Farmers can apply for funding through Environmental Quality Incentive Program (EQIP) to obtain a CNMP for their operation. Any livestock operation receiving EQIP funds for waste management practices such as a Heavy Use Area Protection (HUAP) site or waste storage facility must have a Comprehensive Nutrient Management Plan (CNMP). NRCS can assist producers with the development of a CNMP which in turn can be used as guide for implementing waste management practices in the future. These plans are developed with the assistance of a Technical Service Provider (TSP).

Recycling

Recycling is an important part of natural resource conservation for the agriculture industry. Hay, corn and soybeans, the dominant farm products by acreage in Green Township, use limited products that can be recycled, and as such limit recycling opportunities. Although nursery and produce make up a small part of Green's agricultural operations, there still is a need to provide outlets for recyclable waste from these operations.

The Sussex County Municipal Utilities Authority (SCMUA), operates the Solid Waste and Recycling Services, making recycling services available

to Green Township farmers. There is a tire recycling program available through SCMUA, with the recycled tires being disposed at a waste-to-energy facility used as rubberized mulch. Local automotive service stations may also have a free tire recycling program or offer to recycle tires for a fee.

For other farm-oriented recyclables, the NJDA website lists resources for agricultural recycling. Programs listed include options for nursery and greenhouse film, pesticide containers, nursery pots, plug trays, flats, mulch film, and irrigation tape. Some of these services are free, and others come at a cost to the farmer.

E. Energy Conservation Planning

In January 2010 (P.L. 2009, c.213) allows for the construction, installation, and operation of biomass, solar, or wind energy generation facilities, structures, and equipment on commercial farms, including preserved farms, with certain caveats regarding interference with agricultural productivity, valuation for farmland assessment, amount of farm acreage that can be devoted to such facilities, local and State approvals.

In 2019, Governor Phil Murphy signed the Updated Global Warming Response Act seeking to reduce greenhouse emissions 80% by 2050. Green energy policy is also echoed in Governor Murphy's Energy Master Plan, in which, the state seeks to transition to 100% clean energy by 2050. Green farmers can take advantage of this initiative by applying for the financial incentives to implement energy efficient

improvements to their farms and operations. The Rural Energy for America Program (REAP) funds grant and loan guarantees to agricultural producers for assistance in purchasing renewable energy systems. Renewable energy systems include generation from: biomass, geothermal, hydropower, hydrogen, wind, and solar.

The NRCS also has the authority to use EQIP to implement Agricultural Energy Management Plans (AgEMP) to address concerns of energy conservation. As a part of the EQIP On-Farm Energy Initiative, these plans are designed to evaluate energy use and efficiency within farming operations. These energy audits can qualify a farmer for financial assistance to implement recommendations of the process if the audit meets the proper time and standard requirements. This plan is implemented to assist the landowner's goals of achieving cheaper and more efficient energy consumption.

The EQIP natural resource conservation program pays for some energy production programs, such as replacement of older, dirty polluting working diesel engines, with newer, more efficient, cleaner burning diesel engines that will meet EPA Tier requirements for the program year. The New Jersey Board of Public Utilities offers rebates for solar electric, wind, and sustainable biomass systems if funding is available.

Solar Energy

The SADC does allow solar generating facilities on preserved farms, and [rules](#) for these installations are contained in

Subchapter 24 of Chapter 76. Solar generating facilities are also allowed on unreserved farms and the SADC has provided AMP (agricultural management practices) for these facilities. A summary of the policies aligned by both the subchapter and the AMP is given below::

- Solar panels (solar energy general facilities) are allowed on commercial farms (preserved and unreserved).
- Panels cannot be constructed/ installed on prime farmlands (to the maximum extent practicable).
- The SADC prefers panels be constructed on buildings or facilities; if on the ground, they are to be installed without concrete footing or permanent mounting.
- System cannot exceed height of 20 feet.
- Must minimize views from public roadways and neighboring residences.
- Facilities must use existing roadways to provide access to facilities to avoid construction of new roadways.
- Panels may not exceed 10 acres per farm assessed property.
- Production capacity may not exceed 2 megawatts.
- The area ratio of solar to agricultural and horticultural operations may not exceed 1:5.

EQIP provides cost-share funding for solar livestock watering facility as part of a grazing system. Special rates are available to qualified farmers. In 2018, two contracts were planned and applied, but in 2019 no contracts were developed.

The practice of dedicating large areas of farmland to ground-mounted solar arrays takes viable farmland and nutrient-rich soils out of traditional farming. Production farmers already struggle to find enough available land to operate financially viable farming operations given pressures from residential and commercial development. Additional incentives to establish large solar arrays could put undue stress on farmers. While some arguments state that some crops can flourish in the shadows of solar panels, the reality is that traditional farming options around and under solar arrays are quite limited. Fortunately, the State Board of Public Utilities is proposing an approach to solar siting as it develops its new solar incentive program, steering solar projects toward the built environment away from open space, forests, wetlands, and farmland prioritized for preservation. Farmers interested in adding solar arrays to their farming practices may want to consider smaller solar array systems that avoid areas of prime farmland soils or mounting solar panels on existing structures such as barns and sheds, to limit amount of land being consumed by this land use, and the SADC and county can evaluate the effect a proposed solar array project will have on farmland on a project-by-project basis.

Wind Energy

According to the NJDA, the northwest part of New Jersey, which includes Sussex County, has ample and consistent enough wind power to make turbine energy feasible. New Jersey and Green Township farmers might take advantage of a distributed or “small” wind system, which uses turbines of 10 megawatts

or smaller to directly power a home, farm, or small business. New Jersey’s Clean Energy Program provides a model small wind ordinance for municipal adoption. Although this is a first step toward encouraging wind energy, New Jersey’s Clean Energy Program incentives for wind energy installations have been on hold since 2011.

In Green Township, any applicant proposing a wind and/or solar production system must file conditional use and site plan applications with the Planning Board and obtain site plan and other requisite Board approvals. A zoning permit and site plan are required for an application to be deemed complete. These requirements, along with other detailed conditions, indicate Green Township’s willingness to consider alternative energy source.

Incentives and Assistance for Terrestrial and Small Wind Systems include the Renewal Energy Incentive Program (REIP) and the Anemometer Loan Program, administered by Rutgers and four other state universities. The program is funded by the United States Department of Energy Wind Powering America Program and funds provided by the NJ Board of Public Utilities Office of Clean Energy Program. By measuring wind power at the target location, the anemometers help determine the economic feasibility for wind turbine installation. Target market includes municipalities, farms, residential and small commercial customers.

Biopower

Starting in 2017, biopower projects are incentivized through the Combined Heat and Power Program (CHP). Program participants are eligible to receive financial incentives for CHP installations to further enhance energy efficiency in their buildings through on-site power generation and using distributed generation to provide reliability solutions for New Jersey while supporting the state's Energy Master Plan. Green Township farmers can find the program eligibility requirements and the program's financial incentives in the CHP-FC Program Guide.

Ethanol and Pelletized Switchgrass

Corn, the second highest dominant field crop in Green Township, could position the Township's farmers to financially capitalize on the spreading movement towards ethanol-blended fuels. In addition, interest has been shown in utilizing switchgrass to make energy producing pellets. This could add another market for Green Township farmers.

Biodiesel

Biodiesel, made from the oils of soybeans, is an alternative to petroleum diesel. The Environmental Protection Agency reported a record 2.1 billion gallons of biofuel were consumed in 2015. County-wide, soybean production has decreased significantly over the past decade. Sussex County produced 235,825 bushels in 2012, 356,376 bushels in 2015, and only 64,300 bushels in 2020. This is an 81% decrease in soybean production between 2015 and 2020. Green Township, based

on 2018 totals, has roughly 8% of the County's total soybean production.

Biogas

In 2020, New Jersey ranked 30th nationwide in biogas production. Out of 59 operational systems, down from 62 in 2015, 22 are landfill systems and 32 are wastewater systems, and five are food waste systems. Increasing biogas operations can lead to economic opportunity through job creation and environmental benefits through reducing greenhouse gasses.

Renewable Energy Grant Programs

New Jersey's Clean Energy Program: Administered by the New Jersey Board of Public Utilities, this program provides financial incentives to install clean energy systems, including fuel cells, solar energy, small wind, and sustainable biomass equipment. Financial incentives are in the form of rebates, grants, energy certificates, and loans.

Renewable Energy Incentive Program (REIP): This program previously offered funding assistance for solar, wind, and sustainable biomass installations. Currently, this program is on hold for wind systems. Solar projects are no longer eligible for REIP incentives. Those who sought assistance for solar projects used to register for Solar Renewable Energy Certificates (SREC) through the SREC Registration program (SRP). Since the Spring of 2020, those who seek to register solar projects do so through the Transition Incentive Program (TI).

Anemometer Loan Program: administered by five New Jersey universities, provides a way for

prospective locations to test the potential for wind power production and assess its economic feasibility.

New Jersey Smart Start Buildings: Operated by the New Jersey Board of Public Utilities, this program is a statewide energy efficiency program available to qualified commercial, industrial, institutional, governmental, or agricultural customers that seek to change their electric or gas equipment.

USDA Rural Energy for America Program (REAP): Reauthorized under the Agricultural Improvement Act of 2018 (2018 Farm Bill), the REAP program provides guaranteed loan financing to agricultural producers and rural small businesses for renewable energy systems or to make energy efficiency improvements. For agricultural producers, a guaranteed loan and grant program can provide financial assistance with the installation of renewable energy systems.

Advanced Biofuel Payment Program: This program is to increase the production of advance biofuels. Quarterly payments are distributed to participants for actual quantity of eligible advance biofuel production. An advanced biofuel is a fuel that is derived from renewable biomass, other than corn kernel starch. Biofuels that may be specific to Green Township farmers are those derived from waste material such as crop and animal wastes.

Biorefinery, Renewable Chemical, and Biobased Product Manufacturing Assistance Program: This program provides loan guarantees up to \$250 million to assist the development of new and emerging technologies. These

technologies include advanced biofuels, renewable chemicals, and biobased products.

F. Outreach and Incentives

The Township's AAC is committed to working with the Sussex CADB, the state, and regional agencies to assist in outreach and education to farmers and landowners regarding natural resource conservation and agricultural productivity. Green Township looks to the county, state and regional agencies for leadership, direction, and help. The Green Township AAC will continue to work with the Sussex CADB to implement programs to aid in natural resource conservation on farms in the Township.

As competing uses impact farmers in Sussex County and in Green Township, education, outreach, and regional coordination will become more integral to the success of farming operations.



Chapter 8.

Agricultural Industry, Sustainability, Retention, & Promotion

A. Existing Agricultural Industry Support

1. *Right to Farm*

In 1983 the State Legislature enacted the Right to Farm Act (RFA) and amended it in 1998, ensuring that farmers can continue accepted agricultural operations. Another critical piece of legislation in support of agriculture was the 1983 Agriculture Retention and Development Act. This Act created the SADC, and authorized counties to create CADBs.

The SADC works to maximize protection for commercial farmers under the RFA by developing AMPs, tracking right-to-farm cases, offering a conflict resolution process, and reviewing rules proposed by other state agencies for the impact they may have on agriculture. To qualify for right-to-farm protection a farm must meet the definition of a commercial farm in the RFA; be operated in conformance with federal and state law; and comply with AMPs recommended by the SADC, or site-specific AMPs developed by the Sussex CADB at the request of a commercial farmer.

As of 2023, the SADC had 12 AMPs in place, the latest being an AMP for On-Farm Direct Marketing Facilities, Activities, and Events, adopted April 7, 2014. The SADC lists 7 site-specific AMPs for Sussex County, all of which the Sussex CADB decided on or resolved.

All right to farm complaints or issues that are brought before the Sussex CADB are first handled with fact finding and efforts to resolve differences between the parties. The mediation can be informal, or, if the parties agree, the SADC will provide mediation or conflict resolution at no cost to the participants through its Agricultural Mediation Program. If a formal complaint is filed with the Sussex CADB, it is sent to the SADC for a determination as to whether the farm qualifies as a commercial farm (N.J.S.A. 4:1C-3) and whether the operation or activity is eligible for right-to-farm protection. The CADB and/or SADC typically conducts a site visit for additional fact finding, sometimes consulting with agricultural experts and municipalities (in cases where municipal regulations are involved in right-to-farm disputes. Depending on the nature of the issues, either the CADB or SADC (or both in some cases) holds a public hearing at the county level. Decisions made by the Sussex CADB may be appealed to the SADC, and final SADC determinations may be appealed to the New Jersey Superior Court, Appellate Division.

Municipalities can and should limit the number of right-to-farm complaints and encourage farming as an industry by:

- Working to better understand the Right to Farm process to adopt or

update comprehensive Right to Farm ordinances as outlined by the SADC.

- Making agriculture a permitted use in all appropriate zones.
- Requiring buffers between new non-agricultural development and adjacent existing farmlands.
- Requiring notification to homeowners purchasing a home in a new subdivision where active agriculture occurs on adjacent property.

Right to Farm ordinances are a necessary item for municipalities that wish to enter the Farmland Preservation Program. Green Township established its RTF Ordinance (Ord. No. 2010-15) in 2010, twenty-seven years after the state enacted Right to Farm in 1983. **(Appendix G)** The Ordinance states that its purpose is to:

preclude farming and agricultural operations, when conducted in accordance with accepted agricultural management and farming practices, from constituting or being found to constitute a public or private nuisance.

The RTF Ordinance in Green Township uses the following language to describe permitted agricultural use for the aforementioned activities:

1. The storage, processing and sale of farm products subject however, to all other conditions and limitations applicable thereto as set forth in the Zoning Ordinance.
2. The use of irrigation pumps and equipment.

3. The application of chemical fertilizer, insecticides, herbicides, pesticides and liquid/liquefied manure and/or fertilizer. Liquid/liquefied manure and/or fertilizer shall only be applied to ground which is not frozen and shall be tilled into the soil within 24 hours after its application.

4. On-site distribution of organic agricultural wastes.

5. Use of the land for the grazing of animals, subject to all applicable restrictions for intensive fowl or livestock farms.

6. The use of farm laborers employed by the farm owner and/or operator.

7. The use of public roadways for the transportation of tractors and other large slow-moving vehicles and equipment.

8. The construction of fences for retention of animals and livestock.

9. The use of customary farm machinery and equipment.

10. The creation of noise, dust, odors, and fumes conventionally associated with such agricultural activities.

11. The engaging in farm practices at any and all times deemed reasonably necessary, including, but not limited to, Sundays, holidays and in the evenings.

12. The raising and keeping of farm animals, including, but not limited to: dairy cattle, beef cattle, sheep, goats, swine, fowl, horses, ponies and mules provided, however, that proper

sanitation measures, minimum recommended acreage limitations and appropriate setbacks between fencing and enclosures for such farm animals and adjoining properties are established and maintained.

13. Installation of physical facilities for soil and water conservation and the harvesting of timber.

14. Provisions for the wholesale and retail marketing of the agricultural output of the farm, which include the building of temporary and permanent structures and parking areas for said purpose, providing same conform to all applicable provisions of the Green Township Zoning Ordinance and the Green Township Site Plan Review Ordinance.

Green Township's AAC can help avoid or minimize Right to Farm conflicts by making farmers and other residents aware of the provisions in the Township's code and by having an open-door policy that allows those with issues to talk informally with a member or members of the AAC or Township officials to try to resolve issues before engaging the formal processes of appeals to the Sussex CADB or the SADC.

2. Farmland Assessment

The Farmland Assessment program is a tax incentive that reduces property taxes on active commercial farmed land. This tax incentive is made possible by the Farmland Assessment Act of 1964, N.J.S.A. 54:4-23.1 et seq. Its provisions were recently updated by legislation that was signed into law in 2013,

becoming effective in tax year 2015.
Basic eligibility requirements include:

- The applicant must own the land.
- The property owner must apply annually for Farmland Assessment on or before August 1 of the year immediately preceding the tax year, and effective as of tax year 2015, must submit proof of sales or clear evidence of anticipated gross sales along with the FA-1 application form.
- Land must be devoted to agricultural and/or horticultural uses for at least two years prior to the tax year.
- Land must consist of at least five contiguous farmed and/or woodland management plan acres. Land under or adjoining a farmhouse is not counted towards the minimum five acres.
- Effective as of tax year 2015, gross sales of products from the land must average at least \$1,000 per year for the first five acres, plus an average of \$5.00 per acre for each acre over five. In the case of woodland or wetland, the income requirement is \$500 for the first five acres and \$0.50 per acre for any acreage over five. Dependent on the agricultural or horticultural products being produced, the farmer can also offer clear evidence of anticipated yearly gross sales, payments, or fees within a reasonable period.
- The property owner must represent that the land will continue in agricultural or horticultural use to the end of the tax year.

The Farmland Assessment program does not apply to farm structures, such as barns and storage facilities.

There are 10,438 acres of land in the municipality, of which 5,011 acres are devoted to agricultural and horticultural usage. This is slightly less than one half of the land in the Township itself. 2,367 acres are used as either cropland or pasture, and the remaining 2,644 acres are woodland/wetland areas or equine boarding rehabilitation or training operations. According to Farmland Assessment data in Green Township from 2000 to 2018, general trends indicate:

- Harvested cropland decreased about 22% from 2000 (2,177 acres) to 2018 (1,695 acres).
- Pastured cropland decreased about 22% from 2000 (180 acres) to 2018 (140 acres).
- Permanent pasture decreased about 23% from 2000 (695 acres) to 2018 (532 acres).
- Total acreage in active agricultural use (cropland harvested, cropland pastured, and permanent pasture) decreased about 22% in 2000 (3,052 acres) to 2018 (2,367 acres).
- Woodland acreage increased about 3% from 2000 (2,552 acres) to 2018 (2,633 acres).
- Equine acreage increased about 267% from 2009 (3 acres) to 2018 (11 acres).

By making agriculture more profitable and viable, tax incentives will help to ensure a steady, permanent source of agricultural lands for the Township's farmland preservation efforts. The Township considers the assessment procedure as essential to continued agricultural success and supports the law in its current form.

B. Additional Strategies to Sustain, Retain, and Promote Agriculture

1. Permit Streamlining

Municipalities play a key role in the preservation of farming as an industry. Without strong and active support from municipal governments, farming can be too costly and burdensome to be profitable or worthwhile. The viability of farming in New Jersey is impacted by many issues, including government regulation, development pressures, and the economics of the marketplace. While land preservation is vital for maintaining a sufficient land base suitable for farming, sustaining Green's strong agricultural base requires support on many fronts, one of which is flexibility in government regulation.

This includes supportive public policy (such as right to farm, farmland assessment, and exemptions to regulations; flexibility (for infrastructure and protecting environmental/historic areas); and agricultural friendly zoning.

2. Agriculture Vehicle Movement

Green Township farmers need to move heavy, slow-moving agricultural equipment over local, county, and sometimes state roads to access unconnected fields and barns. The town's residents also need to commute to workplaces, or drive to area destinations for shopping, town sports, and social activities, at a pace much faster than the slow-moving agricultural equipment. These different transportation paces can cause conflict between

Green's farmers and suburban dwellers, while creating unsafe road conditions as residents and farmers compete for road space.

Since many farm vehicles travel over local municipal roads, municipalities should continue to support local agricultural business' right to do so. The SADC model Right to Farm ordinance recognizes, as a specific right, the operation and transportation of large, slow-moving farm equipment over roads. Green Township includes tractors and power-driven wheeled/tracked vehicles as a protected farming activity in their Right-to-Farm ordinance.

Signage alerting fast-moving cars to possible movement, and road crossing, of slow-moving farm vehicles is an additional, effective tool to protect farmer (and automobile passenger) safety. Signage also informs the public at large that agriculture is an important, equal, and permanent fixture of life in Green Township. Where absent or inadequate, appropriate signage can be posted. Township officials may consult with farmers as to what adequate signage is and where it should be posted.

3. Agricultural Labor Housing/ Training

An adequate labor supply is integral to harvesting vegetables, fruits, and berries. Measured in farmed acreage, Green Township has a relatively small industry for these products compared with field crops such as hay; Sussex County maintains 2,967 acres of corn and 11,765 acres of hay. The Sussex CADB recognizes that, currently, agricultural labor housing is not protected under the Right to

Farm Act. It may be permitted on a preserved farm, with the approval of the CADB and SADC, but that does not give it RTF protection. Since the overall acreage devoted to labor intensive farming is small in Green, seasonal farm labor housing, a large issue in towns and counties with high farm labor populations is, for the most part, not of high concern in the Township.

Sussex County has a higher cost of living than the national average, which affects both farmers and laborers. Attracting farm labor to live and work in Sussex is difficult, as is attracting the next generation of farmers. In addition, in recent years, problems that face New Jersey Employers persist as the wage for agricultural employers is expected to increase to \$15.00/hour by 2027. The cost of labor in New Jersey is a significant issue for some farming sectors such as produce, and one that needs further consideration for its effect on agriculture in New Jersey, Sussex County, and Green Township.

Farmer Education and Training

To sustain a modern, diverse, and stable food and agricultural industry, education and progressive ongoing training for farmers promotes a more efficient and productive business environment.

The NJAES - RCE of Sussex County provides one-on-one, on-site consultations with farmers to assist with control of insect identification, plant disease diagnoses and pest management recommendations for agricultural operations. In addition, its online resources, offers educational and training opportunities.

Sussex County Community College (SCCC) currently offers several agriculture-related Associate programs, such as Agricultural Business and Horticultural Science. These degrees focus on the SCCC also offers natural sciences specializations, such as Biology, Chemistry, and Geology.

NOFA-NJ offers educational programs for farmers of all ages and skill sets, including a Beginning Farmer Program. Other educational programming includes organic gardening, permaculture design certification, business courses, technical assistance, and farm-to-table workshops.

Through its Division of Agriculture and Natural Resources, Natural Resource Conservation Program, the NJDA offers technical, financial, and regulatory assistance, and provides educational outreach to landowners throughout the state.

Agriculture labor education and training funding may be available through the New Jersey Department of Labor and Workforce Development Programs. These programs can help assist in upgrading the skills and productivity of the agricultural workforce. The NJDA hosts a web page with links and information on Agricultural Education, geared mostly toward teachers but also listing conferences and other information of potential education interest to farmers.

The NJFB also hosts educational meetings and provides educational information for farmers on its website about legislative issues, farmland preservation, and labor resources.

Youth Farmer Education Programs

According to the Census of Agriculture, the farmer population in Sussex County is getting older, with an increase of 1.4 years of an average age of 58.7 in 2017 versus 57.3 in 2007. The nationwide average age of operators in 2017 was 58.6, roughly the same as Sussex County. In 2017, there were 85 farmers (4.9%) out of 1,721 farmers in Sussex County who were under the age of 35.

Due to the aging farmer population, the next generation of farmers needs to become interested in, and exposed to the business of agriculture, and prepared to enter the industry. The closest post-secondary institutions to Green Township that offer programs relating to agriculture and horticulture are:

- 8.5 miles – Sussex County Community College, 1 College Hill Rd, Newton, NJ.
- 17.9 miles – Kean University – Skylands Campus, 243 Mt. Paul Rd, Oak Ridge, NJ.
- 28.6 miles – East Stroudsburg University – 200 Prospect St, East Stroudsburg, PA.

Changes in the cost of attendance/ financial assistance for college education in New Jersey may offer incentives for young farmers to seek enrollment in higher education. In the Spring of 2019, the state piloted the New Jersey Community College Opportunity Grant, where students may be eligible for tuition-free college.

Future Farmers of America (FFA) is a national educational organization that helps prepare youth for careers

and leadership in agriculture by aiding students in the development of agricultural skills. In 2023, there were 45 chapters in New Jersey with more than 3,000 members. Newton High School provides youth agriculture education where students can participate in local, state, and national FFA activities. The school works with Sussex County Community College to provide students with fieldwork farming experience on land leased through the SAgE (Sustainable Agriculture Enterprise) program of the Foodshed Alliance.

4-H is an informal, practical educational program for youth, which assists young people interested in farm animals through livestock projects. The 4-H Youth Development Program is overseen by the Sussex County NJAES-RCE. The 4-H program is led by volunteers that teach about different areas of interest varying from animals, plants, agriculture, and leadership. Within Sussex County, all 4-H club members are active in County events such as the Sussex Agricultural Fair.

NJ Farm Link is a program for farmers, new and established, and assists:

- New farmers looking for opportunities to gain experience
- New farmers looking for land to get started
- Established farmers looking for land to expand
- Farm owners looking to lease, sell, or make land available for farming
- Retiring farmers who would like to ensure their land stays in agricultural production but have no family members who want to continue to farm

- Farmers looking to hire farm managers, fill apprenticeship positions, or mentor a new farmer
- Non-profits, municipalities, and counties looking for farmers for farmland they own or manage
- Farmers and landowners working on farm transfer plans.

Farmers interested in land or partnership/job opportunities, as well as those wanting to advertise available land and opportunities, can sign up and create and manage their own listings through the interactive NJ Land Link [website](#). As of June 2023, there are 29 farmland listings in Sussex County.

4. Wildlife Management Strategies

Crop damage from wildlife leads to economic loss for the farmer and is a serious problem throughout Sussex County. Although many farmers do apply for depredation permits that allow them to hunt out of season, even hunting is becoming a less viable solution. As farms become smaller and more developments are built adjacent to farms, areas can no longer be hunted, even by the farmers who own the land, because they would be hunting too close to a neighborhood dwelling. In many instances, this is the only short-term solution to control crop damage. Special hunting options include:

- License exemptions for farm families.
- Special farmer black bear permit.
- Farmer Depredation Permit.
- Deer Management Assistance Program.

Insects are also causing crop damage. The pesticides used to

control them can cause other kinds of damage, possible health concerns for the end user of the product, and pollution of the County's water supply. At the county level, studies undertaken by the NJAES-RCE, such as the perimeter trap study on insects and pumpkins undertaken several years ago and the integrated pest management resources available through the NJAES-RCE, are attempts to help solve these problems in ways that work for both the farmer and the environment.

The NJDA's Division of Plant Industry works to safeguard the state's plant resources from injurious insect and disease pests. The Division's Gypsy Moth Suppression Program is a voluntary cooperative program involving local governments, county, and state agencies, as well as the USDA Forest Service. Aerial spray treatments of *Bacillus thuringiensis* are utilized when gypsy moth cycles are at a peak and natural controls are not sufficient to control defoliation.

The gypsy moth problem in Sussex County was heavy enough in several recent years to require aerial spray treatments in some areas. Green Township has not been listed on the Gypsy Moth Aerial Defoliation Survey since 2015, where 1,512 acres experienced heavy defoliation and 9 acres experienced severe defoliation. In 2015, Sussex County suffered the highest amount of tree defoliation in the state with over 112,149 acres impacted. In 2022, the entire state of New Jersey was placed under quarantine for gypsy moth by the USDA Animal and Plant Health Inspection Service.

The Spotted Lanternfly (SLF) is a relatively new but serious pest to the region that was first discovered in

the US in Berks County, Pennsylvania in 2014, and has since spread to numerous neighboring states, including New Jersey. The insect has the potential to greatly impact agricultural crops and hardwood trees as the insects in their various life stages feed on the sap of many different fruit, ornamental, and woody trees including grapevines, maples, black walnut, and other important New Jersey plants. The NJDA encourages property owners to report any sightings of SFL, and to destroy egg masses and insects at any and all stages as they are encountered. Currently, there is no commercially available biological control option for SLF, but the NJDA is researching potential parasitoids or pathogens that can be released as a long-term control solution. Based on studies in 2018 and 2019, paraffinic and/or mineral oils such as JMS Stylet oil, Damoil and Lesco Horticultural oil were the most effective products against insect egg masses, and research trials are still ongoing to evaluate the best application method and active ingredients for systemic insecticides.

5. Agricultural Education and Promotion

The USDA has the Rural Development Program to assist residents in rural areas support essential public facilities and services. The Agricultural Act of 2018 (Farm Bill) updates the Rural Development Program in several ways, including:

- Amends the definition of rural to exclude from population thresholds individuals incarcerated on a long-term or regional basis and excludes the first 1,500 individuals residing in on-base military housing.

- Increases annual appropriated funding for broadband deployment from \$25 million in FY2019 to \$350 million in FY2023.
- Redirects program funds of existing development programs to target health issues.
- Reauthorizes and/or amends loan and grant programs that help with water and wastewater infrastructure, business development and retention, and community and regional development.

Grants and loans are available in three key areas: Business-Cooperative, Housing and Community Facilities (including farm labor housing), and Utilities (including Broadband). To qualify for some of the program’s loans and grants, municipalities must have less than 10,000 residents,. At a population of 3,601 as of 2021, Green may qualify for these programs.

The U.S. Taxpayer Relief Act of 1997, administered by the U.S. Department of Treasury’s Internal Revenue Service, is meant to smooth out economic disparities that farmers experience from year to year due to the cyclical nature of agriculture. Known as Farm Income Averaging, qualified farmers can average all or part of their current year farm income over the previous three years. Substantial tax dollars can be saved by income averaging.

The New Jersey Legislature has considered bills that would provide income averaging similar to the federal program. In the 2018-2019 Regular Session, Bill NJ A236 was introduced and has since been referred to the Assembly Agriculture and Natural Resource Committee.

The NJDA, SADC, Sussex County Commissioners, and Sussex CADB can work with, and encourage, the New Jersey Legislature to continue to introduce bills that would assist Sussex County and Green farmers to remain economically viable.

The New Jersey FSA has both Direct and Guaranteed Farm Ownership loans available for farmers, including those in Sussex County. Direct Farm Ownership Loans are available up to \$600,000, and guaranteed loans can go up to \$1,776,000. Down payment loan funds may be used to partially finance the purchase of a family farm. Loan applicants must contribute a minimum down payment of 5% of the purchase price of the farm and the Agency will finance 45% to a maximum loan amount of \$300,015.

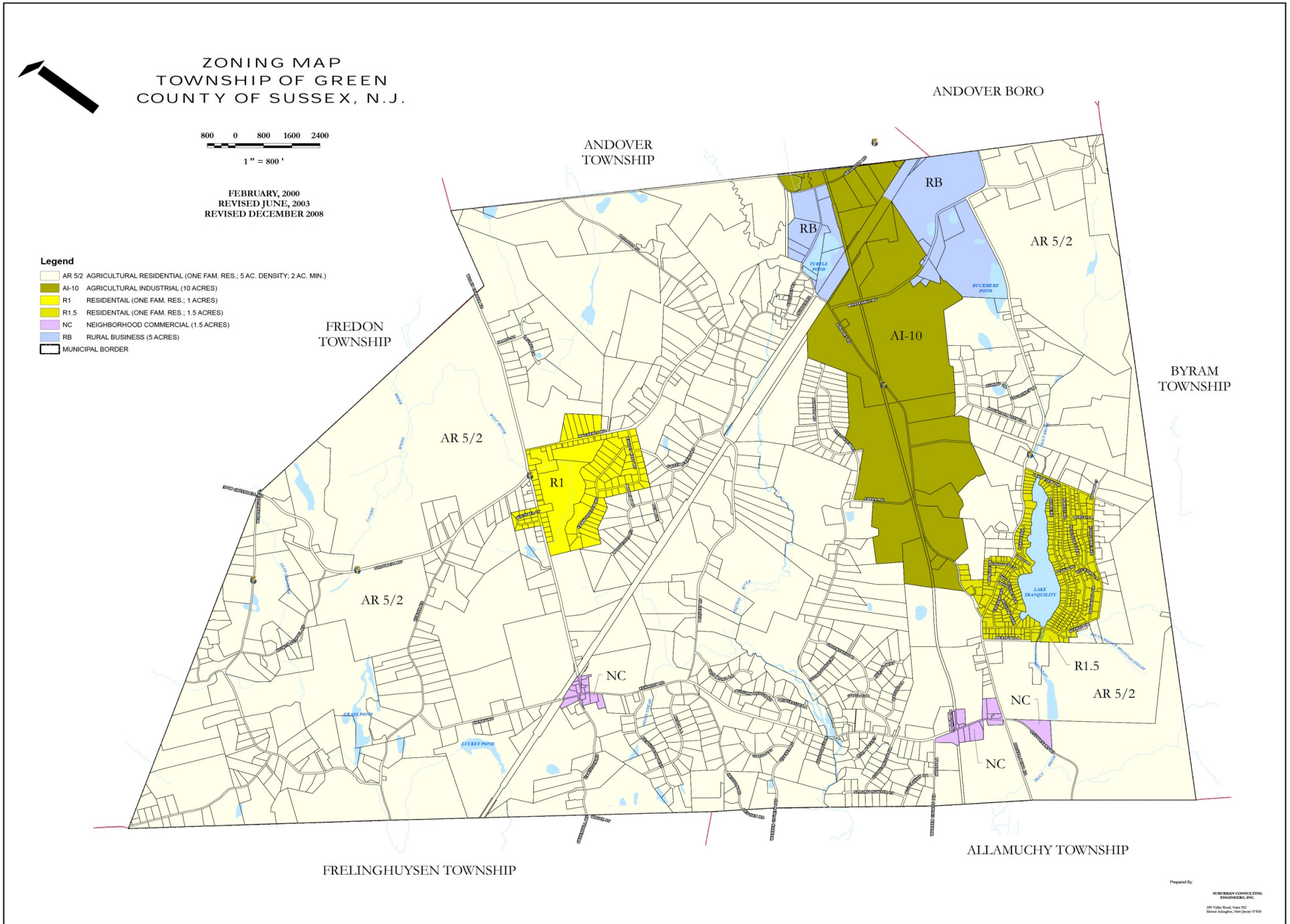
FSA loans can be used for most agriculture necessities such as purchasing land, livestock, equipment, feed, seed, supplies, and for construction of buildings, or to make farm improvements.

Appendix

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B. Zoning Map and Regulations Referenced in Chapter 2 Section C	94
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D. Preserved Farms Referenced in Chapter 4 Section B	104
E. SADC Minimum Eligibility Criteria Referenced in Chapter 5 Section C	106
F. Target Farms Referenced in Chapter 5 Section C	108
G. Green Township Right to Farm Ordinance Referenced in Chapter 5 Section D	110

Public Meeting Materials

Agendas, handouts, and presentation materials for public meetings will be included here once they are available.



Prepared By:
SUNSHINE CONSULTING
ENGINEERS, INC.
100 Valley Road, Suite 202
Mount Arlington, New Jersey 07054

LAND USE REGULATIONS

30 Attachment 2

SCHEDULE OF ZONING REQUIREMENTS
 LAND USE REGULATIONS ORDINANCE
 GREEN TOWNSHIP
 (Section 30-31)
 (Ord. No. 2017-02)

Zone	Principal Use	Height Feet	Min. Lot Area Acres	Density/Far	Max Depth Feet**	Width Street Line Feet	Width Setback Line** * Feet	Min. Setbacks Feet			Max Building Coverage Percent	Impervious Coverage Percent
								Front	Rear	Side		
AR-5/2	SINGLE FAMILY RESIDENTIAL	35	2*	1 UNIT/5.0 ACRES	600	130	210	100	100	35	15	-----
R-1	SINGLE FAMILY RESIDENTIAL	35	1	1 UNIT/1.0 ACRES	285	95	160	60	75	25	20	-----
R-1.5	SINGLE FAMILY RESIDENTIAL	35	1.5	1 UNIT/1.5 ACRES	360	112	190	60	75	25	20	-----
RB	RURAL BUSINESS	35	5	0.25 FAR	500	200	200	60	100	25	-----	25
NC	NEIGHBORHOOD COMMERCIAL	35	1.5	-----	330	200	200	60	75	25	25	75
AI-10	AGRICULTURAL/ INDUSTRIAL	50	10	-----	1,000	435	440	200	200	100	30	60

* Minimum lot size is 2.0 acres but average density across a development must be one unit per 5.0 acres

** Used for calculation of minimum lot area

*** 50 foot minimum required on a cul-de-sac

Agricultural Businesses Servicing Green Township

Sources: SADC Green Pages

Equipment

Central Jersey Equipment
228 State Rt 94
Columbia, NJ 07832
Warren County
(908) 362-6916

Everitt Equipment LLC
258 County Rd 579
Ringoes, NJ 08551
Hunterdon County
(908) 782-5082
<http://www.everittequipment.com/>

Powerco, Inc
12 NJ-173
Clinton, NJ 08809
Hunterdon County
(908) 735-2149
<https://www.powercoinc.com/>

Smith Tractor & Equipment, Inc
115 NJ-31
Washington, NJ 07882
Warren County
(908) 689-7900
<https://www.smithtractorandequipment.com/>

Seed

Growmark FS
60 Lehigh Ave
Bloomsbury, NJ 08804
Hunterdon County
(908) 479-4500

Nutrien Ag Solutions
127 Perryville Rd
Pittstown, NJ 08867
Hunterdon County
(908) 735-5545

Garden State Heirloom Seed Society
82 Delaware Rd
Columbia, NJ 07832
Warren County
(973) 475-2730

Animal Feed

Blairstown Ace
2 Bridge St
Blairstown, NJ 07825
Warren County
(908) 362-6177

Morristown Agway Store
176 Ridgedale Ave
Morristown, NJ 07960
Morris County
(973) 538-3232
<https://morristownagway.com/>

Sergeantsville Country Store
735 Route 523
Sergeantsville, NJ 08557 Hunterdon County
(609) 397-0807
<https://sergeantsvillegrainandfeed.com/>

Tractor Supply Company
128 NJ-94 #9
Blairstown, NJ 07825
Warren County
(908) 362-0082
<https://www.tractorsupply.com/>

Tractor Supply Company
293 US Hwy 206, Unit 15A
Flanders, NJ 07836
Morris County
(973) 252-2925

Tractor Supply Company
144 Hwy 202/31 North
Ringoes, NJ 08551
Hunterdon County
(908) 284-2021

Appendix C. Agricultural Businesses

Tractor Supply Company
775 NJ-23
Sussex, NJ 07461
Sussex County
(973) 875-7087

Tractor Supply Company
398 Rte 57 West 4
Washington, NJ 07882
Warren County
(908) 689-3202

Dover Pet Shop
112 E Blackwell St
Dover, NJ 07801
Morris County
(973) 361-2322

Ise Feed
110 Good Springs Rd
Stewartsville, NJ 08886
Warren County
(908) 859-8424

Mike's Feed Farm
90 Hamburg Turnpike
Riverdale, NJ 07457
Morris County
(973) 839-7747
<https://www.mikesfeedfarm.com/>

New Village Farms
11 Stewartsville Rd
Stewartsville, NJ 08886
Warren County
(908) 859-3381

Outlaw Outfitters
530 US-206
Newton, NJ 07860
(844) 780-3261
Sussex County
<https://outlawtack.com/>

Penwell Mills
448 Penwell Rd
Port Murray, NJ 07865
Warren County
(908) 689-3725

The Tack Room
367 Pittstown Rd
Pittstown, NJ 08867
Hunterdon County
(908) 730-8388

Schaefer Farms
1051 County Rd 523
Flemington, NJ 08822
Hunterdon County
<http://www.schaeferfarms.com/>

Delaware Valley Feed and Farm Supply
1133A NJ-12
Frenchtown, NJ 08825
Hunterdon County
(908) 628-3550

Deer Run Hay Company
110 Amwell Rd
Flemington, NJ 08822
Hunterdon County
(732) 904-5137

Brodhecker Farm, LLC
2 Branchville-Lawson
Newton, NJ 07860
Sussex County
(973) 383-3592
<https://brodheckerfarm.com/>

Slaughterhouses
A&M Packing LLC
268 Newton-Swartwood Rd
Newton, NJ 07860
Sussex County
(873) 383-4291

Seugling Meat Packing Inc.
9 Mandeville Ave
Pequannock, NJ 07440
Morris County
(973) 694-3156

V Roche Butcher Shop
9 High St
Whitehouse Station, NJ 08889
Hunterdon County
(908) 534-2006

Appendix C. Agricultural Businesses

Green Village Packing Co.
68 Britten Rd
Green Village, NJ 07935
Morris County
(973) 377-0875
<https://greenvillagepacking.com/>

Louie Chiu Slaughterhouse
40 Montana Rd
New Village, NJ 08886
Warren County
(908) 859-6635

Livestock Supplies

Ackerman & Sons Livestock Hauling LLC
932 Maple Ave
Stillwater, NJ 07875
Sussex County
(973) 383-4240

Construction & Concrete

Morton Buildings
512 State Rt 57
Phillipsburg, NJ 08865
Warren County
(908) 454-7900
<https://mortonbuildings.com/phillipsburg-nj>

Fine Woodworking
606 Rt 519
Sussex, NJ 07461
Sussex County
(973) 875-8779

County Concrete Corp.
50 Railroad Ave
Kenvil, NJ 07847
Sussex County
(973) 584-7122
<https://www.countyconcretenj.com/>

Lentini Ready Mix, Inc.
217 Limecrest Rd
Newton, NJ 07860
Sussex County
(973) 300-4146

SCC Concrete, Inc.
1051 River Rd
Phillipsburg, NJ 08865
Warren County
(908) 859-2172
<https://www.sccconcreteinc.com/>

Sparta Redi-Mix
33 Demarest Rd
Sparta, NJ 07871
Sussex County
(888) 383-4651
<https://www.spartaredimix.com/>

Flemington Precast & Supply, LLC
18 Allen St
Flemington, NJ 08822
Hunterdon County
(908) 782-3246
<https://www.flemingtonprecast.com>

Franklin Precast
95 Scott Rd
Franklin, NJ 07416
Warren County (973) 827-7563
<https://www.franklinprecast.com/>

Precast Manufacturing Co.
187 Stryker's Rd
Phillipsburg, NJ 08865
Warren County
(908) 454-2122
<https://www.precastmfgco.com/>

B&B Concrete Co.
811 Rt 57
Stewartsville, NJ 08886
Warren County
(908) 454-1622
<http://www.bakermason.com/>

Donald Baker Mason Contractors, Inc.
188 Thatcher Hill Rd
Flemington, NJ 08822
Warren County
(908) 782-2115
<http://www.bakermason.com/>

Appendix C. Agricultural Businesses

JM Lenze Construction
69 Upper North Shore Rd
Branchville, NJ 07826
Sussex County
(937) 948-5491

SMB Construction
73 Mercer St
Phillipsburg, NJ 08865
Warren County
(908) 454-9530

William R. Hunt Stonework & Masonry, LLC
PO Box 346
Whitehouse Station, NJ
Hunterdon County
(908) 534-2194

Bill Wroblewski, LLC
5 Whitehall Rd
Andover, NJ 07821
Sussex County
(973) 347-3888

Brad Lauyer Masonry Contractor, LLC
611 Main St
Pattensburg, NJ 08802
Hunterdon County
(908) 735-0875

A.A. Matulay
PO Box, 539 70 Rt 202
Ringoes, NJ 08551
Hunterdon County
(908) 782-7666

Well Drilling

Samuel Stothoff Co., Inc.
PO Box, 59 Rt 31
Flemington, NJ 08822
Hunterdon County
(908) 782-2116
<https://www.stothoffwellwater.com/>

Colaluze Well & Pump Service
2293 Rt 57
Washington, NJ 07882
Warren County
(908) 454-8008
<https://www.colaluzeWell.com/>

Dan Ballentine Well Drilling, Inc.
PO Box 178, Port Murray Rd
Port Murray, NJ 07865
Warren County
(908) 689-7666
<https://www.ballentinedrilling.com/>

Site Work Contractors

Apgar Brothers Excavating Co.
PO Box 91
Whitehouse Station, NJ 08889
Hunterdon County
(903) 303-9758

Harrington Contractors
50 Parker Pd
Chester, NJ 07930
Morris County
(908) 879-7500
<http://www.harringtoncontractors.com>

KOR Companies
1 Greenwood Place
Flemington, NJ 08822
Hunterdon County
(908) 284-2272

Charles T. Matarazzo Excavating & Masonry,
LLC
1024 Route 173
Asbury, NJ 08802
Warren County
(908) 479-2025

John P. Martin Excavating, LLC
112 Ferry Rd
Flemington, NJ 08822
(908) 782-2512
Hunterdon County
<https://www.jpmartinexcavating.com>

Appendix C. Agricultural Businesses

A.S. Milkowski & Sons Contracting
249 Rocky Run Rd
Glen Gardner, NJ 08826
Hunterdon County
(908) 537-2590

Rick Mueller Excavating, Inc.
31 Rick Rd Milford, NJ 08848
Hunterdon County
(908) 996-3031

S Snook Excavating, Inc.
150 Pelltown Rd
Lafayette, NJ 07848
Sussex County
(973) 875-5754

Wantage Excavating Co.
137 Holland Rd
Sussex, NJ 07461
Sussex County
(973) 875-5670
<https://www.wantageexcavating.com/>

Willever Excavating
200 Creek Rd
Phillipsburg, NJ 08865
Warren County
(908) 454-6242

Bill Wrobleski, LLC
5 Whitehall Rd
Andover, NJ 07821
Sussex County
(973) 347-3888

Petersen Excavating
273 Mt. Lake Rd
Belvidere, NJ 07823
Warren County
(908) 637-8531

Earthway Excavating
16 Greengate Rd
Lebanon, NJ 08833
Hunterdon County
(908) 534-4343

William R. Hunt Stonework & Masonry
PO Box 346
Whitehouse Station, NJ 08889
Hunterdon County
(908) 534-2194

The Viersma Companies
PO Box 224, Airport Rd
Allamuch, NJ 07820
Warren County
(908) 852-0552
<https://www.viersma.com>

Richard Pfauth, Jr. & Son
239 Halls Mill Rd
Lebanon, NJ 08833
Hunterdon County
(908) 534-2535

John Peach Excavating
PO Box 78, Pleasant Grove Rd
Schooleys Mountain, NJ 07870
Morris County
(908) 852-5875

William H. Wilson Contracting Co., Inc.
210 Houses Corner Rd
Sparta, NJ 07871
Sussex County
(973) 579-5353

D&V Construction Co.
83 Good Springs Rd
Asbury, NJ 08802
Warren County
(908) 479-6911

A. Mokros Backhoe Service, Inc.
17 Lynnbrook Dr
Lambertville, NJ 08530
Hunterdon County
(609) 737-8311

Razz Construction
79 Sky Manor Rd
Pittstown, NJ 08867
Hunterdon County
(908) 996-3298

Ravcon Construction Group LLC
PO Box 1098
Whitehouse, NJ 08889
Hunterdon County
(908) 482-7037
<https://www.ravcon.us/>

Paul W. Steinbeiser Landscape
718 County Rd 519
Frenchtown, NJ 08825
Hunterdon County
(908) 996-6609
<https://www.pwsteinbeiser.com/>

Fence Installation

Farmette Services
67 Henry Rd
Newton, NJ 07860
Sussex County
(973) 300-0103

Hunt's Fencing
567 Rt 94
Newton, Nj 07860
Sussex County
(973) 383-4426

The Fence Company
3 Hill Hollow Rd
Pittstown, NJ 08867
Hunterdon County
(908) 735-8879

J&M Fence & Sheds
328 Rt 46 West
Great Meadows, NJ 07838
Warren County
(908) 637-8799

Seamless Gutters

Warren Valley Seamless Gutters
17 Ernella Dr
Belvidere, NJ 07823
Warren County
(908) 752-5397

Wayne Johnson & Sons, Inc.
1167 NJ-23
Kinnelon, NJ 07405
Morris County
(201) 838-2358
<https://www.waynejohnsonandsons.net>

NJ Soil Conservation Districts

Sussex Soil Conservation District
186 Halsey Rd, Ste 2
Newton, NJ 07860
Sussex County
(973) 579-5074
<https://sussexscd.org/>

NJ County Agricultural Development Boards

Sussex County Agricultural Development Board
One Spring Street, First Floor
Newton, NJ 07860
(973) 579-0500
https://www.sussex.nj.us/cn/webpage.cfm?TPID=15772&utm_source=agriculture&utm_medium=web&utm_campaign=agriculturedevelopmentboard

Rutgers

Cooperative Extension of Sussex County
130 Morris Turnpike
Newton, NJ 07860
(973) 948-3040
<https://sussex.njaes.rutgers.edu/>

United States Department of Agriculture (USDA) – Farm Service Agency (FSA)

Hackettstown Service Center
101 Bilby Rd, Suite 1H
Hackettstown, NJ 07840
(908) 852-2576
<https://www.fsa.usda.gov/state-offices/New-Jersey/index>

USDA – Natural Resources Conservation Service (NRCS)

Hackettstown Service Center
101 Bilby Rd, Suite 1H
Hackettstown, NJ 07840
(908) 852-2576
<https://www.nrcs.usda.gov/wps/portal/nrcs/site/nj/home/>

USDA Rural Development

Hackettstown Service Center
101 Bilby Rd, Suite 1H
Hackettstown, NJ 07840
(908) 852-2576
<https://www.rd.usda.gov/nj>

Auctions

Hackettstown Livestock Auction
225 W Stiger St
Hackettstown, NJ 07840
Warren County
(908) 852-0444
<https://www.hackettstownauction.com>

Crop Insurance Agents

Crop Growers, LLC
9 County Rd 618
Lebanon, NJ 08833
Hunterdon County
(800) 234-7012
<https://www.cropgrowers.com/>

Financial Services

Farm Credit East
9 County Road 618
Lebanon, NJ 08833
(908) 782-5215
<https://www.farmcrediteast.com/>

Licensed Foresters

G. Lester Alpaugh
PO Box 211
Stockton, NJ 08559
Hunterdon County
(609) 397-0615

Andrew Bennett
PO Box 790
Lafayette, NJ 07848
Sussex County
(973) 729-7430
<https://www.ridgeandvalleyforest.com/>

Dylan Borger
PO Box 790
Lafayette, NJ 07848
Sussex County (570) 730-1977
<https://www.ridgeandvalleyforest.com/>

Thomas S. Broddle
217 Hickory Corner Rd
Milford, NJ 08848
Hunterdon County
(908) 996-2333

E. Joseph Bruschetta
1178 Bridge Rd
Phillipsburg, NJ 08865
Warren County
(908) 475-8466

Donald Donnelly
650 Jackson Valley Rd
Oxford, NJ 07863
Warren County
(908) 752-2538

Thomas D. Doty
45 Lilac Dr
Flemington, NJ 08822
Hunterdon County
(973) 813-3222

Joseph Dunn
49 Millbrook-Stillwater Rd
Blairstown, NJ 07825

Lorens D. Fasano
PO Box 72
Brookside, NJ 07926
Morris County
(973) 214-8294

Appendix C. Agricultural Businesses

G. Mike Fee
10 Paulinskill Rd
Hardwick, NJ 07825
Warren County
(908) 362-5565

William Grundmann
151 County Rd
Frenchtown, NJ 08825
Hunterdon County
(908) 309-6611
<https://www.organicplantcarellc.com/>

Kris Hasbrouck
9 East Buena Vista Way
Bloomington, NJ 07403
Passaic County
(201) 819-6454

Thomas Koepfel
PO Box 54
Pequannock, NJ 07440
Morris County
(973) 633-0360

John D. Linson
PO Box 6089
West Orange, NJ 07052
Essex County
(973) 766-2143

Robert A. Sidor
154 President St
Passaic, NJ 07055
Passaic County
(973) 356-8828

Timothy J. Slavin
319 Route 515
Stockholm, NJ 07460
Sussex County
(973) 697-6646

Douglas Tavella
PO Box 313
Newton, NJ 07860
Sussex County
(570) 350-5359

Richard S. Wolowicz
4 Maude Lane
Hackettstown, NJ 07840
Warren County
(973) 220-6797

Veterinarians

Dr. Carole Edwards AVCA, CHI, FIAMA
Specialty: Equine
PO Box 232
Frenchtown, NJ 08825
Hunterdon County
(908) 575-7834
<https://www.carole-edwards.com>

Mountain Pointe Equine Veterinary Services
Specialty: Equine
14 Schooleys Mountain Rd
Long Valley, NJ 07853
Morris County
(908) 269-8451
<https://www.mountainpointequine.com>

Woods End Equine Veterinary Services
Specialty: Equine
67 Rose Morrow Rd
Wantage, NJ 07461
Sussex County
(973) 209-4994
<https://www.woodsendequine.com>

Equihart Veterinary Services
Specialty: Equine
PO Box 215
Califon, NJ 07830
Hunterdon County
(732) 616-6188
<https://www.equiheartvet.com>

Appendix D. Preserved Farms

*entries in gray denote preserved farms in multiple municipalities

Name	Year	Program	Acres in Green	Total Cost in Green	State Cost in Green	County Cost in Green	Township Cost	Per Acre Cost in Green	Block	Lot
Kirby - Circle Brook	1989	County EP	55	\$324,498	\$259,598	\$64,900		\$5,907	22	11.01
*total preservation including acreage in Andover Twp: 74 acres, cost of \$436,391									22	19
									22	21
									25	3
Cahill	2001	County EP	39	\$131,521	\$93,333	\$38,187		\$3,363	22	1
									24	6
									26	3
Mooney, Raymond	2001	County EP	294	\$1,099,245	\$777,176	\$322,069		\$3,738	19	16
									27	2
									30	1
									31	2
									32	2
Freeborn - Tranquility	2001	County EP	90	\$307,697	\$265,124	\$42,572		\$3,400	113	3
*total preservation including acreage in Allamuchy Twp: 294 acres, cost of \$998,342									15	3
Hoitsma, John & Anita	2002	County EP	75	\$351,068	\$240,519	\$110,549		\$4,700	10	1.01
Luckey -Havenwood Farm	2005	County EP	82	\$261,859	\$189,848	\$72,011		\$3,200	9	5
Hunt, Ralph	2006	County EP	16	\$52,479	\$37,011	\$15,467		\$3,367	1	6
*total preservation including acreage in Fredon Twp: 101 acres, cost of \$341,035										
Tri Farms, Inc.	2010	County EP	482	\$2,461,418	\$0	\$2,461,418		\$5,111	28	1
*total preservation including acreage in Andover Boro and Byram Twp: 546 acres, cost of \$2,726,242									28	1.02
									31	7
									31	7.01
									34	13
									34	13.01
									34	33
Frascella, Michael	2010	County EP	27	\$204,300	\$0	\$204,300		\$7,500	10	1
Chirip - Crooked Creek	2011	County PIG	18	\$141,363	\$69,331	\$72,032		\$7,850	19	20
Washer - Rock Knoll	2012	County PIG	83	\$944,271	\$462,755	\$481,516		\$11,390	27	6.02
*total preservation including acreage in Andover Boro and Twp: 99 acres, cost of \$1,127,460										

Appendix D. Preserved Farms

**entries in gray denote preserved farms in multiple municipalities*

Name	Year	Program	Acres in Green	Total Cost in Green	State Cost in Green	County Cost in Green	Township Cost	Per Acre Cost in Green	Block	Lot
Tommaso - LL Pittenger	2014	County PIG	47	\$437,522	\$198,776	\$131,493	\$107,252	\$9,377	19	7
									19	7.02
									19	7.03
Pittenger, Lori & Russell	2021	SADC EP	83	\$361,896	\$361,896			\$4,374	19	13
Pittenger	2022	Municipal PIG	32	\$134,408	\$93,446	\$20,481	\$20,481	\$4,150	19	10
TOTAL: 14 Farms			1,422	\$7,213,544	\$3,048,814	\$4,036,996	\$127,734	\$5,072		

SADC Minimum Eligibility Criteria

Minimum Eligibility Criteria are based upon the SADC's rules for farmland preservation and project eligibility.¹ In order to be eligible for preservation the site must be developable, have soils capable of supporting agricultural or horticultural production, and meet minimum tillable land standards. (N.J.A.C. 2:76-6.20)

In summary:

For all lands less than or equal to 10 acres:

- The land must produce at least \$2,500 worth of agricultural or horticultural products annually; and
- At least 75% or a minimum of 5 acres of the land (whichever is less) must be tillable; and
- At least 75% or a minimum of 5 acres of the land (whichever is less) must be capable of supporting agriculture or horticulture; and
- The land in question must exhibit development potential as defined by the SADC (based upon zoning, ability to be subdivided, less than 80% wetlands, less than 80% slopes of 15% or more); or
- The land must meet the above criteria or be eligible for allocation of development credits pursuant to a Transfer of Development Credits (TDR) program.

For lands greater than 10 acres:

- At least 50% or a minimum of 25 acres of land (whichever is less) must be tillable; and
- At least 50% or a minimum of 25 acres of land (whichever is less) must have soils capable of supporting agriculture or horticulture; and
- The land in question must exhibit development potential as defined by the SADC; or
- The land must meet the above criteria or be eligible for allocation of development credits pursuant to a Transfer of Development Credits (TDR) program.

For a farm application to qualify for SADC cost share, the farm must have at least one parcel listed on the targeted farm list; comprise an assemblage of substandard parcels which together meet SADC minimum standards; or have sufficient justification by the Hunterdon CADB that the parcels were not identified as targeted due to a specific mapping issue or other error.

Within the identified project area, candidate farms are identified which meet the tillable land and soils minimum eligibility standards. To determine farms that are potentially eligible for preservation, a series of queries were made utilizing the ArcGIS digital mapping software for soils and tillable land. These are described in further detail below and shown on target farm map.

¹ Adopted by the SADC May 21, 2007, and July 25, 2019.

Farmland that meets the SADC Criteria for Tillable Land

Tillable acreage was determined using the NJDEP 2015 Land Use/Land Cover mapping for agricultural lands. The land categories that are defined as the “tillable land” are as follows:

- Agricultural Wetlands (Modified)
- Confined Feeding Operations
- Cropland and Pastureland
- Former Agricultural Wetland
- Orchards/Vineyards/Nurseries/Horticultural Areas
- Other Agriculture

Farm parcels were sorted by size based upon the SADC Minimum Eligibility Criteria for tillable land:

<u>Farm Size</u>	<u>Requirements</u>
0-6.667 acres	75% tillable
6.667-10 acres	5 acres tillable
10-50 acres	50% tillable
50+ acres	25 tillable acres

Farmland that meets the SADC Criteria for Agricultural Soils

Agricultural soils as defined by the SADC are those soils capable of supporting agricultural or horticultural production. The use of the NRCS Soil Survey identifying prime, statewide, and unique agricultural soils is the first and best indication of the farmland soils.

Farm parcels are sorted by size based upon the SADC Minimum Eligibility Criteria for soils:

<u>Farm Size</u>	<u>Requirements</u>
0-6.667 acres	75% soils capable of supporting agricultural production
6.667-10 acres	5 ac of soils capable of supporting agricultural production
10-50 acres	50% soils capable of supporting agricultural production
50+ acres	25 ac of soils capable of supporting agricultural production

Farmland that meets SADC Criteria for both Tillable Land and Soils

Utilizing the tillable acreage determined from the NJDEP 2015 Land Use/Land Cover mapping for agricultural lands and soil acreage determined using the Soil Survey as prepared by the NRCS for prime farmland soils, soils of statewide importance and soils of unique importance, farm parcels were sorted by size based upon the SADC Minimum Eligibility Criteria for tillable land and soils.

Hunterdon County may proceed without state funding on projects that do not meet these Minimum Eligibility Standards, but typically, Hunterdon County will not cost share on applications that do not meet SADC minimum standards. In all cases, the CADB will review and process applications from landowners for farmland preservation and follow all state procedures to ensure consistency in application review and processing.

Parcels								Farm Units			
Block	Lot	Tax Class	Location	Acres (Tax)	Acres (GIS)	Tillable Acres	Tillable Percent	Farm Unit Name	Unit Acres	Tillable Acres	Tillable Percent
17	9	3B	PEQUEST RD	39.07	46.04	24.42	53.0%	Carretta	62.17	36.70	59.0%
17	10	3B	PEQUEST RD	19.09	16.13	12.28	76.2%				
21	2	3B	PHILLIPS RD	8.67	10.44	6.09	58.4%	Kirby	87.48	65.77	75.2%
21	3	3B	PHILLIPS RD	75.83	76.54	59.67	78.0%				
21	16	3B	OFF PHILLIPS RD	0.75	0.51	-					
3	6	3B	WINTERMUTE RD	20.55	21.56	12.45	57.7%	Miller	36.47	20.23	55.5%
3	3	3B	WINTERMUTE RD	14.30	14.91	7.78	52.2%				
16	15.01	3B	130 CREEK RD	17.00	18.29	17.04	93.2%	Pittenger	24.61	17.21	69.9%
19	13.01	3B	143 CREEK RD	5.36	6.32	0.17	2.6%				
16	20	3B	OFF CREEK RD	31.48	29.71	5.62	18.9%	Quarter Moon	105.20	57.94	55.1%
35	2	3B	AIRPORT RD	12.80	12.87	11.16	86.7%				
16	19	3B	OFF CREEK RD	21.05	20.77	13.48	64.9%				
35	3.02	3B	DECKER POND RD	43.18	41.85	-					
1	8.05	3B	WINTERMUTE RD	6.04	5.85	4.53	77.4%	Redlich	14.35	8.10	56.5%
1	12.03	3B	YELLOW FRAME RD	1.53	1.70	1.27	75.0%				
1	11	3B	85 YELLOW FRAME RD	5.69	6.80	2.30	33.8%				
9	17	3B	71 HENRY RD	5.29	5.18	5.17	99.8%	Ruch	26.48	23.26	87.8%
9	4.01	3B	81 HENRY RD	19.87	21.29	18.08	84.9%				
21	4.03	3B	216 WOLFS CORNER RD	6.00	6.63	4.62	69.7%	Sawyer	10.55	8.34	79.1%
21	4.05	3B	PEBBLES RD	3.60	3.92	3.72	94.9%				
5	2	3B	SHOTWELL RD	7.00	10.40	5.38	51.7%	Shotwell	105.98	32.48	30.7%
5	1	3B	SHOTWELL RD	9.61	8.96	2.01	22.4%				
4	2	3B	SHOTWELL RD	14.89	13.06	4.20	32.1%				
4	2.02	3B	SHOTWELL RD	7.50	8.37	3.48	41.5%				
5	2.02	3B	SHOTWELL RD	68.25	63.93	17.42	27.3%				
7	7	3B	SHOTWELL RD	1.40	1.26	-					
21	14.07	3B	190 WOLFS CORNER RD	2.50	3.12	1.14	36.4%	Wall	64.58	47.42	73.4%
21	14.08	3B	186 WOLFS CORNER RD	2.88	2.96	2.36	79.7%				
21	14.01	3B	150 WOLFS CORNER RD	55.32	58.50	43.92	75.1%				
Total (10 Target Farm Units):				526.50	537.87						

Block	Lot	Tax Class	Location	Acres (Tax)	Acres (GIS)	Tillable Acres	Tillable Percent
8	2.04	3B	38 YELLOW FRAME RD	5.14	4.89	4.88	99.9%
6	2	3B	HENRY RD	52.54	52.30	51.52	98.5%
18	3.01	3B	24 WOLFS CORNER RD	8.82	9.57	8.72	91.1%
19	17	3B	21 SUMMIT RD	57.32	55.90	32.77	58.6%
6	3	3B	HENRY RD	92.67	92.87	49.22	53.0%
19	19	3B	86 PEQUEST RD	118.97	112.39	68.30	60.8%
18	3.04	3B	40 WOLFS CORNER RD	16.50	17.89	14.27	79.7%
10	1.05	3B	21 HAMILTON RD	6.00	10.22	5.38	52.7%
7	13.01	3B	WINTERMUTE RD	150.72	155.38	30.84	19.8%
16	15	3B	CREEK RD	26.00	45.24	43.46	96.1%
3	5	3B	WINTERMUTE RD	6.20	5.39	4.51	83.7%
4	4.01	3B	206 WINTERMUTE RD	10.50	12.36	6.35	51.4%
7	12	3B	134 WINTERMUTE RD	11.50	11.53	6.69	58.0%
14	2	3B	38 QUAKER RD	14.14	16.22	10.42	64.3%
21	5	3B	PHILLIPS RD	160.50	160.54	85.83	53.5%
19	18.03	3B	130 PEQUEST RD	16.33	15.14	8.81	58.2%
10	1.06	3B	17 HAMILTON RD	7.82	8.03	6.67	83.1%
17	8.04	3B	PEQUEST RD	7.15	7.29	6.35	87.0%
31	6	3B	WHITEHALL RD	9.38	7.07	5.55	78.5%
14	2.07	3A	10 OLD FORGE LN	4.00	14.02	9.62	68.6%
1	21	3B	OFF RT 94	1.17	1.01	0.76	75.2%
13	4	3B	14 HEDDEN RD	9.44	10.42	8.18	78.5%
13	5	3B	1 QUAKER RD	9.23	11.51	6.74	58.6%
19	21.01	3B	PEQUEST RD	15.21	15.55	9.63	61.9%
Total (24 Non-Unit Target Farms):				817.26	852.73		

Total (All 34 Target Farms): 1,343.76 1,390.60

Chapter 30. Land Use Regulations

Article XVII. General Provisions

§ 30-77. RIGHT TO FARM.

[Ord. No. 2010-15; Ord. No. 2013-03; Ord. No. 2017-02]

The Township Committee of the Township of Green finds that farming has existed and been carried on in the Township of Green for 100 of years last past and long prior to the residential development that has since become prevalent within the Township. As a result of residential construction which has occurred in close proximity to existing working farms which engage in conventional agricultural operations, those residences have been or may be subjected to the effects or impacts, which some residents may deem to be nuisances, from such agricultural activities. It has been further determined that the farmer must be secure in the ability to continue operation of the farm, earn a livelihood therefrom and engage in customary agricultural practices and techniques, free from the threat of nuisance complaints or litigation resulting from such impacts to other residents. The Township Committee has determined that whatever impact to residential and other property owners which result from such farming activities are more than offset by the benefits to the Township of Green, the county of Sussex and the State of new Jersey of such agricultural operations which include the preservation of open space, the preservation of a desirable agricultural visual environment and the provision of agricultural products and farm output. Consequently, the purpose of this section is to assure the continuation and expansion of commercial and home-based agricultural pursuits by encouraging a positive agricultural business climate and protecting the farmer against unnecessary municipal regulation and private nuisance suits while approved agricultural practices are utilized and agricultural production is engaged in consistent with relative Federal and State law, thereby establishing a proper balance among the varied and sometimes conflicting interests of the farm owners/operators and the residents of Green Township.

- a. Statement of Intent. This section shall not be construed as, in any manner, superseding any Zoning Ordinance provision with respect to principally permitted, accessory or conditional uses permitted or prohibited in any particular zone district. Rather, it is the sole intent of this section to prohibit farming and agricultural operations, when conducted in accordance with accepted agricultural management and farming practices, from constituting or being found to constitute, a public or private nuisance.
- b. Activities permitted and protected under this section include all uses and structures ordinarily and customarily incidental to agricultural uses permitted by the Zoning Ordinance, including, but not limited to, the following uses:
 1. The storage, processing and sale of farm products subject however, to all other conditions and limitations applicable thereto as set forth in the Zoning Ordinance.
 2. The use of irrigation pumps and equipment.
 3. The application of chemical fertilizer, insecticides, herbicides, pesticides and liquid/liquefied manure and/or fertilizer. Liquid/liquefied manure and/or fertilizer shall only be applied to ground which is not frozen and shall be tilled into the soil within 24 hours after its application.
 4. On-site distribution of organic agricultural wastes.

Appendix G. Right to Farm Ordinance

5. Use of the land for the grazing of animals, subject to all applicable restrictions for intensive fowl or livestock farms.
 6. The use of farm laborers employed by the farm owner and/or operator.
 7. The use of public roadways for the transportation of tractors and other large slow-moving vehicles and equipment.
 8. The construction of fences for retention of animals and livestock.
 9. The use of customary farm machinery and equipment.
 10. The creation of noise, dust, odors, and fumes conventionally associated with such agricultural activities.
 11. The engaging in farm practices at any and all times deemed reasonably necessary, including, but not limited to, Sundays, holidays and in the evenings.
 12. The raising and keeping of farm animals, including, but not limited to: dairy cattle, beef cattle, sheep, goats, swine, fowl, horses, ponies and mules provided, however, that proper sanitation measures, minimum recommended acreage limitations and appropriate setbacks between fencing and enclosures for such farm animals and adjoining properties are established and maintained.
 13. Installation of physical facilities for soil and water conservation and the harvesting of timber.
 14. Provisions for the wholesale and retail marketing of the agricultural output of the farm, which include the building of temporary and permanent structures and parking areas for said purpose, providing same conform to all applicable provisions of the Green Township Zoning Ordinance and the Green Township Site Plan Review Ordinance.
- c. For the purpose of giving due notice to nearby uses to present and future residents, the Planning Board of the Township of Green shall require an applicant for a major or minor subdivision, as a condition of approval thereof, to include the following notice, both on the subdivision plat itself and in an instrument in recordable form, to provide constructive record notice to buyers of the existence of any proximate agricultural uses, such instrument to be approved by the Planning Board of Green prior to the filing of the final subdivision plat or recording of any deed(s), as the case may be. Such notice shall read as follows: Grantee is hereby noticed that there is, or may in the future be, farm use near the described premises from which may emanate noise, odors, dust and fumes associated with the agricultural practices permitted under § **30-77**, Right to Farm, of the Green Township Zoning Ordinance. A copy of this Ordinance is herewith attached to this deed(s).

References

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State Agricultural Advisory Committee. Green Pages: An Agricultural Resource Guide. Accessed May 2023.

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