Comprehensive Farmland Preservation Plan Kingwood Township

Hunterdon County, NJ

November 2023



Prepared by the Kingwood Township Planning Board and Township Volunteers

With assistance from Banisch Associates, Inc., Flemington, NJ 08822

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INTRODUCTION

This is an update to Kingwood Township's November 2009 Farmland Preservation Plan (FPP). This FPP update identifies the Township's success with farmland preservation over the past decade and affirms Kingwood Township's farmland preservation policies with updated target farms for the Township to continue its participation in State and County Farmland Preservation programs. This FPP responds to State Agriculture Development Committee (SADC) rules for periodic updated of local farmland preservation plans once every 10-years. Since adoption of Kingwood Township's 2009 Farmland Preservation Plan, the Township has experienced very little growth in comparison to the pace of growth Hunterdon County has experienced during the same time period during which Hunterdon County has been at times characterized as the fastest growing County in New Jersey. During this time period, Kingwood Township has had appreciable success with farmland preservation and experienced limited loss of farmland. Kingwood Township's agricultural land base remain substantially unchanged from 2009.

Kingwood Township is a rural municipality consisting of approximately 35.6 square miles, the fourth largest municipality in Hunterdon County. Kingwood Township has an US Census Bureau estimated population of 3,845 in 2020, which is an increase in population of 19 over the US Census Bureau estimated base population in 2010 of 3,826. Kingwood is a farming community without public water or sewer systems infrastructure. The Township's rural character and productive farmland is something that most residents cherish and wish to preserve to the greatest extent possible. Kingwood Township's rural character, farmland expanses and natural areas are attractive new residents and are highly valued by the Township's long-term residents.

Since its establishment, Kingwood Township has been a farming community. Although agriculture and farming have varied over time, from high volume chicken farms to sod farms, agriculture remains the primary land use throughout Kingwood Township. The Township is also home to a limited array of manufacturing, processing, fabricating and assembly industries, and commercial uses that serve the needs of the community; however, agriculture remains the core of the township's "industry". Kingwood Township has long recognized the significant role of agriculture in the community and undertaken sustained efforts by a dedicated group of volunteers and the local government to promote farming, farmland preservation and preserve the right to conduct agricultural activities. Kingwood Township's "Right-to-Farm" ordinance protects a farmer from complaints made by neighboring property owners and determines that "whatever nuisance may be caused to others by these uses and activities are more than offset by the benefits from farming to neighborhood community and society in general." The ordinance advances the Township's desire to take additional actions to enhance the ability of the farmer to productively and profitably continue to devote lands to active farming, and to preserve farming as an integral part of Kingwood Township's future.

In 2012, Kingwood Township took a very significant step toward reorienting the entirety of municipal zoning toward agriculture and similar complimentary uses. The Township adopted Scenic Corridor zoning along the entire length of Route 12 that established agriculture as the principal permitted use in all Route 12 zones previously zoned for and only partially developed with industrial and manufacturing uses. This was a substantial change in municipal land use orientation that greatly enhances the Township's commitment to agriculture and related agritourism and ecotourism commercial uses. Kingwood

¹ Source: U.S. Census Bureau, Population estimates, last revised: October 8, 2021

² Kingwood Township Right to Farm Ordinance: Chapter 74 of the Township Land Use Ordinance.

Township's zoning and land use ordinances now recognize agriculture as a principal permitted use in virtually all zoning districts throughout the Township with the exception (1) of a couple of small village residential and commercial zones that recognize historic crossroads settlement patterns were opportunities for agriculture don't really exist (Baptistown (CR 512 and Route 12) and Barbertown (CR 519 and Barbertown Point Breeze Road), and (2) the Eastern Gateway Village Center Overlay Zone at the far east end of Route 12, where affordable housing zoning is required for municipal compliance with those obligations. Route 12 Scenic Corridor agricultural use clarifying ordinance amendments were prepared and finalized by the Planning Board in 2022 for adoption in 2023, which maintain agriculture as a principal permitted use throughout the remainder of the Route 12 corridor.

Residential subdivision development pressure briefly emerged in the 1990's and 2000's threatening the loss of prime farmland; however, beginning with the Great Recession of 2008 – 2010 and continuing to the present, demand for new housing and residential subdivision activity has dramatically abated. The Planning Board only occasionally receives minor residential subdivision applications at present and this trend is expected to continue. Kingwood Township's resiliency to regional growth and development pressure is in part to the lack of existing centralized public water or sewer facilities, and in part to its relatively isolated location to the far west of Hunterdon County. Against this backdrop, Kingwood Township's commitment to agriculture and farmland preservation combines available local, County and State funding and local zoning to contribute to, appreciable progress preserving farmland. As this progress has been made, farmland vulnerable to development pressure has been saved and removed from the inventory of lands available for development. Kingwood Township's support for farmland preservation is also demonstrated by the municipal Township's Open Space Tax that provides a stable local funding source to preserve farmland, open space, and reinforce preservation of the Township's agricultural base, rural character and related natural resources.

The Kingwood Township Committee and Agricultural Advisory Committee recognize that the goals of this plan are advanced through a variety of techniques such as the outright acquisition of the land, the acquisition of easements, obtaining grants and other funding from the State of New Jersey and cooperation with private conservation organizations and state and county open space agencies. And much progress has been made in this regard. Combining funding sources can be a useful technique where portions of a given site are eligible for both farmland preservation and open space funding and together make preservation of the entire site possible (i.e. steep sloped woodlands eligible for open space, but not farmland preservation funding). where portions of a site fail to score sufficiently to merit acquisition through the farmland preservation program.

The Kingwood Township Committee and Agricultural Advisory Committee has an overriding concern that the process of farmland preservation be as fair as possible to the landowners whose lands or development rights are being acquired, while accomplishing the preservation goals set forth in this Plan. In view of the foregoing, the goals and objectives identified for this Farmland Preservation Plan are as follows:

- Preservation of the rural character of Kingwood Township;
- Preservation of the presence and facilitation of the viability of agriculture;
- Provide for maximum flexibility for local property owners so that lands can be preserved through the program best suited to meet the needs and desires of each individual property owner; and

- Acquire lands or development rights in a manner which is fair to the citizen whose rights are being acquired;³
- Continually update and refine land use policies and zoning so as to reinforce the agricultural industry and related commercial enterprises;

This farmland preservation plan is prepared pursuant to Paragraph (13) of section 19 of P.L. 1975, c.291(C.40:55D-28). This section provides that a farmland preservation plan element shall include:

- 1. an inventory of farm properties in the entire municipality and a map illustrating significant areas of agricultural lands;
- 2. a detailed statement showing that municipal plans and ordinances support and promote agriculture as a business;
- 3. a plan for preserving as much farmland as possible in the short-term by leveraging monies made available by the Garden State Preservation Trust Act, N.J.S.A. 13:8-1 et seq., P.L. 1999, c. 152 through a variety of mechanisms including but not limited to utilizing:
 - i. Option agreements;
 - ii. Installment purchases; and
 - iii. Encouraging donations for permanent development easements.
- 4. a statement of farming trends, characterizing the type(s) of agricultural production in the municipality; and
- 5. A discussion of plans to develop the agricultural industry in the municipality.

Preserving farmland offers many benefits. It maintains clean air and generates little traffic. Farmland often offers attractive views and provides land for groundwater recharge so that rainwater can filter back into the ground. Farmland can contribute to an eco-tourism program, benefiting area towns and businesses. It also provides locally grown products that are increasingly attractive to conservation-minded shoppers. Finally, farmland contributes to the rural quality of life that has been enjoyed in Hunterdon County for centuries. It is for all of these reasons that a farmland preservation program is important to Hunterdon County residents and local officials.⁴

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³ Kingwood Township Master Plan, Farmland Preservation Plan Element, Adopted Aug 14, 2000.

⁴ Hunterdon County Farmland Preservation Plan, 2008.

I. Kingwood Township's Agricultural Land Base

A. Location and Size of Agricultural Land Base

Over the last 20 years, Kingwood's agricultural community has remained largely the same. More landowners are now expressing interest in the farmland preservation program and therefore more land is being preserved. As described in the introduction, the rural character that has long made Kingwood a retreat for new populations, has also been the staying factor for those who have been here for the last few decades, or more.

Population in Kingwood has not increased by much over the last 20 years. In 2000 Kingwood's population was 3,782. In 2020 the population increased by less than a percent to 3,802. ⁵ This small increase helps to keep the amount of farmland developed into non-farm uses at a minimum. To ensure existing and important farmlands remain in farm uses, the Township developed a Farmland Preservation Plan in 2012 and adopted a Right to Farm Ordinance in 2005. The County has been instrumental in overseeing the majority of farms preserved in Kingwood.

Approximately 63% of the Township's total 21,935 acres in tax parcels (13,691 acres) qualify for reduced tax assessment under the Farmland Assessment Act of 1964 (Figure 1 and Figure 3). Table 1 identifies farmland-assessed and farm-qualified parcels within Kingwood, according to the 2021 MOD IV tax data. According to N.J.A.C. 18:12-2.2 Property classifications with definitions:

- (c) Class 3A: "Farm property (Regular)" means land being used for agricultural or horticultural purposes, including its use for the breeding, pasturing and production of livestock and animal products. Farm property also includes land, together with improvements, where the use of the land and function of the buildings thereon are for agricultural or horticultural purposes, as well as farm houses and the lots or parcels of land on which they are situated. For definitions of agricultural use and horticultural use, see N.J.A.C. 18:15- 1.1, adopted under the "Farmland Assessment Act of 1964," N.J.S.A. 54:4-23.1 et seq.
- (d) Class 3B: "Farm property (Qualified)" means land which has qualified and is assessed under the Farmland Assessment Act, P.L. 1964, c.48.

Table 1: Kingwood Township Property Class

Class	Total Acres	%
Farm Property (Regular		
and Qualified)	13,691	63
Residential	4,216	19
No data	1402	6
Public Property	935	4
Vacant	675	3
Other Exempt	660	3
Commercial	155	1
Industrial	116	1
Apartment	4	0
Public School	27	0
Church and Charitable	30	0
Cemetery	24	0
Total	21,935	100.0

⁵ 2000 and the 2020 Decennial Census

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Kingwood Township has delineated one project area for preserving farmland in the community. The project area encompasses the north and easterly 2/3's of the Township, excluding the affordable housing zone on Route 12. The southwest side of the Township is largely excluded from the project area due to the paucity of agricultural land and the limited ability of those lands to contribute to the preservation of the Township's agricultural base when viewed in the broad contact of maximizing efforts and efficiency of funding to preserve meaningful agricultural operations. This condition is graphically depicted on Figure 9. The project area is predominantly comprised of farm assessed/qualified lands and public property (Table 2). Of the total 15,015 acres, 67% (10,110 acres) are farm assessed/qualified and 3% (492 acres) is public property. This totals 70% of the project area as farm and preserved lands. This data is presented with the Preserved Farmland in the Township in Figure 2.

Table 2: Property Class for Kingwood Township Proposed Project Areas

Class	Acres	Percentage
3B Farm (Qualified)	10,110	67
2 Residential	2,482	17
15C Public Property	492	3
No Data	976	7
15F Other Exempt	563	4
1 Vacant Land	187	1
3A Farm (Regular)	71	0
4A Commercial	68	0
4B Industrial	6	0
15A Public School	27	0
15D Church & Charitable	30	0
15E Cemeteries/Graveyards	3	0
TOTAL	15,015	100.00%

The agricultural character of the Township is further highlighted by the 2015 Land Use/Land Cover data. Table 3, below, identifies the Land Use/Land Cover for the entire Township. 7,362 acres (32%) of the Township are classified as Agricultural.

Table 3: 2015 Land Use/Land Cover for Kingwood Township

Type	Total	%
Forest	8087	35
Agriculture	7362	32
Wetlands	3586	16
Urban	3245	14
Water	528	2
Barren Land	28	0
TOTAL	22,836	100

When the 2015 Land Use/Land Cover (LU/LC) is focused on the Township's proposed project area, the agricultural land totals 40% (6,182 acres) of the area, shown below in Table 4 and in Figure 4. Table 5 indicates cropland and pastureland present throughout the Township as well as within the proposed project area. In the proposed project area, "Active Agricultural Acres" is the sum of the Farmland Assessment Cropland Harvested, Cropland Pastured and Permanent Pasture acreage. NJDEP LU/LC data indicates that

Farmland Assessed active agricultural acres in Kingwood totalled 6,565 acres in 2015. This information is represented in Figure 5: Cropland / Pastureland.

Table 4: 2015 Land Use/Land Cover for Kingwood Proposed Project Area

Туре	Total	%
Agriculture	6,182	40
Barren Land	15	0
Forest	4421	29
Urban	2000	13
Water	97	1
Wetlands (Non-ag)	2,569	17
TOTAL	15,284	100.00%

Table 5: 2015 Land Use/Land Cover Cropland and Pastureland

	Prime	Soils of Statewide	Non-farm		Percentage
Category	Soils	Importance	Soils	Acres	of Area
Township Wide Cropland and Pasture Land	1,885	4,361	319	6,565	29
Township Project Area Cropland and Pasture Land	1,800	3,489	293	5,582	37

Finally, it is important to note the amount of existing preserved farmland in the Township. To date, there are 45 farms preserved through SADC, the County and Municipal Funding (Table 6).

Table 6: Preserved Farmland

Block	Lot	Name	Acres	Type of Acquisition
26	22	DeCroce, Richard	110.49	SADC Easement Purchase
26	27	Rosansky, Emily	51.436	Easement Purchase - County
1	6, 6.02	Sargenti, Dennis A.	74.67*	Easement Purchase - County
6	31.02	Kocsis, Frank & Mary Mott-Kocsis	174.26	Easement Purchase - County
42	6	Foley, III, Edward J.	37.5*	Easement Purchase – County
27	10, 6.04	Kenney, J & R	118.34*	SADC Easement Purchase
36	11, 24.01	Michelanko, H & B	5.35	Easement Purchase - County
12	34.01, 34.02, 34	Gordeuk Farm	395.55	SADC Easement Purchase
12	27	Niciecki Farm	135.38	SADC Easement Purchase
12	35	Haring Farm	58.97	SADC Easement Purchase
27.02	2	Paulik Farm	13.48*	SADC Easement Purchase
23	11	Perrotti Farm	130.97	Eight Year Program
4	2	Verity	40.7*	Preserved Farm
7	7, 7.02	DeSapio, Salvatore	125.17	SADC Easement Purchase
14	21.03	Augustine, William and Mary	61.5	Municipal PIG
5	2	Ramirez, Patricia	34.74*	HLTA
5	2.01	Middleton	18.83*	HLTA
26	25	Newcomb, Kathleen M. & Stuart C	44.62	Easement Purchase - County
12	19	Crouse, Richard & Melissa	53.38	Easement Purchase - County
14	23	Felix, Mary, Anna & Phillip	169.97	Municipal PIG
12	31	Palapoli	46.93	NJCF

Block	Lot	Name	Acres	Type of Acquisition
23	17, 17.03	Gordeuk	25.26	HLTA
7	6	Makatura (Maplewood Farm)	108.15	Municipal PIG
33	24	Mulligan\Hunterdon Land Trust Alliance	64	HLTA
5	4.03	Gross, Joel & Rosemary	57.509	Easement Purchase - County
14	20.03	Wydner, Elizabeth	83.106	SADC Easement Purchase
6	12, 13.01	Gaetano DeSapio Family Farm	65.697	SADC Easement Purchase
6	18, 23.01	Kocsis, Ryan and Kimberly	140.485	SADC Easement Purchase
23	11, 11.01	Perrotti Farm LLC	130.979	SADC Easement Purchase
5	3	Zander, Donald H & Jill H. #2	24.4022	Easement Purchase - County
5 5.01	1.01	Tranquility Farms LP/Mase LP	93.61*	
6	3.01			SADC Easement Purchase
6	26, 26.01	Dalrymple, Richard K. & Brian S.	47.743	Municipal PIG
4	3	Dirt Capital Partners, LLC (Baker Road)	.03*	Easement Purchase - County
12	33.01	Haring, Mary Lou and Lucas	58.937	SADC Easement Purchase
41	9	US Agrinova, LLC (Schuster)	88.6*	SADC Easement Purchase
26	24	Ecker, Englebert - Estate of	59.208	SADC Easement Purchase
30	6	Goeckeler, William & Susan	43.551	Municipal PIG
32 33	5, 6 12	Varela, Daniel - Estate of	87.795	SADC Easement Purchase
39	3, 3.03, 4	Oertle, David & Lisa	106.556	SADC Easement Purchase
6	11	DeSapio, Martin A. and Cathleen J.	45.61	Easement Purchase - County
6	7	Kollmer, Wesley M. & Melinda L.	23.842	Municipal PIG
39	2 & 27	Mitchell, Paul &Vouletti	70.56	SADC Easement Purchase
25 26	10 21	Ely, Christopher & Deirdre	148.65	SADC Easement Purchase
37	3, 3.1	Strober, Michael & Diane	52.68	SADC Easement Purchase
19	11	Tinsman, Donald & Fay	33.89	SADC Easement Purchase

^{*}Farms in more than one municipality. Acres represent area in Kingwood Township only.

The objective of the proposed project area is to include target farms that will expand the existing base of preserved farmland and create large contiguous areas of active and preserved farms and build on those targets and the Township's agricultural base in the future. These targets will be discussed further in Sections 4 and 5 below but are noted here to show the proximity and nature of the Township's proposed Project Area and Target Farms. Figure 2 displays this information with the County's Agricultural Development Area.

The information below includes a number of maps and tables providing information on the soils, water sources, farmland assessment and census statistics, farm sizes in the Township and in the County, and the agricultural use of farms in the Township and in the County. All of which serve to paint the portrait of a municipal agricultural base well positioned and suited for preservation and retention of agricultural land in the region.

B. Distribution of Soil Types and Their Characteristics

Soil is the unconsolidated mineral material on the immediate surface of the earth and which serves as the medium for growth of land plants. The characteristics of each soil type have developed over time (usually many thousands of years). Soil is a basic resource for food production, in addition to its essential role in collecting and purifying water before it enters the ground water. However, soil itself can be a pollutant as dust in the air or as sediment in water.

Kingwood farmland is separated into three categories. *Prime Farmland* makes up 25.06% of the Township; *Farmland of Statewide Importance* accounts for 70.43% of land area in the Township; and lands categorized as *Not Prime Farmland* account for 4.51% of lands in the Township.

Bedrock Name	Thickness	Physical character of rocks	% of Twp.
Trl - Lockatong Formation		dolomitic or silty argillite, mudstone, sandstone, siltstone, and minor silty limestone	29%
Trlr - Red Bed Lockatong Formation	3,800 ft.	dolomitic or silty argillite, mudstone, sandstone, siltstone, and minor silty limestone, occasionally red	6%
JTrp - Passaic Formation	6,200 ft.	siltstone and shale	49%
JTrpg – Passaic Formation Gray bed		sandstone, siltstone and shale	14%
Jd - Diabase and granophyre		diabase, medium- to coarse- grained	2%
Trs - Stockton Formation	6,000 ft.	sandstone, mudstone, silty mudstone, argillaceous siltstone, and shale	.06%

The US Department of Agriculture Natural Resources Conservation Service (USDA NRCS) made soils surveys (map units) in 1974 to determine soil characteristics and capabilities and to help people understand soils and their uses (accurate within about 5 acres).

There are 56 different map units in Kingwood. The ERI includes maps and a table of several important characteristics of these soils. Bedrock categories are listed above, as an example. When viewed together, most soils in Kingwood have limitations from at least one of the following factors: poor drainage, high water table, shallow bedrock or steep slopes. The 1974 Soil Survey report also placed an emphasis on limitations of the ground water. Figure 6 shows the types and extent of each soil group.

C. Number of Irrigated Acres and Available Water Sources

Kingwood has a total of 7 irrigated acres, of which, 7 acres are fruit crops, and 5 acres are ornamental plants. As can be seen in Table 7 below, irrigated acres in the Township have decreased since 2004.

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⁶ Kingwood Township Environmental Resources Inventory, 2004, Kratzer Environmental Services.

Table 7: Irrigated Acres

	1983	1991	2000	2004	2010	2014	2018
Kingwood Township	11.5	3.0	62.0	96.0	86	9	7

D. Farmland Assessment and Census of Agriculture Statistics and Trends

Table 8a: Number of Farms

	2017	2002	1982	% Change
Hunterdon County	1,604	1,514	1,180	26%
Kingwood Twp	335	336	n/a	3%

Table 8b: Farms by Size – Hunterdon County⁷

	2018	2002	1982	% Change		
1 to 9 Acres	392	341	177	121%		
10 to 49 Acres	816	722	470	73%		
50 to 179 Acres	300	328	367	-18%		
180 to 499 Acres	71	86	119	-24%		
500 to 999 Acres	14	28	37	-62%		
1,000 Acres or More	11	9	10	10%		

Table 9: Average and Median Farm Size⁸

1 W 10 > V 11 V 1 W 50 W 10 1 W 10 W 10 W 10 W 10 W 10								
	2017		2002		1982		% Change	
	Average (ac)	Median (ac)	Average (ac)	Median (ac)	Average (ac)	Median (ac)	Average	Median
Hunterdon County	63	17	72	24	102	n/a	-29 %	-
Kingwood Twp	41.5	n/a	29.29	n/a	n/a	n/a	1	-

Table 10: Cropland Harvested, Pasture, Woodland, Equine, Total for Agricultural Use9

•	Hunterdo	n County		Kingwood Township			Percent Change	
	2017	2003	1983	2018	2005	1985	County	Township
Cropland Harvested (ac)	54,365	60,117	74,432	6,049	6,591	7,995	-27%	18%
Cropland Pasture (ac)	5,304	8,587	8,608	934	978	838	-38%	-11%
Permanent Pasture (ac)	14,912	16,792	19,409	1,255	1,610	1,748	-23%	-30%
Subtotal Active Agriculture	74,581	85,496	102,449	8,238	9,179	10,581	-27%	-22%
(ac)								
Attached Woodland (ac)	17,475	22,965	39,844*	2,305	2,502	4,905.4*	-56%	-53%
Unattached Woodland (ac)	26,897	23,701		2,755	3,163		-13%	-13%
Equine (ac)	638	698	n/a	15	47	n/a	-60%	-68%
Total for Ag Use (ac)	119,573	132,860	142,240	13,313	14,891	15,496	-16%	-14%

^{*} Total Woodland / Wetland

Of the approximately 22,805 acres that make up Kingwood Township, 13,313 acres or about 58% of the land is farmland assessed according to the 2017 NJ Farmland Assessment Data. As shown in Table 10 above, the majority of the farmland assessed acres are in active agriculture with a total of 8,238 acres.

⁷ US Census of Agriculture, Hunterdon County Ag Profile, 4/13/2017

⁸ US Census of Agriculture, Hunterdon County Ag Profile, 4/13/2017

⁹ NJ Farmland Assessment 2018, Tax Year 20185 – County Summary

Harvested Cropland covers the greatest amount of active agriculture land with 6,049 acres, followed by Permanent Pasture with 1,255 acres and Cropland Pastured with 934 acres.

In summary, the Township and the County saw a decrease in active agricultural acres between 1983 and 2017. Although data for the size of farms was not available for the County in 1982, it can be assumed that the County followed the Township's trend of farms decreasing in size, as well. In addition, the Township and the County soils are on par with the amount of Prime Farmland Soils (25% and 27%, respectively) and soils not important to farming (4% for both). The Township, however, exceeds the County in Statewide Important Soils (70% and 38% respectively). Finally, it should be noted that overall, the amount of land dedicated to all agricultural uses in the County and the Township has decreased since 1983, the County saw a 16% decrease and the Township saw a decrease of 14% in agricultural lands.

II. Municipality's Agricultural Industry – Overview

Kingwood Township's agricultural industry is rooted in the history of this farming community, but it is important, as development happens in Kingwood Township, to protect the agricultural industry that keeps Kingwood farmers farming. Trends portrayed through the NJ Farmland Assessment summaries for the last couple of decades show that, in general, less land in the township is currently being used for agricultural activities than was used 20 years ago. However, some agricultural activities have remained fairly consistent. These activities include horse farms, a variety of field crops such as Rye and Sorghum, and seasonal crops such as Pumpkins. More specific numbers for crop acreage is shown in the Table 11 below.

A. Trends in Market Value of Agricultural Products Sold

The total amounts of revenue generated by farms in Kingwood Township are hard to identify. As stated in the Hunterdon County plan, the use of the United States Department of Agriculture's National Agriculture Statistics Service (NASS) is tabulated annually with certain crop yields recorded in recent years that were not previously recorded. Additionally, trends in the market value are not compiled annually at the County level, but rather reported every five years as part of the National Census of Agriculture. While these statistics are available at the County level, they are not typically available at the municipal level. However, much of the trending witnessed at the County level correlates to the Township level.

While farm income has been relatively low, farm production costs continue to be high for farmers. New Jersey has been described as having the highest cost of farming in the country. In 1997, the average farm production expenses were \$24,601, which represents a sizeable portion of the \$27,461 average dollar amount of agricultural products sold. That number has increased according to the 2018 US Census of Agriculture with a \$65,981 average dollar amount of agricultural products sold. The largest category of production expenses in Hunterdon County is property taxes, due to high property values. Other large categories of farm production expenses include the cost of hired labor, feed for livestock, and repair and maintenance of buildings and equipment. ¹⁰

B. Crop/Production Trends over the last 20 years

Agriculture in Kingwood has become increasingly diverse as new farmers move into the Township and those here for generations look for new ways to enhance their farming practices. The diversity ranges from hay and grain production, horses and cattle, to sheep, nurseries, and specialty crops and animals. The agricultural diversity is largely due to the above average soils that accommodate a variety of agricultural uses, the relatively good climate, and the combination of part-time and full-time farmers that are interested in various types of agriculture.

The total amount of land available for agricultural use including woodland and equine acreage is also down from the 15,496-acre figure in 1983 with a total 13,413 acres for agricultural use according to the 2017 NJ Farmland Assessment. The total woodland figure for agricultural use is 5,301 acres, about 40% of the total amount of land for agricultural use in the Township. The amount of woodlands had been increasing over the years until 2000 when it started to decline.

In 2017 field crops dominated the land in active agriculture in the Township with 5,015 acres, a decrease from 1984; however the remaining acreage is divided among various other forms of agriculture. Nursery

¹⁰ 2002 USDA Census of Agriculture (http://www.agcensus.usda.gov/Publications/2002/index.asp).

operations significant decreased in acreage for farming in 2017 with 156 acres. Among livestock, chickens ranked number one in the number of animals raised with 1,039 chickens in the township, while Beef Cattle ranks second with 381 head. Dairy cattle saw the most dramatic decrease by 99% since 1984. Kingwood's acreage for the top five agricultural commodities is very different than that of the entire County. In Kingwood, the top three are Field Crops, Nursery and Vegetables, while the top three in the County are Nursery, Hay and other Field Crops.

Table 11: 1984 and 2018 Active Agriculture Crops

	1984 (acres)	2004 (acres)	2018 (acres)	% Change
Field Crops	6,435	5,582	5,015	-22%
Nursery	467	294	156	-67%
Vegetables	76	51	26	-66%
Fruit Crops	23	29	21	-9%
Pumpkins	1.3	14	2	54%
Berry Crops	9	0	10	11%
Sweet Corn	59	0	21	-64%
Chickens (#)	1,537	828	1,039	-32%
Beef Cattle (head)	778	356	381	-51%
Dairy Cattle (head)	547	97	5	-99%
Swine	684	29	39	-94%

1. The Cost of Farming

Large farm operations, particularly dairy and grain operations have been declining throughout Hunterdon County for several decades. The price of dairy and grain commodities has been relatively low over these years and contributes to low and/or unpredictable farm incomes. Over the last two decades, milk and grain prices fluctuated but never increased in proportion with the cost of living in Hunterdon County until recently. In 1980, the price paid to farmers for milk was \$13.38/cwt; in 1990 it was \$15.30/cwt and in 1995, it was \$13.30/cwt. In June of 2007, the price received for milk showed significant increase up to \$20.20/cwt and currently stands at around 25.65/cwt. For feed corn, farmers received \$3.59/bushel in 1980; \$3.00/bushel in 1990 (June) and \$2.50/bushel in 1995 (June). In June of 2007 the price per bushel increased to \$3.51 As of January 2023 the price per bushel is 6.7475. This rise has closely followed the rise in corn used for ethanol production for addition to gasoline. This change in the market is felt throughout various agricultural products, as some farmers are abandoning previously profitable crops to take advantage of the high prices for others. Some farmers adopted new farming strategies that either increased crop yields or profit margins; others shifted directions in farming and chose new, more profitable products as a result of the new price increases for different products. Typically the latter requires investments and risks that many farmers, unfortunately, can not afford because of either retirement or financial needs.

C. Support Services within Market Region (equipment and seed dealers, fertilizer/pesticide suppliers, processing facilities, farmers markets, etc.)

1. Agricultural Support Services

Due to the rural nature of Hunterdon County and the intensity of agriculture in the region, there are a number of businesses that have located themselves within easy reach of the local farmers. Various farm equipment dealers are located in the area to sell new and used equipment and service existing as well.

Seed suppliers are also located within the region to provide farmers with support for their planting needs. Closely associated with the seed suppliers are the suppliers of products that help protect the crops such as pesticides. Many of these businesses are moving toward more nationally based outfits with the ease of transport and ordering through the internet. This creates an opportunity for greater diversity in products made available to local farmers that normally would not be exposed to such a wide array of products.

Local auctions are also a service that allows for the sale and trade of agricultural goods at the local level. However; while many are held in the area that allow for local products to be concentrated within the area to the benefit of neighboring farmers, these are regionally available as opposed to being situated locally. In addition to the auctions, farm markets are also a great outlet for local farmers and their use is on the rise in Hunterdon County. Farm markets have begun to proliferate in the region in recent years as the trend toward agritourism has emerged as a viable seasonal marketing alternative for farmers.

Business Name:	Belle Mead Farmer's Co-op	Readington Farms	Perdue Farms Incorporated
Address:	100 Township Line Road	PO Box 164	73 Silver Lake Rd
	Hillsborough, NJ 08844	Whitehouse, NJ 08888	Bridgeton, NJ 08302
Phone Number:	(908) 359-5173	1-800-426-1707	(856) 455-1166
Contact:			
Business Hours:	M-F 8am-6pm, Sat 8am-		
	5pm, Sun 9am-4pm		
Products:	Locally grown nursery stock,	Dairy Cooperative and	Grain Buyers
	feed, grass seed, fertilizer,	Market	
	mulch, pet food, work		
	clothing		
Other:	The Belle Mead Farmers Co-		
	op is open to the public. It is		
	owned by its employees and		
	110 of the local farmers and		
	their descendants.		

Table 12: Local Agricultural Support Services

2. Supplemental on-farm income

Many farmers are supplementing their farm incomes with *farm-related* and *non-farm related* businesses and activities. This is happening not only in Hunterdon County, but throughout the country. According to the FARMs Commission report, November, 1994, supplemental *farm-related* income on New Jersey farms includes hunting/fishing; leaf composting; farmstand marketing; picnic facilities; pick-your-own operations; petting zoos; hay rides; farm tours; and bed and breakfasts. Hunterdon County farmers are including many of these activities in their farm operations, particularly hay rides, pick-your-own operations, corn mazes, and farmstands. *Non-farm* businesses are an additional source of income for farmers. In Hunterdon County, *non-farm* businesses include school bus drivers, vehicle repair shops, arbor businesses and construction and excavating companies.

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¹¹ Ibid.

Table 13: Farmers' Markets in the Hunterdon County Region

34 1 4	CP 4 E	C4 I	G 4 31	G. 1.	TT 4 1 T 1
Market:	Clinton Farmers	Stangl	Sergeantsville	Stockton	Hunterdon Land
	Market	Farmers'	Farmers	Farmers	Trust Farmers'
		Market	Market	Market	Market
Address:	65 Halstead Street	Mine Street and Stangl Road Flemington, NJ 08822	570-560 Rosemont Ringoes Rd Sergeantsville, NJ 08557	19 Bridge St Stockton, NJ	Rte 12 Circle Raritan Township, NJ 08822
Phone:	(908) 735-8811		(908) 468-2540	(609) 915-3412	(908) 237-4582
Open:	Sundays May 1 - Oct. 30 9am - 1pm	May-November, Saturday, 9am – 3pm	Saturdays May 13- Oct. 28 8:30am - 12pm	Year round	Sundays May 21 - Nov 19 9 AM to 1 PM
Products:	Fruits and vegetables, eggs, meats, body products, honey and more Variety of fruits and vegetables. Variety of fruits and vegetables, eggs, honey, cookies		Variety of Fruits and Vegetable	Fruits and vegetables, cheese, meats, honey, fruits and more	

^{*}WIC (Women, Infants, Children) – provides Federal grants to States for supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five who are found to be at nutritional risk.

3. Aging farmer

The average age of Hunterdon County's farmers has been increasing for the last 25 years. In 1969, the average age of the County's farmers was 52.7. Although it decreased slightly over the next 10-12 years, it has increased since then. As of 2017, the average age has increased to 59.2. The aging farmer contributes to the agricultural picture in Hunterdon County. With the average farmer close to retirement, there is little interest in taking risks and making investments to adapt to a changing industry. Therefore, if profit margins are minimal, the path of least resistance is often the sale of the farm. Some farmers hold on to the land and bequeath it to their children. However, with the current estate tax laws, even this can be a costly endeavor. Farmers' children are also losing interest in farming as an occupation as they leave the farm to pursue more profitable jobs.

^{**}FMNP (Farmers Market Nutrition Program) - established by Congress in 1992, to provide fresh, unprepared, locally grown fruits and vegetables to WIC participants, and to expand the awareness, use of and sales at farmers' markets.

III. Land Use Planning

A. State Development and Redevelopment Plan

The New Jersey State Development & Redevelopment Plan (SDRP) is mandated by the State Planning Act of 1985 (NJSA 52:18A-196 et seq.) and establishes a state-level planning policy. The SDRP, first adopted by the State Planning Commission (SPC) in June of 1992, is required to be updated on a three-year cycle. The amendments and re-adoption are conducted through a three-phase "cross-acceptance" process that includes a comparison phase, a negotiation phase, and a final phase.

The SDRP is implemented through the activities of various state departments and, at the municipal level, implemented and amended through "Plan Endorsement." It is essentially one, an outgrowth of a future vision presented in narrative (policy) form and two, an on-the-ground (e.g., mapped) view of the state. The SDRP lays out Statewide Goals that deal with individual topical areas and general policies frame the strategic and tactical aspects of planning decisions. These are the "future vision."

The Planning Areas outlined in the SDRP provide a regional framework for infrastructure development decisions, including the designation of Centers, areas to which growth should be focused (Figure 8). The SDRP includes seven (7) Planning Area (PA) designations:

- **PA1 Metropolitan Planning Area** characterized by areas with Densities of more than 1,000 persons/sq mile; Population clusters of greater than 25,000 persons; Land area greater than 1 square mile; Existing public water and sewer systems; and Access to public transit.
- **PA2 Suburban Planning Area** is characterized by areas with Densities of less than 1,000 persons/sq mile; Are contiguous with PA1; Land area greater than 1 square mile; and has existing or planned infrastructure with capacity to support development.
- **PA3 Fringe Planning Area** is characterized by areas with Densities of less than 1,000 persons/sq mile; Served by rural roadways and utilities; generally; Lacking wastewater systems except in centers; Land area greater than 1 square mile; Lands not meeting criteria for PA4 or PA5.
- **PA4 Rural Planning Area** is characterized by areas with Densities of less than 1,000 persons/sq mile; Land area greater than 1 square mile; generally served by on-site water and wastewater systems; and are generally characterized by agricultural production, woodlands or other vacant lands.
- **PA4B Rural** /**Environmentally Sensitive Planning Area** is characterized by areas with Densities of less than 1,000 persons/sq mile; Land area greater than 1 square mile; Generally served by on-site water and wastewater systems; Generally characterized by agricultural production, and woodlands or other vacant lands. Land satisfying the delineation criteria for PA4 that also meets the delineation criteria for the Environmentally Sensitive Planning Area (PA5) is designated as Rural/Environmentally Sensitive (PA4B)
- PA5 Environmentally Sensitive Planning Area is characterized by areas with Densities of less than 1,000 persons/sq mile outside of centers; Land area greater than 1 square mile, exclusive of centers; Includes environmental features such as: Trout production/maintenance waters; Pristine non-tidal watersheds feeding Category 1 waters; Threatened & Endangered species habitat; Coastal wetlands; Significant features such as slopes, ridgelines, unique ecosystems; and Prime forest.

PA5b – Environmentally Sensitive/Barrier Islands Planning Area is characterized by areas with Densities of less than 1,000 persons/sq mi outside of centers and land area greater than 1 square mile, exclusive of centers (shapes obviously different due to barrier island morphology). Includes environmental features such as: Barrier island habitat; Threatened & Endangered species habitat; Coastal wetlands; and Natural Dune Ecosystems, Vegetation and fauna. Intended to protect barrier island ecosystems while directing development into centers.

Kingwood Township is included primarily within the SDRP Rural Planning Area (PA4), the Rural/Environmentally Sensitive Planning Area (PA4B), with smaller areas of Environmentally Sensitive Area (PA5) found along the Delaware River and along the Boundary with Delaware Township. The PA4B designation is the result of a mapping refinement that the Township sought to the State Plan Policy Map under a prior round of Cross Acceptance. The PA4B amendment refined the PA4-Rural Planning Area designation for the Lockatong and Wickecheoke watersheds to include the Environmentally Sensitive designation (Planning Area 4-Rural Planning Area to PA4B-Rural Environmentally Sensitive Planning Area). This is displayed in Figure 7. Additionally, Figure 9 shows the 2015 NJDEP Agricultural Land Use / Land Cover map with preserved farms, applications and open spaces in surrounding municipalities.

The PA4 and PA4B designations recognize the valuable agricultural resources and environmentally sensitive natural features that Kingwood Township seeks to protect from development pressure within the region that threatens to transform rural lands to suburban sprawl.

SDRP guidance for management of the Rural Planning Area has been provided, as follows:

"Prudent land development practices are required to protect these resources and retain large contiguous areas of agricultural land. If a viable agricultural industry is to be sustained in the future, the conversion of some of the lands to non-farm uses must be sensitive to the areas predominant rural character and agricultural land base. Throughout New Jersey, some Rural Planning Areas are subject to greater development pressure than other areas. Without greater attention to maintaining and enhancing our rural areas, these economic activities are at risk. Tools and techniques need to be tailored to address the distinctive situation. In particular, new development may require additional attention in areas with environmentally sensitive features."

For the Environmentally Sensitive Planning Area, the State Plan offers the following:

"The Environmentally Sensitive Planning Area contains large contiguous land areas with valuable ecosystems, geological features and wildlife habitats, . . . The future environmental and economic integrity of the state rests in the protection of these irreplaceable resources. . . Environmentally Sensitive Planning Areas are characterized by watersheds of pristine waters, trout streams and drinking water supply reservoirs; recharge areas for potable water aquifers; habitats of endangered and threatened plant and animal species; coastal and freshwater wetlands; prime forested areas; scenic vistas; and other significant topographical, geological or ecological features, . . . These resources are critically important not only for the residents of these areas, but for all New Jersey citizens.

The Environmentally Sensitive Planning Area is highly vulnerable to damage of many sorts from new development in the Environs, including fragmentation of landscapes, degradation of aquifers and

potable water, habitat destruction, extinction of plant and animal species and destruction of other irreplaceable resources which are vital for the preservation of the ecological integrity of New Jersey's natural resources. . New development in these Environs has the potential to destroy the very characteristics" (environmental sensitivities) "that define the area".

The SDRP promotes the retention of large open land areas in PA4B, and the Plan defines "large contiguous area".

"When applied to habitat, (large contiguous area) means the area of undisturbed land required to maintain a desired community of plants and animals", and "when applied to farmland, large contiguous area means the amount of contiguous farmland usually considered necessary to permit normal farm operations to take place on a sustained basis."

Whether through maintenance of large contiguous areas for farmland or protection of environmentally-sensitive areas, Kingwood's stewardship of these areas requires policies and management techniques to sustain the landscape so that the long-term viability and function of these lands and natural systems may be assured. Kingwood seeks to manage these resources consistent with the SDRP policy orientation for the Rural Planning Area and the Environmentally Sensitive Rural Planning Area.

SDRP Policies seek to maintain the viability of agricultural areas and the function of natural systems through strategies aimed at the protection of these resources and coordinated growth policies that orient new development adjacent to either Centers, or existing developed areas with infrastructure capable of supporting development. Development should be compact, and innovative development approaches, such as clustering, lot size averaging or open lands zoning discourage sprawl-type patterns of development that fragment viable agricultural areas and destroy the very resources that the Rural and Environmentally Sensitive Planning Area designations seek to protect.

In addition, the SDRP calls for a Special Use Designations in the form of nodes, specifically Agricultural and Industrial land uses. The agricultural "node" in the SDRP is described as the following:

New Jersey's agricultural industry is largely located in the State's predominantly rural areas, delineated for the purposes of the State Plan in Planning Areas 4, 4B and 5. The State Plan's policies discourage unmanaged growth and development in these Planning Areas in an effort to preserve and protect the working and natural landscapes associated with these Planning Areas. However, to maintain and enhance the economic viability of agriculture as an industry, supportive infrastructure and services must be located in close proximity to farming activity. To minimize any adverse impacts of these uses on the landscape, it is useful to concentrate these activities in appropriate locations with suitably planned and implemented measures to protect the characteristics of surrounding areas. To acknowledge the importance of agriculture-supportive infrastructure and services the State Plan includes Agricultural Node designation.

The Agricultural Node will be established and mapped through the Plan Endorsement process. They should be strategically located to utilize existing infrastructure where possible and provide maximum support to the local agricultural community.

B. Highlands Water Protection and Planning Act

Although Kingwood Township is not included within the Highlands Region, portions of Hunterdon County and a substantial portion of the region of the State in which Kingwood is located is designated within the Highlands Region. As a result of the proximity of the Highlands Region to Kingwood Township, it is anticipated that suburban growth pressure will increase in Kingwood, where no regional special resource area mandatory growth management rules govern local development.

The Highlands Act divides the Highlands Region into two primary management areas, including (1) a Preservation Area and (2) a Planning Area. While none of Kingwood Township is designated within the Highlands region, growth management policies for the two management areas of the Highlands was initially expected to to result in heightened growth pressure on Kingwood's flat, open agricultural lands at the time the Act was adopted in 2005; however, this growth pressure has not significantly impacted Kingwood Township to date.

C. Kingwood Township Master Plan & Development Regulations

In 2004, the Kingwood Township Planning Board conducted a periodic reexamination of its master plan and development regulations, pursuant to N.J.S.A. 40:55D-89. The Reexamination Report that was adopted following this periodic reexamination identified a series of zoning and development regulations, which were subsequently adopted, and which reinforce the Township's goal to preserve agricultural lands and the rural character of the community, while at the same time, allowing for a modest level of development based upon the capacity of the land to support development.

Nearly the entire Township's agricultural and environmentally sensitive land base is designated the AR-2 Zone. 2006 zoning ordinance amendments for the AR-2 zone provide for agriculture as a principal permitted use. Residential major subdivisions require a minimum lot size of 7 acres, after deducting land for environmental constraints. The AR-2 zone encourages clustering and lot size averaging as a means of preserving open agricultural and environmentally sensitive areas. This zoning strategy is aimed at retaining large contiguous tracts of farmland as a by-product of major subdivisions in Kingwood. Kingwood Township's farmland preservation efforts are focused on actively farmed parcels in the AR-2 zone.

In 2011, another periodic reexamination was undertaken that authorized additional zoning amendments which were implement in the 2012. This included the 2012 Scenic Corridor Overlay zoning that established agriculture as a principal permitted use in all Route 12 zoning districts, and added the Eastern Gateway Village Center Overlay, which is primarily an affordable housing compliance district. Those 2012 zoning amendments grandfather existing nonagricultural industrial and manufacturing uses within the Route 12 corridor, but does not permit the establishment of new industrial and manufacturing uses, and instead established agriculture and agricultural related uses as a principal permitted uses to better those uses in Kingwood Township.

Kingwood Township initially adopted a Farmland Preservation Plan Element (FPP) to the Master Plan in 2000 and update the FPP in 2009. Kingwood Township's FPP orientation included the establishment oof farmland preservation goals and objectives, inventoried farmland preserved through the State easement purchase program and farms enrolled in the eight-year program. The FPP Goals and objectives are listed below:

• Preserve the rural character of Kingwood Township;

- Preserve the presence and facilitate the viability of agriculture;
- Provide for maximum flexibility for local property owners so that lands can be preserved through (one of) the program(s) best suited to meet the needs and desires of each individual property owner; and
- Acquire lands or development rights in a manner which is fair to the citizen whose rights are being acquired.

Since adoption of the 2000 and 2009 FPP, the additional goal of continually updating and refining land use policies and zoning that reinforce the agricultural industry and related commercial enterprises is identified.

The Farmland Preservation Plan recommends:

- Focusing farmland preservation efforts on the inventory of farmland under farmland assessment and within the County's Agriculture Development Area.
- Zoning ordinance amendments regulatory actions are needed to protect agriculture as an industry and way of life in Kingwood;
 - O Past efforts include the Township's adoption of a Right to Farm" Ordinance and a zoning ordinance amendment to permit farm markets as an accessory use and allow the sale of limited quantities of items not produced on the farm as a means of enhancing the economic viability of such enterprises.
 - Ongoing efforts recommended include development of new ordinances and continually reviewing ordinances to find ways to preserve agriculture as a viable business and rezoning of Route 12 to establish agriculture as a principal permitted use with additional commercial development options that support agritourism and ecotourism, as well as low-intensity commercial uses.
 - o Future efforts are expected to include updating and refining policies that promote agriculture, such as allowing the breeding of livestock, permitting low-intensity agri-tourism uses, and establishing a process for the Planning Board to review farm markets as a conditional use.

Additional recommendations developed by the Planning Board that are aimed at preserving farming as a way of life and agriculture as an industry include a adoption of Land Use Plan amendments for incentives to create larger lots and conserve environmentally sensitive land features and to facilitate the creation of smaller farms for more intensive agricultural operations, such as the following zoning technique:

- a. Rural Estate Minor Subdivision Option the Planning Board should prepare and the Township Committee should adopt a Minor Subdivision Rural Estate Residence ordinance amendment. This land development option would authorize 10-acre subdivisions with limited submission requirements and under certain conditions, such as but not limited to:
 - i. No natural resource mapping or site capacity calculations;
 - ii. Allow frontage access on a common driveway;
 - iii. Deed restriction prohibiting further subdivision;
 - iv. Minimum of two off-street parking spaces per unit; and
 - v. Appropriate limitations as the Board may require."¹²

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¹² Kingwood Township Reexamination Report, 1998

Zoning amendments since 2006 and into the current planning horizon have been based on an overall planning orientation to preserve farmland and to protect the Township's agricultural land base. This planning orientation is expected to continue in 2023 with zoning ordinance amendments to clarify permitted uses that support the Township's rural character within the Route 12 corridor and to expand the range of commercial uses that support agriculture as an industry and to promote agri-tourism uses that will enhance the overall economic climate for local agricultural operations.

D. Current Land Use and Trends

Kingwood township's current land use characteristics are summarized in the following table that identifies the acreage of the Township categorized by property tax class for the tax year 2021 (see Table 2).

1. Residential

Table R-2 of the Township's adopted 2005 Housing Element and Fair Share Plan (shown below at Table 14) identifies the following historic trend of residential growth for the ten years 2012 through 2021.

Table 14: Ten Year Historic Trend of Certificates of Occupancy and Demolition Permits

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
CO's issued	3	3	4	8	3	6	6	10	5	4	52
Demolition	0	6	3	1	0	1	0	1	2	2	16
permits											
Net change	3	-3	1	7	3	5	6	9	7	6	36

The table above shows the pace of residential development for the 10 year period to be fairly consistent at less than 10 Certificates of Occupancy issued each year. For the purpose of characterizing the development trend in Kingwood for these 10 years, it should be assumed that nearly all of the certificates of occupancy issued were for new dwellings in suburban style residential subdivisions that converted agricultural lands to residential use.

2. Nonresidential

The adoption of the Route 12 Scenic Corridor Overlay zoning amendment had the effect of significantly narrowing the field of nonresidential development opportunities available in the Township, primarily eliminating industrial, manufacturing, warehousing and related uses, and replacing those uses with agriculture and farming as a principal permitted uses, and including a host of agriculture related commercial uses better suited to encouraging and promoting agriculture and farming. This change was made primarily along the State Highway Route 12. These zones are comprised of actively farmed lands, which have been zoned for nonresidential development dating back to the 1970's and earlier. The primary threat to farmland from nonresidential development is the potential loss of these lands to industrial and large-scale business park-type uses and the Township addressed this threat by eliminating those land uses that would serve to consume valuable and productive farmland.

For the time period 1995 through 2004, there was a total of 33,550 sq. ft. of nonresidential development that received certificates of occupancy in the Township. Between 2004–2014 the pace of nonresidential development ticked up with the approval of a phased 145,000 sq. ft. flex space/storage business park development. The 2012 Route 12 Scenic Corridor Overlay zoning amendment eliminated this type of use

and related nonresidential uses as permitted uses along the Route 12 corridor that is predominantly occupied by productive farmland land uses.

In summary, the potential for the conversion of actively farmed rural areas of the Township to suburban residential development remains a concern; however local zoning regulations have been established to encourage substantial set-asides of open lands whenever major subdivisions occur. The potential for nonresidential development appears to be limited, as does the potential for the loss of farmland to nonresidential uses in the Township's nonresidential zoning districts that are located along the State highway (Rte. 12).

E. Sewer Service Areas / Public Water Supply Service Areas

There are no portions of Kingwood Township that are included in a sewer service area or connected to centralized wastewater collection. The Township is entirely dependent on individual wells for its water supply, and there are no public water supply distribution lines or a designated service area in Kingwood Township.

F. Municipal Master Plan and Zoning - Overview

1. General Lot Size Categories and Distribution throughout the Municipality

The following table summarizes the distribution of lots by lot sizes throughout the municipality:

Table 15: Lot Comparison*

LOT SIZE	# of Lots	ACRES	% (FROM ACRES)
Lots less than 1 acre	184	86.9	.5%
Lots between 1 and 5 acres (septic/well)	1,049	2,744	14%
Lots between 5 and 10 acres (septic/well)	264	1,842	9%
Lots greater than 10 acres (septic/well)	380	14,584	76%
TOTALS	1,877	19,257	100%

^{*}Does not include parcels with no data available in the tax records

As indicated above, the Township does not have any lots currently served by public water and sewer. The small lots identified generally represent smaller lots that resulted from piecemeal subdivision from primarily farmland. All lots are served by individual on-site septic and well. This is displayed in Figure 10, Lot Size Comparison.

2. Description of Innovative Planning Techniques

Kingwood Township's Master Plan establishes zoning requirements to accomplish several goals. Protecting the rural character and farmland base of the community has assumed the highest priority. Zoning for industry, manufacturing, fabricating and other large-scale warehouse-type related uses has been eliminated. The Township replaced this previously existing zoning with the Route 12 Scenic Corridor Overlay zone that established farming and agriculture as a principal permitted use with additional options for commercial development that will serve to reinforce the municipality's rural character and promote a healthy tax base. Smaller notes of limited scale commercial zoning continue to exist in the Township, such as in Baptistown situated at the intersection of Route 12 and CR 519 where village zoning permits residential, commercial, and other non-residential uses in a manner where those uses may co-exist as a mix

of uses to serve the needs of Township residents. The AR Agricultural Residential zone that prevails throughout the remainder rest of the Township provides for agriculture and related uses that do not conflict with residential areas. Figure 11, Kingwood Township Land Use and Zoning displays this information.

Kingwood Township investigated Center designation as envisioned in the State Development and Redevelopment Plan (SDRP). At the easterly-most end of Route 12 in the Township, the Eastern Gateway Village Center Overlay (EGVCO) was established generally conforming to SDRP policies for center designation; however, the purpose of the EGVCO is to provide zoning for affordable housing in response to the municipal affordable housing obligation, and it is not an SDRP designated center. The decision was made to not designate the villages of Baptistown and Barbertown as Centers; and instead simply allow the existing Village zoning to remain, which provides for with limited opportunities for commercial uses to serve local residents commercial and service needs. The Township has determined that it will not pursue SDRP Plan Endorsement.

Planning in most communities strives to accommodate landowners and avoid creating hardships, while also promoting the goals of the Master Plan. It is for this reason that the township has developed, and implemented mandatory cluster zoning, as follows:

- a. Cluster zoning Sections 132-30.J. & K. identify certain provisions in Kingwood's ordinance for a mandatory clustering and lot size averaging for all major subdivisions. A minimum lot size of 7-acres is required, and the ordinance includes a resource conservation calculation that increases the minimum lot size required to compensate for a variety of constraints on the land (i.e. environmentally sensitive features; easements, rights-of-way).
 - The provisions are mandatory for subdivisions of tracts of land 40-acres or larger; or that adjoin preserved farmland, farm assessed land or land eligible for farmland assessment; or adjoin open space lands, or lands identified for farmland preservation or open space in the Township's master plan, farmland preservation plan, or open space and recreation plan.
 - For lots between 14 and 40 acres the ordinance permits, but does not require mandatory clustering or lot size averaging, except where in the judgment of the planning board a cluster or lot-size averaging subdivision should be required to serve the goals and objectives of the Master Plan.
 - A minimum farmland/open space/open lands set-aside of 50% of the tract area is required, and such lands are required to be restricted to no further subdivision and configured such that a circle with a minimum diameter of 300' (i.e. 6.5 acres) can be circumscribed within the restricted lands.

Additional innovative planning techniques that have been considered, but which have not been adopted include:

- b. Non-contiguous clustering the Township's zoning ordinance does not provide for noncontiguous clustering as stated above.
- c. Lot size averaging the Township's ordinances require mandatory clustering as discussed in subsection a. above.

- d. Transfer of Development Rights (TDR) The Township's ordinances do not include any provisions for TDR.
- e. Use of mandatory vs. voluntary options as discussed in subsection "a." above, the Township's zoning ordinance requires mandatory clustering or lot-size averaging with a 50% farmland/open space/open lands set-aside requirement. This applies to all lots 40-acres or larger, and for all tracts that adjoin farmland, farm assessed lands, lands eligible for farmland assessment, open space and lands identified for such purposes in the master plan. For lots less than 40-acres, the Township's ordinance grants the Planning Board with the discretion as to whether or not clustering or lot size averaging is required. The Township Agricultural Advisory Committee, in general, supports the use of clustering where it is appropriate and where it preserves farmland that would otherwise be compromised.
- 3. Description of Buffer Requirements that separate agricultural uses from other land uses.

The Township's zoning ordinances require setbacks for certain types of agricultural uses (i.e. manure stockpiling-150' from nearest residence) and for all accessory farm buildings, which are required to be setback at least 50' from the side and rear property lines, plus 10' additional for each 1,000 sq. ft. of floor area. Such setbacks may be increased where deemed necessary by the Planning Board (§132-30F). Since the adoption of this ordinance, the Township has not had any conflicts between landowners with regard to the proximity of a non-farm use adjacent to a farm use.

4. Discussion of Municipal and Regional TDR Opportunities, including implementation strategy recommendations.

In 2004, legislation was adopted to permit municipalities to implement a local or regional Transfer of development Rights program. The Transfer of Development Rights (TDR) is a planning and zoning tool that can assist in preserving farmland, open space and natural resources. Market forces for development often threaten the natural resources that a community wishes to protect. TDR is a system for increasing permitted development in appropriate locations (receiving areas), but requiring the preservation of municipally selected areas (sending areas) in order to permit development in designated areas. TDR was thoroughly evaluated by Kingwood Township and proved to be an unworkable land use option owing primarily to the affordable housing regulations and the Mount Laurel doctrine that do not permit the addition of an additional cost burden on the development of affordable housing. As such, the Township reluctantly abandoned TDR as a workable land preservation strategy.

There is no designated sewer service area or centralized public wastewater collection system in Kingwood Township. Individual package treatment plants serving private development exist, and while it is possible to develop additional facilities to support development in the EGVCO for affordable housing development, no such proposal from the private development community has yet to materialize since the designation of the inclusionary affordable housing zoning in the EGVCO in 2018. In addition to the lack of sewer service, Kingwood Township has severely limited groundwater availability due to underlying geology. As such, the availability of water is also a growth-limiting factor.

Pinelands Development Credit Program

Transfer of development rights was first authorized in the state in 1981 with the Pinelands Development Credit (PDC) Program. The PDC Program is a component of the Pinelands Comprehensive Management

Plan (CMP) created to regulate development in the Pinelands region. The program was enacted to offset the severe development restrictions imposed within the Preservation Area District, Agricultural Production Areas and Special Agricultural Production Areas designated by the CMP, and to transfer development out of these sensitive areas. Development potential is transferred to infrastructure-supported areas designated by the CMP as Regional Growth Areas. Before property owners may sell PDCs, they must first be certified by the Pinelands Development Credit Bank.

The PDC program is administered by the Pinelands Commission and the Pinelands Development Credit Bank. Substantial regional TDR program had resulted in the preservation of more than 49,000 acres, according to the Pinelands Development Credit Bank.

To date, grants for intra-municipal programs have been provided to:

- o Alexandria Township, Hunterdon County
- o Ocean Township, Ocean County
- o Mannington Township, Salem County
- o Stafford Township, Ocean County
- o Hillsborough Township, Somerset County
- o Hopewell Township, Cumberland County
- o Woolwich Township, Gloucester County
- o Washington Township, Mercer County
- o Berkeley Township, Ocean County
- o Montgomery Township, Somerset County
- o Fanwood Borough, Union County

Grants to investigate multi-jurisdictional TDR programs within Salem City, Alloway, Quinton and Elsinboro Townships in Salem County and within southwest Cumberland County have also been awarded.

IV. Municipality's Farmland Preservation Program - Overview

A. County Agricultural Development Areas

1. Geographic Information System Mapping/Current Location Map

The Hunterdon County Agricultural Development Board adopted Agricultural Development Areas (ADAs) in 1983 to satisfy minimum eligibility requirements for the statewide farmland preservation program, pursuant to the State Agriculture Retention and Development Act. The purpose of the ADAs is to identify where agricultural operations are likely to continue in the future and therefore be eligible for the farmland preservation program.

In Hunterdon County, the ADA criteria and map were based on a study of agriculture in the County prepared by the Middlesex-Somerset-Mercer Regional Study Council. Key components of the study were the mapping of productive agricultural operations and the location of prime and statewide important soils. Based upon the study, the CADB adopted criteria for the designation of ADAs and mapped them along physical boundaries or property lines.

The Hunterdon County ADA map was amended since it the 2008 FPP was adopted in response to petitioning from individual landowners. No such request has been made by Kingwood Township landowners or farmers. The Hunterdon CADB ADA amendments have received approval from the State Agriculture Development Committee; however, not effecting Kingwood Township.

The Hunterdon CADB adopted Agricultural Development Areas (ADAs) in 1983 to satisfy the minimum eligibility requirements for the statewide farmland preservation program, pursuant to the State Agriculture Retention and Development Act N.J.S.A. 4:1C-18. The statutory requirement of the ADA is:

- Encompasses productive agricultural lands which are currently in production or have a strong potential for future production in agriculture and in which agriculture is a permitted use under the current municipal zoning ordinance or in which agriculture is permitted as a nonconforming use;
- Is reasonably free of suburban and conflicting commercial development;
- Comprises not greater than 90% of the agricultural land mass of the county
- Incorporates any other characteristics deemed appropriate by the board.

The purpose of the ADAs is to identify where agricultural operations are likely to continue in the future and therefore be eligible for the farmland preservation program. In Hunterdon County as a whole, the ADA criteria and map were based on a study of agriculture in the county prepared by the Middlesex-Somerset-Mercer Regional Study Council. Key components of the study were the mapping of productive agricultural operations and the location of prime and statewide important soils. Based upon the study, the CADB adopted criteria for the designation of ADAs and mapped them along physical boundaries or property lines. The ADA criteria have changed little over the years. The requirements, include, but are not limited to, a minimum of contiguous area of at least 250 acres enrolled in farmland assessment; the predominance of prime or statewide important soils; land use that is reasonably free of non-farm development; and the absence of public sewers.

Kingwood Township's project area is 12,428.19 acres and is comprised of farm assessed tax lots, most of which are situated atop Prime Farmland Soils and are located within the County's ADA. Located within the project area are identified target farms which have been selected for preservation efforts due to their size, location and contribution to agricultural retention in the Township. The Project Area is delineated as the area east of Route 519 and essentially the north-central portions of the township.

B. Farmland preserved to date by program

To date, approximately 15,000 acres or about 66% of the land is farmland assessed in Kingwood Township. Of the farmland assessed parcels about 3,000 acres are permanently preserved.

1. County Easement Purchase

The County Easement Purchase Program in Hunterdon County has been offered to landowners for the past years. Also known as the PDR or Traditional program, it was developed in accordance with the enabling legislation - the State Agriculture Retention and Development Act of 1983. The program involves the sale of development rights on a farm in exchange for a permanent deed restriction on the land that requires it to be available for agriculture in perpetuity. The minimum eligibility requirements for the PDR program is that the farm is located in an Agricultural Development Area (ADA) and an agricultural district, is a minimum of 40 acres and is predominantly tillable farmland - farms with more than 50% woodlands are ineligible. Five of the farms preserved in Kingwood Township have used this form of preservation.

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. This program took effect on July 2, 2007 in an effort to revamp the process of preserving farms at the county level. The original PIG program was available to Counties, however CADBs now serve as County agricultural advisory committees. The State Agricultural Development Committee (SADC) has updated their rules (N.J.A.C. 2:76-6.3 through 2:76-17A.17) to promote County PIGs to streamline and expand the farmland preservation program throughout the state. This program is operated in a similar way to the Municipal Planning Incentive Grant Program in that it gives the county more flexibility to preserve those farms that meet the specific preservation needs and goals of the county.

3. Municipal Planning Incentive Grants

The SADC established the Planning Incentive Grant Program to provide grants to eligible municipalities to purchase agricultural easements to protect concentrations of farmland in identified project areas. The local municipality and county cover the remainder of the acquisition costs. The PIG program places an emphasis on planning for farmland preservation. To qualify for a Planning Incentive Grant, municipalities must adopt a farmland preservation plan element in their municipal master plan pursuant to the Municipal Land Use Law, a right to farm ordinance, dedicated funding source, and establish an Agricultural Advisory Committee. Grant recipients have to delineate project areas and develop a list of target farms. The PIG Program has tended to be less competitive than the traditional programs as it places less emphasis on soil quality. Kingwood Township has developed all of the appropriate measures to qualify for a PIG.

In this program, the County provides matching funds for municipal PIGs with certain conditions (e.g., minimum 40-acre farm size or under 40 acres if adjacent to already preserved farms or other circumstances,

available, funding, etc.). The municipality is required to conduct an inventory of all farmland in the municipality to indicate which farms are meet the minimum standards to be eligible for SADC cost sharing.

Kingwood Township's Agricultural Advisory Committee is assisting the Township's consultants to develop this farmland preservation plan in order to qualify for PIGs and to ensure that the Plan is accurately correlated with the county comprehensive farmland preservation plan to target farms within the County ADA.

4. SADC Direct Easement Purchase

The State Agriculture Development Committee (SADC) purchases development rights or farmland outright for preservation purposes under its state acquisition program. Under the Direct Easement Purchase program landowners sell the development rights to their land and continue to own and farm the land. This land is permanently deed-restricted for agricultural use. Landowners do not have to be within an ADA if they are making an application directly to the State, but typically, they are located within a County ADA. In most cases, the State will pay up to 100% of the certified appraised easement value in the direct easement purchase program. By participating in this program, the landowner still retains ownership of their land, but agrees to restrict land use to agricultural purposes. The Direct Easement Program does not receive monetary contributions from the County or the municipality. Over 40 farms and 3,400 acres have been preserved in the County through this program. Table 6 on page 8 herein, lists the nine farms preserved through the SADC Direct Easement Program

5. SADC Fee Simple

The SADC also administers fee simple acquisitions through the State Direct Program. A fee simple acquisition involves an entire property being purchased for certified market value or at a negotiated price. In this type of acquisition, the landowner does not retain any rights. The land becomes restricted so that it becomes permanently preserved for agriculture. The property is then resold at auction; the SADC does not retain ownership of the farm. To qualify to participate in this program, the farmland must be within an ADA and be eligible for Farmland Assessment. There have been 11 farms and over 1,500 acres preserved in the County through this program. None of the preserved farms in Kingwood have been preserved by this method.

6. Non-profit

There are various non profit organizations that are active within the county and take advantage of this opportunity from the SADC. The grants fund up to 50% of the fee simple or development easement purchase on project farms. These grants are obtained through a specific application to the non profit grant program and administered through the SADC. Currently the HCADB is working with various nonprofit programs to develop a system for county involvement and contribution to make up some of the 50% shortfall from State funds.

7. Transfer of Development Rights

There has not been any Farmland preserved in Hunterdon County, and therefore none in Kingwood, through a TDR program to date.

8. Other programs and partnerships

Landowners may benefit financially by donating the development easement on all or part of their farm to the SADC or the County. Landowners that donate their easement may realize significant Federal income tax benefits and a reduction in their estate tax. Such farms are also eligible for State soil and water conservation grants. The AAC advises that there have not been any open space acquisitions involving farms where agricultural uses would have been continued.

Four Hunterdon County landowners have donated their development easements for agricultural purposes, although none are in Kingwood Township. Three landowners have donated their easements to the SADC, totaling 245 acres. Two landowners have donated their easements to the CADB, totaling 209 acres. Donations are processed by either the County or State and take just a few months before they are finalized. While this program is not for everyone, it can offer an attractive benefit for the right applicant.

C. Consistency with SADC Strategic Targeting Project

The SADC's 2003 Strategic Targeting Project was intended to help prioritize farmland preservation investments and secure a "bright future" for the agricultural industry. The primary goals of the SADC's strategic targeting project are:

- To prioritize the preservation of prime and statewide soils in active agricultural use outside of Sewer Service Areas.
- To coordinate farmland preservation/agricultural retention efforts with proactive planning initiatives.
- To update and create maps to target preservation efforts
- To coordinate with open space, recreation and historic preservation efforts.

In keeping with the project's goal of focusing on prime agricultural soil, the Hunterdon County CADB has long emphasized soil quality in its screening of County Easement Purchase Program and now Countywide PIG applications. The county also places a strong emphasize on planning, mapping, and coordination with municipalities and open space agencies. The County has an adopted Comprehensive Farmland Preservation Plan (2008). Hunterdon County has assisted a number of municipalities obtain Planning Incentive Grants. These municipalities have their own agricultural advisory committees which send liaisons to the monthly Hunterdon County CADB staff status meetings and otherwise track the County's work and relevant agricultural issues while keeping the Board apprised of their efforts. Hunterdon County also has an extensive GIS database which staff use to prepare plans, undertake daily planning tasks and analyze candidate farm parcels for preservation. Finally, as described above, the Farmland Program partners with many nonprofits and state and county open space departments to maximize efforts and farmland preservation throughout Hunterdon County.

D. Eight or Sixteen Year Term Programs

The Eight or Sixteen Year Term program and the Municipally Approved Eight or Sixteen Year Term Farmland Preservation Programs, or MAFPP program are programs in which the farmer receives 50% cost sharing for these projects as well as protection against emergency energy and water restrictions and eminent domain. State water and soil conservation programs require land to be actively farmed for a period of eight years. The landowner receives no cash compensation for the restrictions but is eligible for state soil and water conservation cost share grants. After the eight or sixteen year term expires, the landowner may renew the program for another term.

Landowners elect to enroll in the MAFPP for a variety of reasons. Some landowners enter the MAFPP because they want to take advantage of the cost-sharing grant program. Others enroll to help a neighboring farm apply to the PDR program. (A farm in the MAFPP within one half mile of a PDR applicant entitles a farmland preservation applicant an additional point in the evaluation of its application.) Many landowners feel the need to enroll as a gesture of support for farmland preservation and to stave off development inquires. Other benefits of the program include protection of eminent domain and agricultural zoning. This program helps fill in the gaps of an agricultural area and may reduce potential conflicting uses.

Only one of Kingwood's preserved farms is enrolled in this program.

E. Coordination with Municipal and County Open Space Preservation Initiatives

A comprehensive farmland preservation program also relies on partnerships among governmental and non-profit organizations. The CADB coordinates its preservation efforts with the County Parks System to complement its acquisition programs. Partnerships with other organizations have been coordinated by the CADB that have resulted in the preservation of large and/or significant parcels of farmland that the CADB could not have been able to fund by itself. Farmland preservation partners include the New Jersey Conservation Foundation, the Hunterdon Land Trust Alliance and the County Parks System, among others.

F. Farmland Preservation Program Funding Expended to Date by Source

Table 16 highlights the total cost of preserved farmland in the Township to date.

ble 10. Total Cost of Treserved Larmiand to D				
	Total			
Preserved Acres	3,563			
Total Cost	\$22,360,771			
SADC Share (60%)	\$13,936,403			
County Share (20%)	\$2,446,776			
Municipal Share (20%)	\$17,408,592.4813			
Average Cost/Acre	\$6,553.27			

Table 16: Total Cost of Preserved Farmland to Date

G. Monitoring of Preserved Farmland

Every farm that is permanently preserved through the farmland preservation program must abide by the restrictions set forth in the deed of easement. The easement requires that the County inspect the property once a year, during the business week and daylight hours. All preserved landowners are to be given at least 24 hours notice of the inspection. The Hunterdon CADB has made a practice of sending letters to all landowners at the start of the monitoring season and then making appointments as far in advance as possible.

The inspection of a preserved farm usually involves walking the farm, interviewing the landowner, and taking photographs of all buildings, property lines, and any suspicious activities that may be observed. The inspection report is recorded in the CADB's farmland preservation database and stored as hard copy in the

¹³ This figure appears to be a combination of County, municipal and other partners funding expended to date. In all likelihood, the County cost share exceeds the municipal cost share. No total is provided for contributions made from funding participation by private, non-profit partners participation, which likely includes federal farmland preservation funding. Landowner contributions are also not broken out in funding source data provided by the SADC & CADB.

property's inspection file. A copy of the report is sent to the landowner for review and verification, the acknowledgment of which is also filed with the hard copy of the inspection report.

If the inspector finds violations to the Deed of Easement, a letter is drafted to the landowner's attention, directing cessation of violation activity. Examples of such infractions have been the use of biosolid (sludge) fertilizer, the expansion or establishment of a non-agricultural use, and the obvious neglect of a farm field (the HCADB requires all fields be mowed once a year for weed control). When the infraction involves soil or water management, the Hunterdon County Soil Conservation District (SCD) may be contacted for technical assistance.

Monitoring is not intended to be punitive. The restrictions of the Deed of Easement are applied reasonably and fairly. For example, if there has been a drought and the farmer explains that is the reason that nothing has grown on a field, there will not be a report of negligence to maintain the fields. In those cases where there has been a verifiable violation of the Deed of Easement, CADB staff and the SCD are committed to working cooperatively with the landowner to remedy the situation. Only in the most extreme cases would such situations be referred for legal action in the courts.

Violations

Since 1996, the CADB has been required by the SADC to monitor its preserved farms on a yearly basis, with the exception of farms in the Direct Easement or Fee Simple program; the SADC monitors farms in these programs. Until that time, farms were monitored every few years or when a complaint may have been received; however, it is the easement holder's responsibility for monitoring the preserved farmland. Until recently, the CADB encountered few minor easement violations. In most cases the landowner was asked to mow an uncultivated area so the land will continue to be available for agriculture. In the case of a suspected violation, the Township and the AAC will notify the responsible agency.

Landowner Responses to Monitoring

The inspections have proved to be valuable opportunities to receive feedback on the preservation program and the state of the agricultural business from the people who live it every day. Overall, the farmers have reported that they appreciate the one-on-one contact with the CADB, and welcome the opportunity to express their concerns in a manner that allows them to be heard. A copy of the landowner comments and concerns section of the inspection monitoring reports is now sent to every member of the HCADB and the State Agriculture Development Committee.

H. Coordination with TDR Programs

As mentioned, there are no active TDR programs being used for Farmland Preservation within the County. TDR became an available land preservation tool in 2004 for all municipalities within New Jersey. The County's draft Master Plan lists the following steps which must be taken by municipalities in order for TDR to be effective in Hunterdon County:

- 1. Communities must show a commitment to using TDR by preparing the required background studies including a real estate market analysis, and determination of infrastructure for designated receiving areas.
- 2. The completion of a development transfer plan for inclusion in its Master Plan.
- 3. Completion of a development transfer ordinance.

Where Hunterdon County has the technical and financial resources available, it should assist interested municipalities in carrying forward a TDR program

V. Future Farmland Preservation Program

The Agricultural Advisory Committee recognizes that the goals of this plan can be advanced through the use of a variety of techniques such as the outright acquisition of land, through acquisition of easements, obtaining grants and other funding from the State of New Jersey and with the assistance of the HCADB and in cooperation with private conservation organizations and state and county open space agencies.

Flexibility in the farmland preservation process is considered essential and the Agricultural Advisory Committee has developed criteria ranking system for the farms in Kingwood Township. The ranking system creates differences between properties being considered for protection. Properties will be targeted based on an evaluation by the Committee which, in turn, will be based on the furtherance of the goals and policies set forth in this plan. The criteria ranking system is listed above in the Introduction of this plan.

A. Preservation Goals (1, 5 and 10 year acreage targets)

In 2009 when the last FPP was adopted by Kingwood Township, there were 16 preserved farms that totaled 1,630 acres of land. Since then, an additional 29 farms totaling 1,772 acres have been preserved for a total of 45 farms and 3,402 acres of farmland preserved. The average acreage preserved over the past 13 years is 136 acres per year.

The Township has identified approximately 2,700 acres of farmland assessed properties as future target farms as identified in Appendix A. With an estimated easement value of \$10,000 per acre, it is estimated that *target farms will require a total of approximately \$27,000,000 in funding* to complete the farmland preservation easement purchase. Recent SADC Direct Easement purchase activity in Warren County (November 2023) could impact per acre easement values if the values associated with farmland preservation project can be used as a comparable value in appraisals on Kingwood Township's target farms in the future.

The Township has determined future preservation goals based on previous preservation efforts and current farmer interest. These goals can be broken down by 1, 5 and 10 year options. Table 17 highlights these acreage goals.

Table 17: Preservation Goals by Year

Year	Acres
1	300
5	1,200
10	2,400

In consideration of the rate of previous farmland preservation success (3,402-acres), the 10-year goal of 2,400-acres may seem a bit ambitious; however, it is the Agricultural Advisory Committee's expectation that interest in the farmland preservation program will continue to grow, particularly is easement purchase values increase. Kingwood Township's AAC has remained consistently engaged in promoting farmland preservation and generating interest in farmland preservation for over a decade and while the Township's goals are ambitious, it is expected that the AAC will remain dedicated to continued farmland preservation success. Therefore the 10-year goal of preserving an additional 2,400-acres of farmland is identified.

B. Target Farms

The target farms are very conducive to agricultural activity. The target farms consist of 44% cropland and pastureland areas and almost entirely include valuable farmland soils with 82% of the total area in target

farms consisting of Statewide Important soils and 11% of the land area comprised of Prime Farmland soils. As described below, the productivity of the soils in the Township and on the target farms, further promote the need for agricultural retention to ensure the viability of these important soils into the future.

Prime Farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops and is also available for these uses. It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed according to acceptable farming methods, Prime Farmlands are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding. ¹⁴

Farmlands of *statewide importance* include those soils in land capability Class II and III that do not meet the criteria as Prime Farmland, These soils are nearly Prime Farmland and economically produce high yields of crops when treated and managed according to acceptable farming methods, Some may produce yields as high as Prime Farmland if conditions are favorable.¹⁵

 $^{^{14}\} USDA, NRCS\ NJ\ Important\ Farmlands\ Inventory\quad http://www.nj.nrcs.usda.gov/technical/soils/primefarm.html$

 $^{^{15}\} USDA, NRCS\ NJ\ Important\ Farmlands\ Inventory\quad http://www.nj.nrcs.usda.gov/technical/soils/importantfarm.html$

C. Project Area Summaries

Kingwood Township has delineated one project area for preserving farmland in the community. The boundaries of the project area follow the eastern municipal boundary from north to south to Slacktown Rd where it cuts in to the Rte. 12 business area, then back down Locktown Rd and out to the municipal boundary. From there it continues south to Milltown Rd and back north on Rte. 519 to Barbertown-Point Breeze Rd where it follows Rte. 12 west to the municipal boundary on Rte. 29. From there it continues north along Rte. 29, around the Borough of Frenchtown's boundaries and then cuts in east along the rear of properties along Ridge Rd to Rte. 519. It continues north on Rte. 519 to the municipal boundary, then east to the starting point at the corner of Kingwood, Alexandria and Franklin Townships.

The total acreage of the Project Area is 12,645.39. See Tables 18 and 19 for more details and Figure 2 for a map of the Project Area.

D. Municipal and County Ranking Criteria used to prioritize farms

As noted below, Kingwood based its preservation efforts on the State regulations. The Township is currently has a ranking system in the event that several farms become available for preservation at the same time and funding decisions need to be made. This ranking system follows the State and County criteria and local factors. Kingwood Township has used County and Municipal criteria to preserve farmland in the Township in the recent past. Since the criteria ranges in points, it is unlikely that a waiver for any piece of criterion would be considered. Fewer points would be awarded where land does not fully meet the criteria.

E. Municipal and County Minimum Eligibility Criteria Coordination

A brief overview of the SADC minimum eligibility criteria under NJAC 2:76-6.20 indicates that the State ranks farms in the following manner:

For lands less than or equal to 10 acres

- 1. The land produces agricultural or horticultural products of at least \$2,500 annually;
- 2. At least 75% of the land is tillable or 5 acres, whichever is less;
- 3. At least 75% of the land or a minimum of 5 acres, whichever is less, consists of soils that are capable of supporting agricultural or horticultural production;
- 4. The land must exhibit development potential based on a finding the following standards are met:
 - i. The municipal zoning ordinance for the land as it is being appraised must allow additional development, and at least one additional residential site beyond that which will potentially exist on the premises.
 - ii. Where the purported development value of the land depends on the potential to provide access for additional development, the municipal ordinances allowing further subdivision of the land is possible. If access is only available pursuant to an easement, the easement must specify that further subdivision to the land is possible.
 - iii. The land shall not contain more than 80 percent soils classified as freshwater or modified agricultural wetlands according to the New Jersey Department of Environmental Protection (DEP) wetlands maps. If the DEP wetlands maps are in dispute, further investigation and onsite analysis may be conducted by a certified licensed engineer or qualified wetlands consultant and/or a letter of interpretation issued by the New Jersey Department of Environmental Protection, may be secured and used to provide a more accurate assessment of the site conditions, provided,

however, that nothing herein shall require the Committee to conduct such additional investigation.

For lands greater than 10 acres:

- 1. At least 50% of the land, or a minimum of 25 acres, whichever is less, is tillable;
- 2. At least 50% of the land, or a minimum of 25 acres, whichever is less, consists of soils that are capable of supporting agricultural or horticultural production; and
- 3. The land must exhibit development potential based on a finding that all of the following standards are met:
 - i. The municipal zoning ordinance for the land as it is being appraised must allow additional development, and at least one additional residential site beyond that which will potentially exist on the premises.
 - ii. Where the purported development value of the land depends on the potential to provide access for additional development, the municipal ordinances allowing further subdivision of the land is possible. If access is only available pursuant to an easement, the easement must specify that further subdivision to the land is possible.
 - iii. The land shall not contain more than 80 percent soils classified as freshwater or modified agricultural wetlands according to the New Jersey Department of Environmental Protection (DEP) wetlands maps. If the DEP wetlands maps are in dispute, further investigation and onsite analysis may be conducted by a certified licensed engineer or qualified wetlands consultant and/or a letter of interpretation issued by the New Jersey Department of Environmental Protection, may be secured and used to provide a more accurate assessment of the site conditions, provided, however, that nothing herein shall require the Committee to conduct such additional investigation.

Hunterdon County and Kingwood Township utilized the minimum eligibility criteria as outlined in the state regulations §2:76-6.16 – Criteria for evaluating development easement applications. The evaluation is based on the merits of the individual application with a weighted factor assigned to each criterion. These include soil quality, tillable acres, boundaries and buffers, local commitment, size of farm and density of lands dedicated to farmland preservation, local factors encouraging agriculture and threat of development.

In order to prioritize Kingwood's target farms for preservation, the Agricultural Advisory Committee developed a ranking system that is mandated by the State in order for the town to be eligible for Planning Incentive Grant (PIG) funding. Properties are ranked on Farmland Characteristics: Size, Soils, Tillable Soils, Density (Proximity to Preserved Farms), and Boundaries and Buffers. In these categories, a property can earn a total of 20 points. The property is also ranked on the imminence of change to the property. Properties can receive a maximum of 20 points in the categories of Ownership, Availability for Development, and the Approval Status. The ranking criteria are shown in Tables 18 and 19 below.

Table 18: Farmland Characteristics

	Available
	<u>Points</u>
Size	
Over 75 acres	4 pts
50-75 acres	3 pts
20-49 acres	2 pts
Under 20 acres	1 pt
<u>Soils</u>	
Prime Soils – percent prime x number of points	4 pts
Statewide Importance – percent SI x number of points	3 pts
Unique / Local Importance – percent U/LI x number of points	2 pts
Other	1 pt
<u>Tillable</u>	
Cropland – percent cropland x number of points	4 pts
Cropland pastured – percent CP x number of points	3 pts
Permanent pasture – percent pasture x number of points	2 pts
<u>Density</u> (Proximity to Preserved Farms)	
Within 1/4 mile	4 pts
Within ½ mile	2 pts
Boundaries and Buffers	
Next to a preserved farm – percent touching x number of points	4 pts
Next to a preserved open space – percent touching x number of points	3 pts
Next to farms in or applied for 8-yr program – percent touching x number of points	3 pts
Next to unrestricted farmland – percent touching x number of points	2 pts
Next to stream/wetlands – percent touching x number of points	2 pts
Next to woodlands – percent touching x number of points	2 pts
Next to cemetery – percent touching x number of points	2 pts
Next to limited access park – percent touching x number of points	2 pts
Other non-development use – percent touching x number of points	1 pt

Table 19: Imminence of Change

Ownership	Available Points
Builder/Developer	4 pts
Bank / Estate	3 pts
Absentee Owner / Corporation	2 pts
Resident Owner	1 pt
Availability for Development	
Ready to Build	4 pts
For Sale	3 pts
Future Availability Likely	2 pts
Approval Status	
Approved Subdivision	4 pts
Preliminary Approval	3 pts
Plans Submitted	2 pts
Informal Activity	1 pt
Number of Potential Lots	
10 or more	4 pts
5 – 9	3 pts
1 - 4	2 pts

F. Municipal and County Policies Related to Farmland Preservation Applications

The Township, as stated previously, abides by the SADC's policies, including those regarding housing opportunities, division of premises and approval of exceptions. The 2023 Hunterdon County Comprehensive Farmland Preservation Plan provided a brief summary of the state policies for each of these issues which are paraphrased below:

1. Approval of Housing Opportunities

Residential opportunities on permanently preserved farmland are severely limited because the developments rights on the farm have been purchased. However, there are special situations where a new residence may be warranted given the size of the farm and the nature of the operation. For these reasons, the CADB and the SADC permit housing on preserved farmland provided they meet the stringent criteria for "residential dwelling site opportunities", agricultural labor housing, or are located on exception areas. The Township AAC will consider agricultural labor housing and other farm housing opportunities as they arise, with the preference of locating housing within exception areas as much as possible.

2. Overall housing opportunities permitted

The Township AAC and CADB will consider agricultural labor housing on a case-by-case basis, adhering, as much as possible, to the State's criteria for size, location and occupation of the dwelling unit(s).

3. House replacement

The CADB understands certain needs to replace housing as long as the applicant is not excessive in the choice for a replacement house. The Board feels that the house should meet the needs for the farm and not create an estate-like situation with an excessively larger footprint that what was there previously. The need for expansion is realized; however the board feels that it should be within reason. Again, the Township

AAC and CADB will review each housing case as it arises and will, as much as possible, locate the new residence where it has a minimum impact on any agricultural operation.

4. Residual Dwelling Site Opportunity allocation SADC regulations permit up to one dwelling opportunity per one hundred acres of vacant farmland, referred to as a Residual Dwelling Site Opportunity (RDSO). The allocation of an RDSO must be approved by the CADB and the SADC. At the time of closing, the value of the RDSO is deducted from the total purchase price of the easement. (The value of the RDSO will be determined by the appraiser at the time the farm is preserved) After the farm is preserved, the landowner may apply to exercise the RDSO. For RDSO approval, CADB and SADC criteria must be satisfied which generally requires that the RDSO has a minimal impact on the existing agricultural operation.

When farms apply to programs that are governed by CADB oversight and are eligible for an RDSO, the CADB generally tries to discourage RDSO use, but is accepting of those applications that choose that option as long as the applicant understands that the location must be approved by the CADB when the applicant chooses to exercise the RDSO option.

5. Division of the Premises

Due to the agricultural trends over the last few decades towards smaller, more productive farms, there are opportunities for a landowner to divide a permanently preserved farm provided the division is for agricultural purposes and both parcels result in agriculturally viable tracts. An agriculturally viable parcel has been defined as a farm that is of sufficient size and soil quality such that it can accommodate a variety of agricultural uses suitable for the County. The CADB follows the State rules when taking into consideration agricultural subdivision applications and adheres to the criteria as it pertains to the purpose of the subdivision and the resulting parcels remaining agriculturally viable. The Township AAC and the CADB will review consider these cases as they arise and will, to the greatest extent possible, adhere to the State criteria for maintaining agriculturally viable land after subdivision of land.

6. Approval of Exceptions

An exception allows a landowner to remove a portion of the farm from the deed restrictions prior to closing. There are severable and non-severable exceptions. Some landowners may prefer to remove the land immediately under the existing house so that there is no confusion about potential additions or permitted uses in the house.

Severable

A landowner may want to locate a lot on the property in anticipation of constructing a home in the future. In this case, the land may be severed from the farm with the necessary local planning approvals, and is therefore referred to as a severable exception. The size of the exception is typically the minimum lot size for that zoning district. The severable exception can present a problem because it introduces a new housing unit to the farm area that is not related to the farm itself. The CADB has specific criteria for approving an exception, including the size of the exception, its impact on the existing agricultural operation, and the number of existing housing units already existing on the farm. Right to Farm language is also included on all deeds, should the exception be severed from the farm.

Non-severable

Considered on a case by case basis, these are exceptions of preserved land for the location for a future building. The CADB typically approves non-severable exceptions when a farm is vacant and is less than 100 acres (and therefore not eligible for an RDSO). This reflects the CADB's belief that a farm with a residence will be better managed than a vacant farm parcel. In both cases, the excepted land cannot be severed or subdivided from the farm.

In all of the cases above, the acreage of the exception is deducted from the final purchase price of the easement. The AAC and Township will work with applicants to limit the number and location of exceptions, especially severable ones.

G. Funding Plan

1. Description of Municipal and County Funding Sources (dedicated tax, bond proceeds, annual revenues (total), annual revenues dedicated to Farmland Preservation Program)

Recognizing the need for a stable source of funding, the Hunterdon County Board of Chosen Freeholders asked County voters in November 1999, whether the County should have a dedicated open space/farmland preservation tax of up to \$0.03 per \$100 assessed valuation to fund the preservation programs. County voters approved this tax by a two to one margin. It is estimated that the tax will generate approximately \$3.4 million in 2000 which will increase slightly each year for four additional years. After five years, the Freeholders will decide if the tax should continue for another five years. Bonding will supplement the tax generated funds. There is no breakdown between funds for open space acquisition and farmland preservation.

Kingwood Township currently has a healthy tax ratable base that is able to leverage approximately \$186,700 dollars annually through the Open Space Tax, which is currently \$0.03/\$100. This fund is used to preserve both farmland and open space parcels and will continue to fund Kingwood Township's preservation efforts. In recent efforts to continue support for farmland preservation, the Township authorized a bond for \$950,000 which will use the entire annual open space tax revenue presently coming in (\$186,700) for debt service and carrying costs.

2. Financial Policies related to cost-share requirements between county and municipal/other funding partners/installment purchases

Kingwood Township's plan for farmland preservation for the Township's Project Area will combine a variety of techniques to encourage as many landowners as possible to preserve their farms. These efforts will include encouraging farmers to enter their farms into Municipally Approved Farmland Preservation Programs, entering into option agreements for easement purchase with landowners, installment purchase agreements and direct development easement purchase. Applications are evaluated by both the CADB and the SADC using adopted easement purchase criteria. Both County and State criteria emphasize the quality of soils, the municipality's commitment to agriculture, farm size, and the proximity of the farm to other farms enrolled in the farmland preservation program.

Preservation of all farms in the project area is being sought for this application. Assuming inclusion in the PIG budget, including local, county and state contributions, it is hoped that the majority of parcels identified can be preserved. This total amount can be expanded through the use of option agreements and installment purchases, which will be determined after negotiations with landowners. Applications are

cost-shared by the State, County and municipality. The State typically funds up to 70% of applications using monies from the recently passed Garden State Trust Fund (N.J.S.A. 13:8C). The local share is typically split by the County and the municipality equally using government bonds, dedicated taxes and/or other sources of funding.

Upon approval of this Planning Incentive Grant Application, Kingwood will correspond with all property owners of the targeted properties in the Kingwood Project Area and advise them of the parameters of the program.

Kingwood will encourage property owners to consider the financial and other advantages of participation in the Farmland Preservation Plan, and work with an assessor to determine an appropriate easement value for each individual parcel. Additionally, owners will be encouraged to assist in leveraging available funding through donations of easements, partial donations of easements and/or bargain sales of development rights.

In order to maximize preservation opportunities, Kingwood Township will utilize option agreements or installment sales where possible for easement purchases. These vehicles will allow the Township and property owners to develop agreements regarding price and terms that maximize the amount of farmland which can be brought into the preservation program in the early period. The SADC encourages the use of a sliding scale program for zoning which limits non-farm uses, and mandates large farm-sized lots in an effort to preserve and maintain farm operations.

3. Cost Projections and funding plan associated with 1, 5 and 10 year preservation goals The Township of Kingwood estimates that the per acre value of development easements in the Township Project Area will be roughly \$10,000. This is based on analysis of recent SADC and Hunterdon County Park Commission purchases in the project area. However, it should be noted that the rate will increase with inflation on assessed parcels. The Township may anticipate using funding options such as the SADC sliding scale, dedicated tax revenues, or bonding to keep pace with rising land values.

The acquisition costs of preserved farms in the project area ranged from \$5,000 to \$10,000 per acre, with the average closer to the lower end of that range. There are 34 parcels located within the project area that are targeted for preservation. The size of the parcels differ dramatically, but overall, there is a total of 2,476.16 farmland acres targeted in the project area. In order to reach the preservation goal, the Township believes that development easement value for the parcels in the proposed project area is a per acre value of \$10,000. Given a per acre value the total cost to preserve all the target parcels would be approximately \$24,761,600 (Table 20).

Table 20: Funding Needed for Target Farm Acquisition

Year	Acres	Value	State Share (60%)	County Share (20%)	Municipal Share (20%)
1	227.3	\$2,273,080	\$1,363,800	\$454,760	\$454,760
5	1,238	\$12,380,000	\$7,428,000	\$2,476,000	\$2,476,000
10	2,476.16	\$24,761,600	\$14,856,960	\$4,952,320	\$4,952,320

Assuming an SADC cost-share of 60%, a County cost-share of 20% and 20% Municipal cost-share, the Township is in need of \$14,856,960 from the State, \$4,952,320 from the County CADB and the Township will have to provide \$4,952,320 over the course of 10 years. The Township's cost share over 10 years could be achieved through the use of their open space funds, which raise approximately \$211,333.76 annually, with \$105,666.88 dedicated to farmland preservation, and still be able to share funding with open space

preservation efforts. Based on the Township's Farmland Preservation goals, the approximately \$105,700 of local open space tax revenue available is approximately \$390,000 short of the amount that would be needed to effectively fund the farmland preservation targets identified in this plan.

H. Farmland Preservation Program/Agriculture Advisory Committee Administrative Resources

1. Municipal Staff and/or Consultant Resources

The Kingwood Township Planning Board and Township Committee participate and authorize the Agricultural Advisory Committee, which meets once per month. The Agricultural Advisory Committee also receives consulting services, as may be needed, through the Township's Planner, Banisch Associates, Inc. The Township also utilizes the work done by an appointed member of the Township Farmland Preservation/Open Space Coordinator.

2. Legal Support

Legal support for the Township's farmland preservation program is provided by the Township's Attorney, the Savo Law Firm, Somerville, NJ

3. Database Development

The Township's Planning Consultants, Banisch Associates, Inc. currently provide database management, mapping and GIS resources for the Township.

I. Factors Limiting Farmland Preservation Implementation

1. Funding

Funding for farmland preservation within the Township is dependent on the amount and timing of funding sources on the State and County level. Township farmers have been successful in preserving their farms through State Direct Easement Purchase and County Easement Purchase programs. The Township would like to continue this relationship with the County to preserve additional properties. The Township may be able to produce enough funding through the collection of the Open Space Tax to meet their require 20% match, but these funds are a shared resource with open space preservation efforts and can not fund entire projects on their own and require the assistance of County and State matching funds. Therefore the limiting factor for funding is dependant on matching funds from the County and State.

2. Projected Costs

The Township has been able to identify a reasonable per acre value that can be projected out through the 10 year funding cycle. Given the \$10,000 per acre value and the amount of income generated in the Township for preservation efforts, the Township should be able to meet its preservation goals.

3.Land Supply

Kingwood has felt the pressure of development over the last 20 years, but the Township has preserved land and created zoning that has curbed development, for the time being. Increased pressure for development has also increased pressure for farmers to ensure their land remains agriculturally active. In order to do this, the agricultural base must remain strong. Fortunately, in Kingwood, there is an active community of farmers and supportive landowners. This has resulted in a continued land supply of agricultural areas that can still be brought under the farmland preservation program.

In the long run, preserving farmland in Kingwood Township now could save taxpayers money in the future. Farmland is typically the most desirable land for development. As has been found in communities similar

to Kingwood, new development increases annual costs of education, infrastructure maintenance, police, and other community services. While up-front costs of preserving farmland may appear costly, it will save the Township money from the annual costs that are likely to incur with new development. As opportunities to preserve active farmland arise, the Township will evaluate preservation options to maintain the culture of the community.

4.Landowner Interest

Kingwood is fortunate to have actively farmed areas with land owners dedicated to the promotion of farmland preservation and agricultural retention. Currently, the Township has about six landowners who have displayed continued interest in placing their land in farmland preservation. This constant interest in local farmers has resulted in a large amount of lands being entered into the preservation program. There has been continued interest by land owners to enter farmland preservation.

5. Administrative Resources

The Agricultural Advisory Committee and Township volunteers have been extremely helpful in the promotion and execution of the farmland preservation program. Land owners have been able to contact the AAC, the Township Clerk and the appointed Farmland/Open Space Coordinator for assistance in preparing applications for farmland preservation. Administrative resources are not a limiting factor to the Township's preservation efforts.

VI. <u>Economic Development 16</u>

Development pressure continues to be a problem for Hunterdon County farmers. Hunterdon County has had the second fastest rate of residential growth in the State since 1980. For the period 1980 to 1990, the average annualized growth rate for Hunterdon County was 2.1%, second only to Ocean County. For the period from 1990 to 1995, the County's average annualized growth rate was 1.5%, which was second only to Somerset County. Similarly, the statewide average annualized growth rate was .5% for both periods. During this period, real estate developers aggressively solicited the interest of farmers to sell their land through letters, phone calls and door-to door visits. This is still true today. Many large developers offer down-payments to landowners in exchange for contracts to sell their farmland after subdivision approvals have been secured. This process can take up to several years, but the money initially paid to the landowner makes the offer attractive. Such offers are difficult for some farmers to resist if profit margins have been low or retirement is near.

New residential development also presents other problems. Residences and farms are not ideal neighbors. Nuisance suits, trespassing, noise and pollution complaints, and liability issues are all common problems when farms are surrounded by residential developments. The population of Hunterdon County has almost doubled in size in 40 years with a population of just over 128,947 in 2020 as compared to approximately 87,000 people residing in the county in 1980. Right-to-farm laws have attempted to address this issue and these laws have been recently strengthened. Municipalities have attempted to curb this trend as well by introducing zoning that requires larger lot sizes or encourages cluster developments.

In Kingwood, the same is true. As previously discussed, the Township adopted a "Right to Farm" ordinance for this very reason and has maintained a rural zoning ordinance to ensure new development does not impact farmland properties.

A. Consistency with NJ Department of Agriculture Economic Development Strategies and other regional economic development plans and initiatives

The SADC has developed an Agricultural Smart Growth Plan that addresses the five components identified as critical links for the future of farming: Farmland Preservation, Innovative Conservation Planning, Economic Development, Agriculture Industry Sustainability and Natural Resource Conservation.¹⁷ The Economic Development section offers guidance to help foster and stabilize an active and productive agricultural industry which is critical to retaining viable farms. For Kingwood Township, the most important aspects of planning for agriculture would be to identify and facilitate the creation of new markets helping farmers access an ever-changing marketplace. One recommendation in particular that Kingwood should consider is to incorporate agriculture into the economic development plan to ensure that topic receives the level of acknowledgement and support it needs to succeed.

B. Agricultural Industry Retention, Expansion and Recruitment Strategies

- 1. Institutional
 - a. Farmer Support (e.g., Farm Link Program, Estate Planning)

As a program of the New Jersey State Agriculture Development Committee, the Farm Link Program (https://www.nj.gov/agriculture/sadc/farmlink) is a resource and referral center for new farmers, farmers seeking access to land and farming opportunities, landowners seeking farmers and farmers working on

¹⁶ Hunterdon County Farmland Preservation Plan, November 2007

¹⁷ NJ Dept of Ag, Agricultural Smart Growth Toolkit "Planning for Agriculture" http://www.state.nj.us/agriculture/toolkit.htm

estate and farm transfer plans. The Township AAC supports the Farm Link program and works with Kingwood farmers to ensure opportunities through the program are available to local farmers.

b. Marketing/Public Relation Support (e.g., local use of the Jersey Fresh promotional program, agritourism)

Agritourism promotes the use of agricultural amenities and resources, such as open fields farm houses, live stock and other scenic components of the farm for the purpose of offering fee-based recreational opportunities. Agritourism can benefit local communities by attracting tourists to the area who not only spend time at participating farms, but spend money in other local businesses. Farmers benefit by supplementing their income from those added activities.

Agritourism may be a valuable means of supplementing farm income and may increase the sale of products produced on-site. People residing in suburban and city environments are attracted to rural areas with active farm operations. Given Hunterdon County's close proximity to New York and Philadelphia metropolitan areas, farmers have a large urban population to market an agritourism program uniquely tailored to their farm operations.

Hunterdon County has developed a new trail system promoting the County's farms and agricultural businesses. The Hunterdon 579 Trail (www.hunterdon579trail.com) includes a wine trail, brewery trail and lists of farm markets, pick-your-own farms, and other farm-hosted events and destinations. The website provides additional information on events, local stores, and other places to visit while following the trails.

c. Community Farmers Markets

Eliminating the need for distributors, farmers are selling at farm stands and farmer markets and to nearby rural and suburban markets. There are four community farmers markets in Hunterdon County. These markets are located in Flemington, High Bridge and Sergeantsville and are open for business on Saturday or Sunday. (NJDA Jersey Fresh)

Efforts to market a county agricultural tourism program may increase the profits in local direct marketing. The urban markets offer even more substantial opportunities. The close proximity to one of the largest metropolitan markets in the world presents farmers in Hunterdon County with tremendous possibilities.

d. Community Supported Agriculture

Community Supported Agriculture (CSA) is a relationship of mutual support and commitment between local farmers and community members. Shareholders pay the farmer an annual membership fee to cover the production costs of the farm, in turn, they receive a weekly share of the harvest during the local growing season. The arrangement guarantees the farmer financial support and enables many small- to moderate-scale organic family farms to remain in business. Ultimately, CSA creates "agriculture-supported communities" where members receive a wide variety of foods harvested at their peak of ripeness, flavor and vitamin and mineral content.¹⁸

The benefits to belonging to a CSA include a level of trust in the source of food products grown. Members, having a stake in the farm, are assured their produce comes from a local source. This helps the local economy. Customers gain an understanding of where and how their food is grown by supporting the farm, a local business. A CSA also helps to develop the community character by allowing residents to meet and

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¹⁸ Rutgers Cook College, Cook Student Farm at https://rutgersgardens.rutgers.edu/

talk to the farmer who grows their food. Food that is grown locally also improves air quality. The food does not have to travel long distances to get to customers, which reduces air pollution from trucks that carry the produce. Fewer trucks on the roads mean less air pollution.

CSA's that are also organic farms provide an added benefit to the community and to the members who have a stake in the farm. Using no pesticides and fertilizers, the community can be sure that fewer chemicals are running off into nearby waterways or seeping into groundwater sources. Members of the farm are also assured that the food they eat from the farm does not contain harmful chemicals.

Hunterdon County is home to a variety of CSAs offering products ranging from produce, eggs, baked goods, ice cream, dairy products, flowers, honey, and more. Information on CSA's can be found through the Jersey Fresh website or the Hunterdon 579 Trail website.

e. Agricultural Education and Market Research Coordination

Kingwood Township farmers have a variety of resources in the CADB, Rutgers Cooperative Extension Service, the NJ Agricultural Experiment Station, the Rutgers School of Environmental and biological Sciences and others. These organizations work to disseminate information and sponsor seminars and workshops to keep Hunterdon County farmers and local officials apprised of changes in NJ agriculture. These organizations, and their assistance to Kingwood farmers, are described below.

i. Rutgers Cooperative Extension

Rutgers Cooperative Extension Service is a leading program on new-use agriculture. This is defined as agriculture where traditional agricultural crops and live stock are used for new purposes other than food. For example, plants are grown for medicinal purposes and corn is grown for bio-diesel and other types of fuel. It is anticipated that many of these types of new-use agriculture will require large areas of farmland due to economies of scale. The potential for the farm community to benefit from alternative fuels, both as consumers of energy in their farm operations and as producers of the feed stocks needed to create alternative fuels, such as corn for ethanol and soybeans for bio-diesel. An aggressive program encompassing solar, wind and bio-fuels energy was undertaken to help interested farmers pursue these avenues for both cutting their costs and broadening the market for their commodities. There are many opportunities for interested Kingwood farmers to partner with Rutgers on some of these endeavors.

ii. New Jersey Agricultural Experiment Station

The New Jersey Agricultural Experiment Station is the way in which Rutgers and the state of New Jersey fulfill a joint mission to provide solutions to residents. As a land-grant university, Rutgers is committed to teaching, research, and outreach. The work that NJAES does is carried out by 4-H agents, Extension specialists, Family & Community Health Sciences educators, and Agricultural and Resource Management agents. They are the ones who provide continuing-education opportunities and certification programs, work with at-risk youth, educate parents and restaurant owners about food allergies, teach proper nutrition to combat obesity and diabetes, identify invasive species, reduce pesticide use, improve soil fertility, and more. Kingwood farmers and schools that are interested in providing this information to residents can partner with the 4-H groups or the Agricultural Experiment Station to host educational workshops.

iii. Rutgers School of Environmental and Biological Sciences

The Rutgers School of Environment and Biological Sciences is based on the foundation of the physical and social sciences but also focuses on the social and human dimensions of scientific practice in majors such as

environmental and business economics or environmental policy, institutions and behavior. Kingwood Township farmers, officials, and interested residents can use their services regarding any opportunities for farm research and testing.

iv. Other

Kingwood Township should continue to work closely with the CADB and other groups and organizations to form partnerships for farmland preservation. Future partners may include the Hunterdon County Chamber of Commerce, Hunterdon Economic Partnership, County Board of Agriculture and the New Jersey Farm Bureau. Working with these groups could result in such benefits as improved marketing of agricultural products, educational programs for farmers to be more competitive in today's economy, reduced crop damage caused by wildlife, agribusiness that uses locally grown produce and local regulations that are compatible with the needs of farmers.

2. Businesses

a. Input Suppliers and Services

Hunterdon County farmers have indicated that there are very few farm equipment dealers within the county. One AGWAY is located in Clinton and the other AGWAY in Flemington has closed for business. There is one Tractor Supply store located in Flemington. Most farmers travel to Pennsylvania in order to buy equipment. Many of the dairy farmers are looking for specialized equipment that is unavailable in the County. Those farmers that are looking for specialized equipment now look toward the internet to find those products. The growth of internet-based businesses has allowed farmers to look further beyond their immediate region to find products that would not normally be available to them. With the coverage that shipping services such as UPS and FedEx have, it gives farmers another option when looking for agricultural inputs.

For equipment repairs, most farmers try to "do it themselves" and maintain their existing equipment. For those who need assistance, there are two repair services available in the region. One dealer in Ringoes (East Amwell) does repairs and sells used machinery and a farmer in Jugtown (Bethlehem Township) also does repairs and will make house calls, if necessary.

b. Product Distributors and Processors

Hunterdon County will continue to host a variety of agriculture but there will probably be a continued loss of large farms – as in previous years - due to lower profit margins of grains, and loss of local feed mills. There are no major grain processing facilities in Hunterdon County. However, many farmers who continue to farm grains will likely grind their own feed and sell locally. The Township AAC will work with Kingwood farmers to assess their needs for products and distributors that may be found locally or regionally.

c. Anticipated Agricultural Trends

Agriculture in Hunterdon County is likely to continue its trend towards smaller, more intensive use farms with innovative marketing techniques sought by many farmers to meet production needs. Part-time farmers will continue to dominate the industry. And the diversity of farming that has traditionally characterized Hunterdon County will also continue. Given these trends, the future of farming in Hunterdon County and Kingwood Township looks promising and will be geared toward a changing agricultural market.

Part-time farmers, particularly those with horses and other livestock, will continue to be important players in the County's agricultural industry and their continued existence should be nurtured. Part-time farmers often do not have the time or the land to plant enough hay or other feed for their livestock and therefore create a market for hay and grain farmers. Part-time farmers are also important because they keep land in farming, minimizing the intrusion of residential developments on neighboring farm operations. Additionally, they often provide farmland for others to farm by leasing their land. This is particularly important for grain farming which has a low per acre value and requires a considerable amount of land to be profitable. The number of small part-time farms has stabilized over the last few years, but will continue to be a large percentage of the County's agricultural complexion, assuming the rural character of the area is preserved and there are no major regulatory changes such as significant changes in the Farmland Assessment Act.

d. Market Location

Hunterdon County has a great market location due to its close proximity to the New York and Philadelphia metropolitan areas. The median household income for Hunterdon County, according to the 2020 census data is \$117,858. This is well above the statewide average of \$85,245. Hunterdon has the highest median household income in the state, followed by Morris County and Somerset County. Hunterdon County had a population of 128,947 persons, according to the 2020 census.

e. Product Demand

Hay comprises 49% of agricultural lands in Hunterdon County, and it's the leading crop countywide and statewide. Corn and other grains crops, soybeans, specialty crops, nurseries, cattle, milk cows and horses also characterize the county's agricultural base. In 2004, Hunterdon County ranked first in New Jersey for hay, fourth for corn and grain and also for cattle and calves and fifth for soybeans, beans, wheat, grain, and nursery stock acreage.

Kingwood Township is located within the western-central portion of the state where farmland is abundant, but disappearing due to encroaching development. Municipal agencies and farmers are working together to protect a landscape of NJ that once defined the state and earned the nickname, "The Garden State". While many product distributors and services are not available in the immediate vicinity of the Township, just across the river in Pennsylvania, more regional services are available. As more farmers take advantage of these local services business will grow and perhaps new opportunities for product distributors and services will emerge in areas where they are currently lacking.

f. Agricultural Support Needs

In order to get the pulse of agricultural support needed in the area, the County of Hunterdon held a public meeting on specific topics for inclusion in this plan. Comments from the first public meeting primarily fell within these topic areas:

- Technical Support on Specific Issues
- Assistance with Specific Environmental and Wildlife Issues
- Financial Support from the Municipality
- Youth Not Interested in Farming
- Labor Assistance Needed
- Municipal Support for Local Markets

- Housing on Preserved Farmland
- Incentives for Preservation

In order for agricultural activities in Kingwood to maintain and enhance their viability, support in the marketplace is needed. As noted above, as more farmer's markets, product distributors, and other services related to agriculture, are established in the area, viability of agriculture increases. Additional support for the livlihood and business of farming is available to local farmers through various County and State business organizations.

g. Agricultural Facilities and Infrastructure (e.g., farm markets, food processors type Placement/Location)

The infrastructure the farmers most need is on the regulatory and technical assistance side: getting municipalities, residents and consumers to look favorably on agriculture and understand the economic and quality of life advantages it brings to the County, getting municipal support through flexible land use regulations and ordinances that take into consideration the special needs of the agricultural operations, and getting help with financial and planning matters through workshops and other educational and counseling services provided by the state, RCRE, the CADB and the federal government.

Additional support could come from a concerted effort to promote agritourism through signage, publications, website and media promotion.

h. Flexible Land Use Regulations

Ordinances and policies supporting agriculture are essential for the future of farming in Kingwood Township. Full-time farmers who rely largely, if not entirely, on the farm operation for income would greatly benefit from more positive regulations. These regulations should include ordinances giving farmers flexibility to pursue additional agricultural activities. They should also recognize the need for farmers to supplement their operations with on-farm and off-farm activities and businesses. Development regulations that streamline the review process for new farm buildings and minimize the cost of the reviews would also be helpful. Equity protection is especially important to full-time farmers as a large part of their retirement security rests in the value of their farmland. This challenges the municipality to be creative and to use innovative regulatory mechanisms that both achieve community goals and protect the farmer's future.

The requirements for constructing agricultural labor housing are much less stringent than the Residual Dwelling Site Opportunity (RDSO), provided the house is for non-family related farm labor. Any number of agricultural units may be constructed on permanently preserved farmland provided at least one tenant/resident actively works on the farm and there are no blood relatives to the landowner residing in the house. Any existing agricultural labor housing that is destroyed may be reconstructed. Once an agricultural labor unit is no longer inhabited by an agricultural laborer, the unit must be vacated. This policy prevents abuse of the program where the units could be rented out to non farm related tenants. An enforcement component of this regulation should be implemented to ensure no violations occur.

i. Agriculture Representation in Economic Development Organizations
The following Hunterdon County organizations, mentioned throughout this plan, lend their support to the Kingwood Township agricultural community:

Hunterdon Chamber of Commerce is an action-oriented business organization that promotes a favorable business climate for its membership and community; works with other interested organizations to develop effective mechanisms for taking action on issues of community interest; and provides business leadership for improvement of the economy and quality of life in Hunterdon County, New Jersey.

Hunterdon County Agriculture Development Board (CADB) takes the lead role in farmland preservation and helps guide future policies. Their mission is to "promote the present and future of Hunterdon County agriculture by preserving agricultural land and by promoting public education and agricultural viability."

Rutgers Cooperative Research and Extension Service is a grassroots organization where the needs of the community take precedence over programs designed at other levels of government.

Hunterdon County Soil Conservation District is a special purpose subdivision of the State. In cooperation with the State Soil Conservation Committee, they are empowered to conserve and manage soil and water resources and address stormwater, soil erosion, and sedimentation problems that result from land disturbances.

The Agricultural Advisory Committee plays an important role in the Township's farmland preservation program by working with landowners to educate them about the farmland preservation program and through recommendations to the Township Committee. The Township Committee then authorizes money to be spent for preservation efforts.

j. Agricultural Support Implementation

Hunterdon County's success preserving farmland is largely attributed to the partnership that has been established between the Hunterdon municipalities, the county and the state. Generally speaking, the State pays about 60% of the cost of acquiring easements. The county and municipalities split the remaining 40%. To advance the Township's preservation of farmland and the viability of agriculture as a local industry, Kingwood should consider investing some portion of resources in the economic development of agriculture in the Township.

k. Cost

Many municipalities have adopted municipal dedicated taxes to fund preservation programs Kingwood approved an open space tax in 1997 and renewed it in 2001 and 2006. While this is a positive commitment toward the farmland preservation program, many of the municipalities have a low tax base and the tax revenue will not cover the entire municipal cost share of easements. Municipalities may therefore need to bond monies to match the tax revenue.

1. Funding Opportunities

The creation of the Garden State Preservation Trust Fund provides a stable source of state funding for acquisitions through the year 2023. The Hunterdon County Board of Chosen Freeholders appropriate funding for farmland preservation annually through the capital budget. Also, since 1999, the Hunterdon County Open Space Trust Fund (voter-approved \$0.03 property tax) provides funds for farmland and open space preservation, as well as funds for the preservation of county-owned historic structures. Most Hunterdon municipalities with active farmland programs have voter-approved property taxes dedicated to farmland preservation. On NJ ballots this year, the Garden State Preservation Trust Fund was once again voted to protect open space.

m. Timeline

Regional and statewide initiatives to preserve farmland and to ensure viability of agricultural activities throughout the state are continually updated to provide the most current resources available. The Township AAC can assist these initiatives by keeping in contact with the regional and state agencies to inform them of the support and resources needed. This communication then enables the region and state agencies to provide the most appropriate resources and support an agricultural community needs. This will become especially important as Kingwood Township moves forward with preserving farms in the Township over the next 10 years. See Table 24 of the Funding Plan for more details on the timeline for preserving farmland acres.

VII. Natural Resource Conservation

Kingwood Township's natural resources are found in a variety of sources. The sweeping views across flat farmland, the highly productive and sensitive waterways, steep slopes that drop above the Delaware River, the corridor along the Delaware River that provides a look into history, rich soils, and the diversity of wildlife throughout the area account for some of the many resources in Kingwood. In 2004 the Township obtained consultants Kratzer Environmental Services to prepare an Environmental Resources Inventory (ERI) of these very resources in Kingwood. That report is currently being updated in order to contribute some of the information to a new Conservation Plan Element of the Township's Master Plan. This work is being conducted as part of a grant obtained by the Township from the Association of New Jersey Environmental Commissions (ANJEC).

Below is a description of additional programs and resources that can assist Kingwood Township farmers to protect natural resources.

A. Natural Resource Protection Coordination

1. Natural Resources Conservation Service¹⁹

Farmers, ranchers, and other conservation-minded agricultural producers, rely on the Natural Resources Conservation Service (NRCS) for assistance through conservation programs and technical information to help them protect the natural resources on their land. Since 1935, the NRCS (originally called the Soil Conservation Service) has provided leadership in a partnership effort to help America's private land owners and managers conserve their soil, water, and other natural resources. NRCS employees provide technical assistance based on sound science and suited to a customer's specific needs. They provide financial assistance for many conservation programs and they provide technical expertise in such areas as animal husbandry, clean water, ecological sciences, engineering, resource economics, and social sciences. They also provide expertise in soil science and leadership for soil surveys and for the National Resources Inventory, which assesses natural resource conditions and trends in the United States.

The local NRCS office serving Hunterdon County is located in Franklin Township. Hunterdon County farmers may utilize this local NRCS office for technical assistance with conservation issues. NRCS will also reach out directly to landowners if they know of a farmer who is in need of assistance, or could use the guidance of the NRCS staff.

2. Soil Conservation Districts²⁰

The Hunterdon County farm community is served by the Hunterdon County Soil Conservation District (SCD) located in Franklin Township. Some of the technical services that the SCD provides Hunterdon farmers include animal waste management, erosion control design and construction and Integrated Pest Management. Hunterdon County farmers who are interested in developing farm conservation plans apply to local Soil Conservation Districts, which assist in developing farm conservation plans and ensuring projects are necessary and feasible. Applications are forwarded to the N.J. State Soil Conservation Committee, which recommends projects to the SADC for funding approvals. The Hunterdon County Soil Conservation District gives final approval on all Conservation Plans and program contracts.

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¹⁹ Hunterdon County Farmland Preservation Plan, November 2007

²⁰ Ibid.

Within one year of the signing of the Deed of Easement on a Preserved Farm through the County Easement and Municipal PIG programs, the landowner must obtain an approved Farm Conservation Plan from the Hunterdon County SCD. Although an approved Conservation Plan within a year of the preservation of a farm is required, implementation of the plan is not mandatory. According to the Hunterdon County SCD, approximately 25% of these plans are implemented. Although the services of the NRCS for the implementation of the Conservation Plan is cost free to the farmer, the services of the SCD may be needed to complete the implementation of the plan and this work is billable as the SCD is a separate entity from the NRCS. Funding for approved soil and water conservation projects are available from the SADC for up to 50% reimbursement.

The farmland preservation program has an ongoing annual monitoring program conducted by the Hunterdon County Soil Conservation District. Kingwood Township farmers each year comply with the monitoring inspector to allow a site walk of the preserved land and an interview with the landowner regarding agricultural activity on the preserved farm and any concerns, issues, or other comments on the preservation program.

B. Natural Resource Protection Programs²¹

1. SADC Soil and Water Conservation Grant Program

This program provides grants to eligible landowners to fund up to 50 percent of the costs of approved soil and water conservation projects.

2. Federal Conservation Programs (EQIP, , CREP, etc.)

Environmental Quality Incentive Program (EQIP): This program provides technical, financial, and educational assistance to farmers/producers for conservation practices that address natural resource concerns, such as water quality. Practices under this program include integrated crop management, grazing land management, well sealing, erosion control systems, agri-chemical handling facilities, vegetative filter strips/riparian buffers, animal waste management facilities and irrigation systems.

Conservation Reserve Enhancement Program (CREP): Under CREP, farmers voluntarily remove cropland along streams, lakes and wetlands from agricultural production and convert the land to native grasses, trees and other vegetation to provide buffers. These conservation buffers slow and absorb runoff, sediment, nutrients, and chemicals from cropland while also creating beneficial wildlife habitat for many species in need.

Agricultural Land Easements (ALE)

The Agricultural Conservation Easement Program (ACEP) includes the Agricultural Land Easements (ALE) component which is a voluntary program providing opportunities for eligible partners to receive financial assistance to purchase agricultural land easements. The program targets working agricultural lands to ensure that productive working land is not converted to non-agricultural uses, thus maximizing protection of land devoted to food production. Eligible lands include cropland, grassland, pastureland, and nonindustrial private forestland. Each easement is required to have an agricultural land easement plan that promotes the long-term viability of the land. Eligible cooperating entities must:

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²¹ Ibid.

- Be committed to long-term conservation of agricultural lands
- Be capable of acquiring, managing, and enforcing easements
- Have sufficient staff dedicated to monitoring and easement stewardship
- Have available funds for acquisition, monitoring, and stewardship
- Be a State or local government, or non-governmental/non-profit organization that has a farmland or grassland protection program

Under the Agricultural Land component, NRCS may contribute up to 50 percent of the fair market value of the agricultural land easement. Where NRCS determines that grasslands of special environmental significance will be protected, NRCS may contribute up to 75 percent of the fair market value of the agricultural land easement.

Farmland Stewardship Deer Fencing Grants

The State Agriculture Development Committee (SADC) provides cost-share grants to eligible farmers for the installation of high-tensile woven wire deer fencing on permanently preserved farms. Farms that been permanently preserved through other programs, such as cluster or open space subdivision and development approvals or independent easement purchase may also be eligible. The grants may cover up to 50% of the costs of materials and installation, and they may not exceed \$200/acre or a total grant of \$20,000.

The **Rutgers Cooperative Extension Service** continues to assist Hunterdon's farmers in facing the challenge of operating a business in a heavily regulated environment, while enhancing market potential and using integrated management systems that help provide for environmentally sound best management practices.

North Jersey RC&D, in partnership with the Natural Resources Conservation Service, Rutgers Cooperative Extension, County Soil Conservation Districts, and the NJ Department of Agriculture has successfully leveraged federal monies to help farmers employ land management practices that reduce chemical inputs without compromising yields.

Farmers in Hunterdon County have also received technical and financial assistance through provisions in Farm Bill Legislation and the Conservation Technical Assistance Program. The programs listed above have helped Kingwood Township expand its farmland preservation program over the years and have provided support to farmers.

C. Water Resources

With the onset of prolonged periods of dry weather and reduced rainfall over the last decade, water supply conditions have become an increasingly important statewide concern. Hunterdon County's drinking water supply comes from surface and ground water sources. More than 70% of the households in Hunterdon County depend on ground water from individual wells for their water supply. In addition to individual residential wells, there are permitted public-community wells as well as non-community wells (for example, schools, offices, restaurants, institutions, etc.).²²

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²² Ibid.

1. Supply Characteristics

Almost half of New Jersey's drinking water comes from ground water. Kingwood Township relies exclusively on ground water. Kingwood, like most of the Piedmont Physiographic Province, is underlain by dense, almost impermeable, bedrock that yields water mostly from secondary porosity and permeability provided by fractures. Therefore, the distribution and orientation of these fractures controls the rates and directions of ground water flow.

Characteristics of the Aquifers in Kingwood Township ²³			
Aquifer	State Rank	Aquifer Characteristics	
Brunswick aquifer	С	Sandstone, siltstone, and shale of the Passaic Formation. Ground water stored and transmitted in fractures. The water-bearing units are composed of fissile shale and siltstone, and the confining units are composed of massive siltstone. Water is normally fresh, slightly alkaline, non-corrosive and hard. Calcium-bicarbonate type waters dominate. Subordinate calcium-sulfate waters are associated with high total dissolved solids.	
Stockton Formation	С	Arkosic sandstone. Ground water stored and transmitted in fractures. The water-bearing units are composed of sandstone and the confining units are composed of siltstone. Water is fresh, slightly acidic, corrosive and moderately hard. Calcium-bicarbonate type waters dominate.	
Lockatong Formation	D	Silty argillite, mudstone and fine-grained sandstone and siltstone with minor limestone. Ground water stored and transmitted in fractures. The water-bearing units are composed of fissile shale, and the confining units are composed of massive, thick bedded argillaceous siltstone. The Lockatong Formation is one of the poorest sources of ground water in New Jersey, but yields more water than the diabase rocks. Water is normally fresh, slightly alkaline, non-corrosive and hard. Calcium-bicarbonate type waters dominate.	
Diabase	Е	Hard and dense igneous rocks. Ground water stored and transmitted in fractures, which are sparse. Few high-capacity wells. Water is normally fresh, slightly to highly alkaline, moderately hard, and of the calcium-bicarbonate type. Because fractures in the diabase are so widely spaced, many unsuccessful wells have been drilled into these rocks.	

Note: "State Rank" is based on High Capacity Wells (such as water-supply, irrigation, and industrial-supply wells sited and tested for maximum yield. Many of the wells have boreholes exceeding the standard six-inch diameter for domestic wells. State Rank is best viewed on a relative basis, with "A" yielding the most water, and "E" the least. Median High Capacity Wells Yield (in gpm): [A] > 500; [B] 251 to 500; [C] 101 to 250; [D] 25 to 100; [E] <25

Sources: NJGS Readme.txt with GIS data; Lewis-Brown, 1995; Vecchioli and Palmer, 1962 in Lewis-Brown, 1995.

2. Agricultural Demand & Supply Limitations

Recent agricultural trends in Hunterdon County tend towards higher water use for irrigation as well as increased use of temporary and permanent greenhouses. Both uses contribute to loss of ground water recharge. In Kingwood Township, water supply is limited in most areas, as noted in the table above. The aquifers' supply in Kingwood ranges from up to 250 gpm to less than 25 gpm. Because of the geology and the demand for water in the area, irrigation using potable water should be kept to a minimum. Innovative techniques such as recycling stormwater for irrigation could provide one solution to the water supply issue.

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²³ Kingwood Township Environmental Resources Inventory, June 2004

²⁴ County FPP, 2007

3. Conservation & Allocation Strategies

The draft 2007 County Growth Management Plan recommends the CADB to work with agricultural organizations who lend support to the farm community, including the Hunterdon County Board of Agriculture and North Jersey RC&D. These organizations should work to promote funding opportunities for agricultural water conservation practices, such as the federally funded EQIP program and Conservation Reserve Program.

In addition, Hunterdon farmers have worked with various agencies to help improve water quality in our streams. North Jersey RC&D, in partnership with the Natural Resources Conservation Service, Rutgers Cooperative Extension, County Soil Conservation Districts, and the NJ Department of Agriculture has successfully leveraged federal monies to help farmers employ land management practices that reduce chemical inputs without compromising yields. By 1999, some 14,000 acres, including acreage in Hunterdon County, were using best management practices on their lands through this program. The draft County Growth Management Plan recommends that these success stories be actively marketed.

In general, water use in the region is increasing as the need for the resource in new housing developments, commercial districts, and in agricultural areas, is required. Across the board, populations are encouraging water conservation as well as maximizing groundwater recharge. Measures to reduce consumption tend to rely on indoor solutions like replacing water fixtures with their low-flow counterparts. For uses like agriculture and residential development, solutions include drip irrigation (delivering water directly to the plant roots) or for the residential uses, planting vegetation like grasses and plants that do not require watering as often as sod or other short grasses.

Reducing the consumption of water on all irrigated lands contributes to overall conservation of the resource and could save nearby wells from going dry.

D. Waste Management Planning (e.g., animal waste, plastic mulch, tires, etc.)

Waste management for the Township exists on several levels. Field crop production and nursery stock can create a large amount of agricultural byproducts. Additionally, livestock production creates a great deal of organic waste byproducts that need to be carefully disposed of to avoid pollution issues.

Farm waste may vary from animal byproducts to solid waste. Animal waste has the potential to impact ground and surface water quality. If poorly managed, such waste products may introduce unwanted bacteria into water supplies. To prevent these problems many equine and livestock owners in the county work with the NRCS to develop manure management plans. Also, depending on their scale, animal feeding operations that exceed certain livestock population thresholds are required by the State to obtain New Jersey Pollutant Discharge Elimination System (NJPDES) permits and develop animal waste management plans.

The SADC has adopted an animal waste Agricultural Management Practice (AMP) under the Right-to-Farm Act and provides guidance for managing livestock waste. Information on the Manure Management Rule can be found at:

http://www.state.nj.us/agriculture/divisions/anr/agriassist/animalwaste.html

The Hunterdon County Soil Conservation District offers technical assistance for Hunterdon County farmers in the area of Animal Waste Management. The County can provide farmers with technical assistance concerning the disposal of tires including locations for disposal and also recycling opportunities.

E. Energy Conservation Planning (e.g., solar, wind, etc.)

Hunterdon County farmers have started to develop alternative energy sources for the operation of their farms. A notable example of this is the Blew Farm in Franklin Township which has recently installed a solar panel energy system to provide all of the energy requirements for their farm.²⁵

Conservation-minded farmers who are also looking to save money are becoming more aware of energy technologies that can reduce energy use on their farms. Some examples where farmers could apply these technologies include:

- Solar systems to power their energy needs;
- Solar water pumping to effectively pump water for irrigation during times when it is needed most, during full sun exposure;
- Solar electric fencing to keep animals penned in on a piece of the farm, often where electricity is not accessible. Powering an electric fence with a small scale solar system is reliable and can be used to automatically open and close gates where intensive grazing methods are used;
- Wind turbines to provide energy needs; and
- Farm methane to provide energy needs through the use of animal waste collected on the farm. Other benefits of using farm methane include odor reduction and pollution reduction.²⁶

Alternative energy sources located on farmland, preserved or not, has become a discussion in the Township. In general, the feeling is that wind turbines, for example, do not belong in the Township because there just is not enough wind to generate an amount of energy needed to make the facility worthwhile, as witnessed in previous installations in the County. Placing a wind turbine in the middle of a farm field also raises concern for the viewshed of the Township and for any critical habitat present on that land. In the case of the solar panels, as mentioned above, this is a less intrusive option as the panels can be situated atop a barn roof in order to maximize solar gain and produce a good amount of energy for the farm's use. The use of solar panels should not require land to be taken out of production. The SADC provides regulations regarind the installation and use of solar facilities on preserved farms under NJAC 2:76-24 which allows the installation of solar facilities to provide power or heat to the farm, reduce the farm's energy costs, or alternatively to afford a limited income opportunity to the farm owner. The solar facilities may not occupy more than one percent of the farm, as well as to make improvements to any agricultural, horticultural, residential, or other building or structure on the land for that purpose, provided that the solar energy facilities.

Rural Energy for America Program Renewable Energy Systems & Energy Efficiency Improvement Guaranteed Loans & Grants:

This program is offered through the USDA and provides loan financing and grant funding to agricultural producers for renewable energy systems or make energy efficiency improvements, including new energy efficient equipment. Additional information on this program and other rural development energy programs

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²⁵ Ibid.

²⁶ USDA, NRCS, "Renewable Energy Use: Conservation Activity Job Sheet". August 2007 http://www.nj.nrcs.usda.gov/programs/eqip/documents/2008/NJAir02-RenewableEnergy.pdf

can be found at: https://www.rd.usda.gov/programs-services/energy-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 and loans. Additional information is at www.njcep.com/.

F. Outreach and Incentives

The Draft Growth Management Plan recommends that the CADB reach out to agricultural organizations and those that work with the farm community to promote funding opportunities for agricultural water conservation practices such as through EQIP and the Conservation Reserve Program. As always, the Township AAC is committed to working with the County and other regional interests to assist with outreach to farmers and landowners in Kingwood Township.

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²⁷ Ibid.

VIII. Agricultural Industry Sustainability, Retention, and Promotion

A. Existing Agricultural Industry Support

1. Right to Farm/Agricultural Mediation Programs

The Right to Farm Act was enacted by the State Legislature in 1983 to ensure farmers have the ability to proceed with accepted agricultural operations. It was amended in 1998. The Act provides "protection of commercial farm operations from nuisance action, where recognized methods and techniques of agricultural production are applied, while, at the same time, acknowledging the need to provide a proper balance among the varied and conflicting interests of all lawful activities in New Jersey." (*Right to Farm Program*)

Another critical piece of legislation to support agriculture was the 1983 Agriculture Retention and Development Act. This Act created the State Agriculture Development Committee (SADC), and eighteen County Agriculture Development Boards (CADB's). Both the SADC and CADB implement the Right to Farm Act on the State and local levels. The SADC works to maximize protections for commercial farmers under the Right to Farm Act by developing Agricultural Management Practices (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. In order to qualify for Right to Farm protection a farm must meet the definition of a "commercial farm" in the Right to Farm Act; be operated in conformance with federal and state law; comply with AMPs recommended by the SADC, or site specific AMPs developed by the Hunterdon County Agriculture Development Board (CADB) at the request of a commercial farmer; must not be a direct threat to public health and safety; and, must be located in an area where agriculture was a permitted use under municipal zoning ordinances as of December 31, 1997, or thereafter; or, must have been an operating farm as of December 31, 1997.

It should be noted that the Hunterdon CADB has developed a "Policy for Public Hearings Involving Right to Farm Conflicts", which was developed through guidance offered by the SADC.

Municipalities, like Kingwood, are able to limit the number of right to farm complaints and encourage farming as an industry by enforcing the comprehensive Right to Farm ordinance and by requiring notification of homeowners when purchasing a home in a new subdivision where active agriculture occurs on adjacent property. In addition, Kingwood Township's Land Development Ordinance requires an agricultural buffer in Section 132-30F.(2) which states:

"All accessory farm buildings shall have a minimum distance to the side lot line, the rear lot line and other buildings of fifty (50) feet, plus ten (10) additional feet for each one thousand (1,000) square feet of gross floor area within the building, provided that, when the nature of the use requires additional setbacks in order to meet other requirements herein and in Article VI, the Planning Board may increase the distance."

Right to Farm Ordinances are a necessary item if a municipality, or property owner, wishes to enter into the farmland preservation program. Therefore, all municipalities within Hunterdon County with commercial farms are encouraged to adopt a Right to Farm Ordinance, and to update their existing ordinances to be consistent with the SADC model ordinance. (See Appendix A for the Township's Right to Farm Ordinance)

2. Farmland Assessment

The Farmland Assessment program is a tax incentive which reduces property taxes on active commercial farmed land, thereby assisting farmers with a critical financial aspect in helping to keep land in farms. This tax incentive is made possible by the Farmland Assessment Act of 1964, N.J.S.A. 54:4-23.1 et seq.

The Farmland Assessment program does not, however, apply to farm structures, such as barns and storage facilities. It has been proposed that additional tax incentives are necessary which encourage farmers to maintain their buildings in good working order as part of active farm operations, and which do not financially penalize them for renovating, or replacing, old or unsafe structures. Maintained buildings are not only critical to the farmer but also add to farm "aesthetics" for the larger community, helping to support agri-tourism, an important element of agricultural sustainability in Hunterdon County.

The Township sees the importance to sustain and expand tax incentives such as Farmland Assessment to keep land in farms, and to encourage the development or extension of other tax incentives for the agricultural industry. By making agriculture more profitable and viable, tax incentives will help ensure a steady, permanent source of agricultural lands for the County's farmland sustainability efforts.

B. Other Strategies

1. Public Outreach

Over the last 50 years, Hunterdon County and New Jersey have transformed from a largely rural and agricultural landscape, to a more urban and suburban landscape. However, farming remains strong and viable in many portions of the state, including Kingwood Township. If the Township's remaining agricultural areas are to survive and prosper, the non-farming public needs to be aware of, and be financially supportive of, the continuing economic, cultural, scenic and agricultural contributions made by Kingwood's farmers. Public education and outreach will increase the recognition of the farm industry importance to the non-agriculture resident, and should be continued and expanded whenever possible. Agritourism is one form of public outreach that exists in Hunterdon County and should be expanded wherever possible, especially at community events and in each municipality's schools.

2. 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. In towns, like Kingwood, with a sizable acreage of assessed farmland, zoning can be utilized to require buffers between agriculture and other uses to minimize conflict. The aforementioned Right to Farm Ordinance is an active example of municipalities' commitment and support for agriculture. Support of municipal governments must also be actively practiced so that agriculture is seen as an important and permanent part of the community as a whole. An example of this support is ordinances to support farmers' rights to move slow moving farm vehicles on town roads, which assists farmers in running their agriculture business. Such actions create an atmosphere favorable to agriculture, and its economics and profitability.

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 Hunterdon County's strong agricultural base requires support on many fronts, one of which is flexibility in government regulation. The Hunterdon County Planning Board, CADB, Board of Agriculture, County Freeholders, Soil Conservation District, Natural Resource Conservation Service, Rutgers Cooperative Research & Extension, municipal planning and zoning boards, chambers of commerce, Non-profit farm preservation groups, and other interested

entities and individuals, can work together to present a united front in issues regarding government regulation and permits.

The 2006 Agricultural Smart Growth Plan for New Jersey identified the following as important relative to regulatory flexibility and priority, and which the aforementioned entities can work towards ensuring proper advantage for agriculture in Hunterdon County:

3. Agricultural Vehicle Movement/Routes

In recent years, as many portions of the rural New Jersey landscape have become developed with residential subdivisions and shopping malls, the sometimes conflicting lifestyles of farmers and suburban residents clash. Hunterdon County farmers need to move heavy, slow moving agricultural equipment over local, county and sometimes state roads to access unconnected fields, barns, etc. The County'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 paces can, and do, cause conflict between Hunterdon County's farmers and suburban dwellers. They can also create 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 equipment over roads.

Signage alerting faster moving cars as to the possible movement, and road crossing of slower 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 Hunterdon County life. Where absent or inadequate, appropriate signage can be posted. Hunterdon County municipalities may consult with farmers as to what adequate signage is, and where it should be posted.

If local non-agriculture residents are to enjoy the scenic vistas, fresh produce, clean air and limited traffic congestion that Hunterdon County's agriculture provides, they must be more tolerant of the farming community. Local, county and state government can advertise the contributions of the farming community via public outreach at local schools and various community activities. The annual 4-H Fair, held yearly, is a prime example of advertising the importance and permanence of agriculture in Hunterdon County.

4. Agricultural Labor Housing /Training

An adequate labor supply is integral to not only produce farming, but also for operating equine businesses, a growing and thriving segment of the Hunterdon County farming community. Measured in farmed acreage, Hunterdon County has a relatively small industry for produce products compared with field crops such as corn, soybeans, and hay, and nursery products. Harvesting of the latter farm products is more mechanized, and/or not as labor intensive as produce or equine. As an example, produce (fruits, berries and vegetables) occupy far less land in Hunterdon County than field crops and nursery products.

Rising farm labor costs in Hunterdon County overall are not currently impacting agriculture sustainability, which is due at least in part to the continued strong trend of mechanized, non-labor intensive crop farming in the county. However, as this trend may change over time especially with the growing equine industry in the County, a brief discussion of the topic is warranted.

The New Jersey Department of Labor recommends the following to address farm labor issues at the state and local levels:

- Work with the U.S. Department of Agriculture's Rural Development program to reexamine program criteria to enable New Jersey's rural communities to qualify for more programs related to farm labor. The current focus of the program, such as rural area infrastructure, is not applicable to Hunterdon County (and New Jersey).
- Link neighborhood revitalization efforts with housing opportunities for farm workers and, where appropriate, establish on-site housing, to ensure a safe and stable workforce.
- Develop and promote comprehensive and ongoing training opportunities for farm workers.
- Work with the New Jersey Department of Labor, Rutgers Cooperative Extension and others to provide farm safety training.
- Join other agricultural stakeholders in supporting ongoing efforts at the federal level to streamline and modernize the immigration process.

The cost of labor in New Jersey is a material issue for some farming sectors such as produce, and one that needs further consideration for its effect on agriculture in Hunterdon County and New Jersey. This is because as labor costs increase, so does the cost to farmers producing commodities. Though a farmer may wish to raise his/her prices to cover increased production costs, this is many times not feasible due to competition from neighboring states with lower production (i.e. labor) costs. The result is lower profits for Hunterdon County and New Jersey farmers, making the business of farming less profitable, and therefore more difficult.

The New Jersey Department of Agriculture has specified the identification and posting of new markets as a specific strategy in its 2007 Economic Development Strategies report.

This effort is a necessary outgrowth of the report's finding that due to the State's high labor rates (in addition to high land values and property taxes) production costs in New Jersey are higher than in most other areas. With commodity prices based on national production costs, yields and demand, it is less profitable to produce commodity items in New Jersey than elsewhere

5. Wildlife Management Strategies

Management of nuisance and crop damaging wildlife is critical to the short and long term sustainability of Hunterdon County's agriculture industry. Crop damage from wildlife leads to economic loss for the farmer and/or land owner, and is a serious problem in Hunterdon County, with "large" losses reported in certain instances. Most damage is caused by a multitude of insects, as well as deer, turkey, Canada Geese and other wildlife. It is imperative to not only control and manage damage to crops, but also to do it in a manner which creates the least amount of collateral natural resource damage (i.e. limit pesticide use to the greatest extent possible, using natural pest control). State, county, and local government units must be sensitive to the negative economic impacts caused by crop damage, and support efforts to control it through education, technical and financial assistance, and regulatory flexibility.

Deer exclusion fencing may be effective for protecting produce, since produce is grown on relatively small plots of land. However, it is not cost effective to erect deer fencing on very large tracts of land where, for example, corn may be grown. One key way for Hunterdon County farmers to control damage from deer is through hunting of crop damaging animals. This hunting is allowed on private lands through depredation permits, issued by the New Jersey Department of Environmental Protection's (NJDEP) Fish and Wildlife

Program. In many instances, this is the only short term solution to control damage of crops by what is widely considered an excessive deer population in the County. Hunterdon County farmers continue to work with the NJDEP and NJDA, as well as counties and municipalities, to implement wildlife control strategies on privately and publicly owned land. One example of this cooperation is coordinated hunting of nuisance animals on county owned lands.

Municipalities may approach the Hunterdon County Parks Commission with a request to stage a hunt on county owned lands, typically when such lands are adjacent to other publicly owned lands. The Parks Commission works with the town on details of a proposed hunt, but the township generally is the lead implementing entity. Hunting Clubs or professional hunting companies may be brought in to perform an approved hunt. This cooperative program between municipalities and the Hunterdon County has been successful in controlling nuisance wildlife, especially deer.

The New Jersey Department of Agriculture's Division of Plant Industry works to safeguard New Jersey's plant resources from injurious insect and disease pests. The Division implements several programs for detection, inspection, eradication and control of insect pests, which helps to ensure that the public can enjoy high quality, pest-free agricultural products. In addition, "the Division oversees programs that certify plant stock for interstate and international shipments, protects forested communities from tree loss caused by the gypsy moth and Asian long-horned beetle, inspects honeybees for harmful bee diseases and pests, regulates the quality of plant seeds, and produces and releases beneficial insects to reduce crop and environmental damage and decrease dependence on chemical pesticides. Protection of forest resources is important to Hunterdon County farmers who harvest wood as part of woodland management plans on their farmland assessed properties. One important example of the Division of Plant Industry's work is in control of the gypsy moth. The gypsy moth is considered the most destructive defoliation forest insect pest in New Jersey. 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. The Division promotes an integrated pest management approach, which "encourages natural controls to reduce gypsy moth feeding and subsequent tree loss."

However, aerial spray treatments of the chemical insecticide Bacillus thuringiensis are utilized when gypsy moth cycles are at a peak and natural controls are not sufficient to control defoliation.

The federal government is a key partner in supporting Hunterdon County agriculture. There are several federal programs that support, or could support, the agricultural industry in Hunterdon County. As such a discussion of each is warranted, and follows below.

6. Agricultural Education and Promotion

To sustain a modern, diverse and stable food and agricultural industry, education and progressive, ongoing training for farmers will promote a more efficient and productive business environment. This includes programs covering "farmer risk management education, labor education including worker safety, agricultural leadership training, secondary school and college agricultural education."

One educational link for Hunterdon County agricultural land owners and operators is to collaborate with the Rutgers Cooperative Research and Extension (RCRE) of Hunterdon

County (associated with Cook College, Rutgers University). There is not a minimum or maximum size farm to which the RCRE will lend assistance, so long as it is farmland assessed. During the growing season,

RCRE of Hunterdon County can provide one on one, on-site consultations with farmers to assist with control of insect infestations and plant diseases for fruits, vegetables, greenhouse nurseries and ornamentals, Christmas trees, and also for field crops. Similar farm animal consultation can be provided on a year round basis. During these one on one consultations, technical scientific research is relayed to the farmer in a useful and applicable manner. However, it is reported that these on-site consultations have become infrequent. This is due, in part, to more farm visits by chemical company representatives that supply herbicides and pesticides, and the decline in the dairy industry to only several Hunterdon County dairy farms. Also during the growing season, RCRE of Hunterdon County coordinates with other RCRE offices in northwest New Jersey to conduct on-site farm meetings regarding a range of agricultural issues including vegetable growing, safe operation of farm equipment, and programs to certify and recertify farmers for pesticide application licenses. Hunterdon County farmers are invited, and do attend.

In the winter months, regional and local classes are conducted by RCRE of Warren and Hunterdon Counties on a diverse set of agriculture topics. Two of special significance are conducted with the North Jersey Vegetable and Fruit Growers Association. A class on vegetable growing is conducted at the Snyder Farm in Pittstown, Hunterdon County, while a similar class on fruit growing is held at the Warren Grange in Franklin Township, Warren County. Hunterdon County farmers and the RCRE of Hunterdon County participate in these classes. RCRE of Hunterdon County also provides practical assistance to farmers.

Examples include:

- Assistance in obtaining water certification and registration permits from the
- New Jersey Department of Environmental Protection, for groundwater and/or surface water allocations;
- Soil testing for fields and pastures;
- Assistance with obtaining farmer certificates for N.J. Division of Motor Vehicle registrations;
- Assistance with applications for "Outstanding Young Farmer" (OYF) nominations. OYF is a state award given annually by the NJDA which "recognizes the outstanding achievements of a young person engaged in farming in New Jersey
- Assistance with grant applications to the NJDA for various types of economic assistance. Examples include "Jersey Fresh" grants to advertise;
- Distribution of "Jersey Fresh" and "Jersey Grown" promotional material such as bumper stickers, banners and t-shirts;
- Assistance to connect owners of farmland with tenant farmers, so that land may stay in farmland assessment;
- Assist new farmers with various regulatory requirements, and acquaintance with various farmer organizations;
- Provide outreach through the RCRE of Hunterdon County Website, and at the annual 4-H Fair.

Through its Division of Agriculture and Natural Resources' Natural Resource Conservation Program, the New Jersey Department of Agriculture offers technical, financial and regulatory assistance, and provides educational outreach to landowners throughout the state. The Department also offers, in conjunction with the U.S. Department of Agriculture, farm risk management and crop insurance education programs to assist farmers in understanding what assistance is available to reduce agricultural risks

Hired farm workers continue to be one of the most economically disadvantaged groups in the United States due to low wages, seasonal employment and limited participation in the non-farm labor market. Therefore, as an important statewide resource to the agricultural industry, the New Jersey Department of Labor recommends that more must be done to ensure a well-trained, educated farm labor workforce, that has adequate living and working conditions, and is trained in worker safety. Agriculture labor education and training funding may be available through the New Jersey Department of Labor and Workforce Development programs. These programs can help to assist in upgrading the skills and productivity of the agricultural workforce. Some of the programs which may be applicable include Customized Training Initiative, Basic Skills Program, and Occupational Safety and Health Training Program.

Finally, as a form of "education", government agencies at the state and county level can provide continuous outreach information to farmers, to ensure they take full advantage of all federal and state loan, grant, education, and technical assistance programs. This is especially important since these programs are meant to aide the farming business to thrive and survive. Due to the complexity and vast array of the programs, they may be unknown to many farmers.

C. Youth Farmer Education Programs

Due to the aging farmer population in Hunterdon County (52.7 years in 1969, as compared to 56 years in 2002) the next generation of the County's farmers needs to become interested in, and exposed to the business of agriculture, and be prepared to enter the industry.

The National Future Farmers of America (FFA) Organization "operates under a Federal Charter granted by the 81st Congress of the United States, and is an integral part of public instruction in agriculture. The National FFA Organization was founded in 1928, and currently has 7,242 chapters and nearly 500,000 members. The Hunterdon County Agriculture Community can look to expand agriculture education beyond the Vocational Technical School so that more youth are exposed to agriculture, and may become interested in it as a future career. Youth agriculture education classes or programs are not offered at any elementary schools within the County, but are an opportunity to cultivate young people's interest in the field of agriculture. The National Agriculture in the Classroom program helps K-12 students become aware of the importance of agriculture. 4-H is an informal, practical educational program for youth, which assists young people interested in farm animals through livestock projects. The New Jersey Agricultural Society's Agriculture Leadership Program provides young professionals in agriculture with leadership development skills and opportunities.

In addition, the New Jersey Department of Agriculture offers an "Agricultural Education" program. This is "a systematic program of instruction available to students desiring to learn about the science, business, and technology of plant and animal production and/or about the environmental and natural resources systems. A complete Agricultural Education program is composed of three components: class/lab instruction, supervised agricultural experience (SAE), and FFA, which provide a well-rounded and practical approach to student learning

The Township AAC is continually seeking ways to enhance the level of awareness and education surrounding the farming lifestyle in Kingwood. The Township should continue to explore strategies such as signage along routes where farm equipment frequently travels to make drivers aware of nearby farming activities.

In addition, continual presence in the County farm activities like the 4-H Fair, as well as research into the changing needs of the agriculture industry, will keep Kingwood Township at the forefront of preserving farmland and enhancing the livelihood that has defined this community for generations.

Appendix A: Target Farms

Block	Lot	Location	Acres (GIS)	Block	Lot	Location	Acres (GIS)
1	1.01	40 TINSMAN ROAD	35	18	3	103 FITZER ROAD	110
2	2	235 OAK SUMMIT ROAD	74	18	3	103 FITZER ROAD	110
2	2	235 OAK SUMMIT ROAD	74	18	5	375 BARBERTOWN-PT BREEZE	131
2	4	255 OAK SUMMIT ROAD	35	18	5		131
2	4	255 OAK SUMMIT ROAD	35	18	6	106 LOCKTOWN ROAD	54
2	8	55 OAK SUMMIT ROAD	12	18	6	106 LOCKTOWN ROAD	54
2	15	81 OAK SUMMIT ROAD	82	20	8	127-219 THATCHER ROAD	116
2	15	81 OAK SUMMIT ROAD	82	20	8	127-219 THATCHER ROAD	116
4	8	12-36 HAMPTON ROAD	75	21	4	LOCKTOWN ROAD	87
5	6	85 RIDGE ROAD	64	21	4	LOCKTOWN ROAD	87
5	6	85 RIDGE ROAD	64	21	6.01	LOCKTOWN ROAD	6
6	8	240 RIDGE ROAD	41	21	8	LOCKTOWN ROAD	15
6	17	1155 STATE HIGHWAY 12	114	21	9	LOCKTOWN ROAD	35
6	23	1103 STATE HIGHWAY 12	25	21	10	275 LOCKTOWN ROAD	14
6	23	1103 STATE HIGHWAY 12	25	22	2	358 BARBERTOWN-PT BREEZE	37
6	23.02	1105 STATE HIGHWAY 12	12	22	20	563 KINGWOOD-LOCKTOWN RD	110
6	23.02	1105 STATE HIGHWAY 12	12	25	4	226 BARBERTOWN PT BREEZE	62
7	3	132 OAK SUMMIT ROAD	110	25	8	130 KINGWOOD-LOCKTOWN RD	24
7	3	132 OAK SUMMIT ROAD	110	25	8	130 KINGWOOD-LOCKTOWN RD	24
7	3.07	130 OAK SUMMIT ROAD	5	25	8.01	130 KINGWOOD-LOCKTOWN RD	2
7	14	560 OAK GROVE ROAD	27	27	6	48 HAMMAR ROAD	21
7	14	560 OAK GROVE ROAD	27	27	6	48 HAMMAR ROAD	21
7	14.1	500 OAK GROVE ROAD	52	28	4		62
7	14.1	500 OAK GROVE ROAD	52	28	5	115 FAIRVIEW ROAD	47
7	14.15	554 OAK GROVE ROAD	5	28	5	115 FAIRVIEW ROAD	47
7	14.16	556 OAK GROVE ROAD	5	28	13		78
7	14.17	558 OAK GROVE ROAD	2	30	2	127 WARFORD ROAD	40
8	9	353 OAK GROVE ROAD	28	30	2.01	WARFORD ROAD	34
12	1	1194 STATE HIGHWAY 12	71	33	1	248 BARBERTOWN-IDELL ROAD	41
12	1	1194 STATE HIGHWAY 12	71	35	1	540 BYRAM-KINGWOOD ROAD	41
12	10	1106 STATE HIGHWAY 12	59	35	1	540 BYRAM-KINGWOOD ROAD	41
12	10	1106 STATE HIGHWAY 12	59	35	6	343 COUNTY ROAD 519	26
12	32	48 SPRING HILL ROAD	167	37	4	172 BYRAM-KINGWOOD ROAD	100
14	12	3002 DANIEL BRAY HIGHWAY	42	37	12	142 BYRAM-KINGWOOD ROAD	74
14	12	3002 DANIEL BRAY HIGHWAY	42	37	14	4 LOCKATONG ROAD	13
15	1	124 SLACKTOWN ROAD	37	37	17.01	120 BYRAM-KINGWOOD ROAD	40
15	3	853 STATE HIGHWAY 12	136	38	17	COUNTY ROAD 519	9
15	3	853 STATE HIGHWAY 12	136	38	18	259 COUNTY ROAD 519	130
18	2	900 STATE HIGHWAY 12	152	38	18	259 COUNTY ROAD 519	130
18	2	900 STATE HIGHWAY 12	152	38	19.01	253 COUNTY ROAD 519	13
				40	24	35 BYRAM-KINGWOOD ROAD	119