

COMPREHENSIVE FARMLAND PRESERVATION PLAN - 2008

for the
Township of Harmony
County of Warren



Compiled by



Morris Land Conservancy
A nonprofit land trust

with



**Township of Harmony
Farmland/Open Space
Committee**

April 2008

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Produced by:

Morris Land Conservancy's Partners for Greener Communities Team:
"Partnering with Communities to Preserve Natural Treasures"

David Epstein, President

Barbara Heskins Davis, PP, AICP, Vice President, Programs

Holly Szoke, Communications Director

Kenneth Fung, GIS Manager

Andrew Szwak, Project Consultant

Elizabeth Lee, Project Consultant

Kelly O'Brien, GIS Consultant

Katharine Otto, Planning Intern

For further information please contact:



Morris Land Conservancy
19 Boonton Avenue
Boonton, NJ 07005
(973) 541-1010
Fax: (973) 541-1131
www.morrisland.org



Township of Harmony
3003 Belvidere Road
Phillipsburg, NJ 08865
(908) 213-1600
Fax: (908) 213-2180
www.harmonytwp-nj.gov

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APRIL 2008

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Harmony Township Farmland/Open Space Committee

Abigail Postma, Chair

Dale Crouse

Mitchell Jones

Susan Salter

Ben Tjalma

Harmony Township Committee

Brian Tipton, Mayor

Richard Cornely, Deputy Mayor

Diane Yamrock

Harmony Township: Kelley D. Smith, Clerk

Warren County Department of Land Preservation: Bob Resker, Administrator

Rutgers Cooperative Extension of Warren County: Everett Chamberlain and Bill Tietjen

U.S. Natural Resource Conservation Service: Kent Hardmeyer, Ron Phelps, and Janice Reid

U.S. Department of Agriculture Farm Service Agency: Ken Bingham and Virginia Brophy

Warren County Soil Conservation District: David Schaaf, District Manager

State Agriculture Development Committee:

Timothy A. Brill, Planning Manager and Steve Bruder, Senior Planner

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EXECUTIVE SUMMARY



Home to the County Fairgrounds and the annual Warren County Farmer’s Fair, Harmony Township’s rolling hills, expansive fields, and pristine natural lands comprise some of the most beautiful agricultural areas in New Jersey. Much of the Township falls within the Delaware Valley, one of three major agricultural belts in Warren County. The large and fertile land base of Harmony Township supports a thriving farming industry.

Harmony is located between the towns of Belvidere and Phillipsburg, which offers local farmers easy access to potential buyers and support businesses. Additionally, the various types of land in Harmony can support many forms of agriculture, including field crops, livestock, and woodlands. For these reasons, agriculture is as viable in Harmony Township as anywhere in New Jersey.

Harmony’s natural and agricultural areas are dotted by small hamlets that contain most of the Township’s residents. This rural setting of Harmony Township – with its delicate combination of natural areas, farm belts, and villages – is rare in New Jersey. Harmony has been able to retain its agricultural landscape and way of life by aggressively pursuing and supporting farmland preservation within their community.

Since the Township established a Farmland Preservation Program in 1997, **1,273 acres** of farmland has been permanently protected within its borders. Harmony administers a municipal trust fund (\$0.05/\$100 assessed value) that helps fund farmland and open space projects, and developed an *Open Space and Recreation Plan* in 2005 to guide expenditures from its tax. The Township has set an ambitious goal of preserving an additional:

100 acres in 2008,
500 acres by 2013, and
1,000 acres by 2017 for a total of
2,273 acres of preserved farmland in Harmony Township.

There are currently six farms pending preservation in Harmony Township, totaling an additional 503 acres. This *2008 Comprehensive Farmland Preservation Plan* restates the Township’s emphasis on farmland preservation. It identifies three Project Areas (Project Area One, Project Area Two, and Project Area Three) that are the basis for farmland preservation efforts in Harmony. Combined, these three project areas encompass the entire Township outside of the lands for the Merrill Creek Reservoir.

CHAPTER 1: AGRICULTURAL LAND BASE OF HARMONY TOWNSHIP

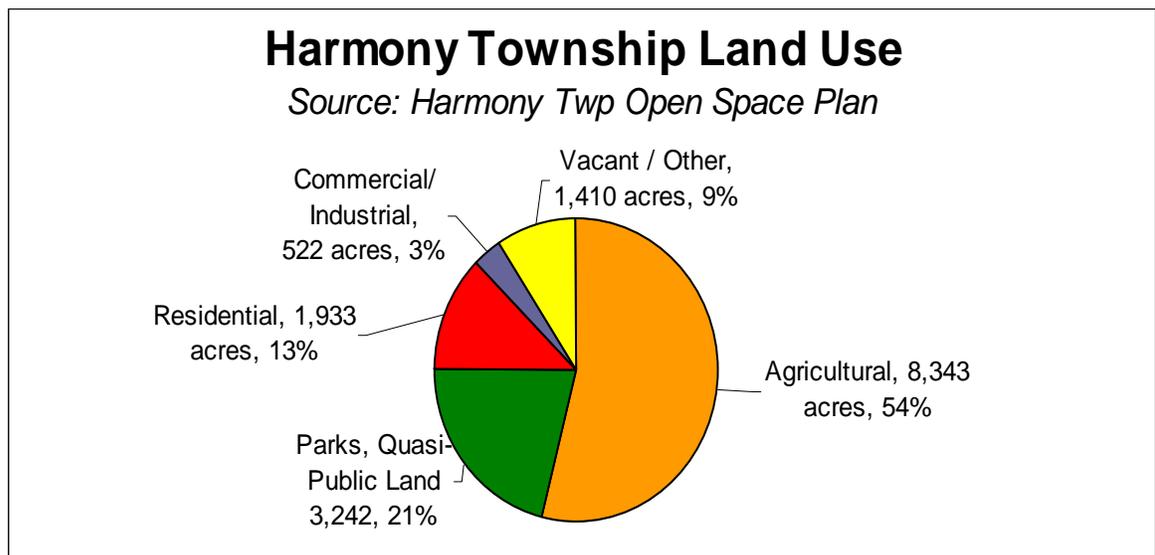
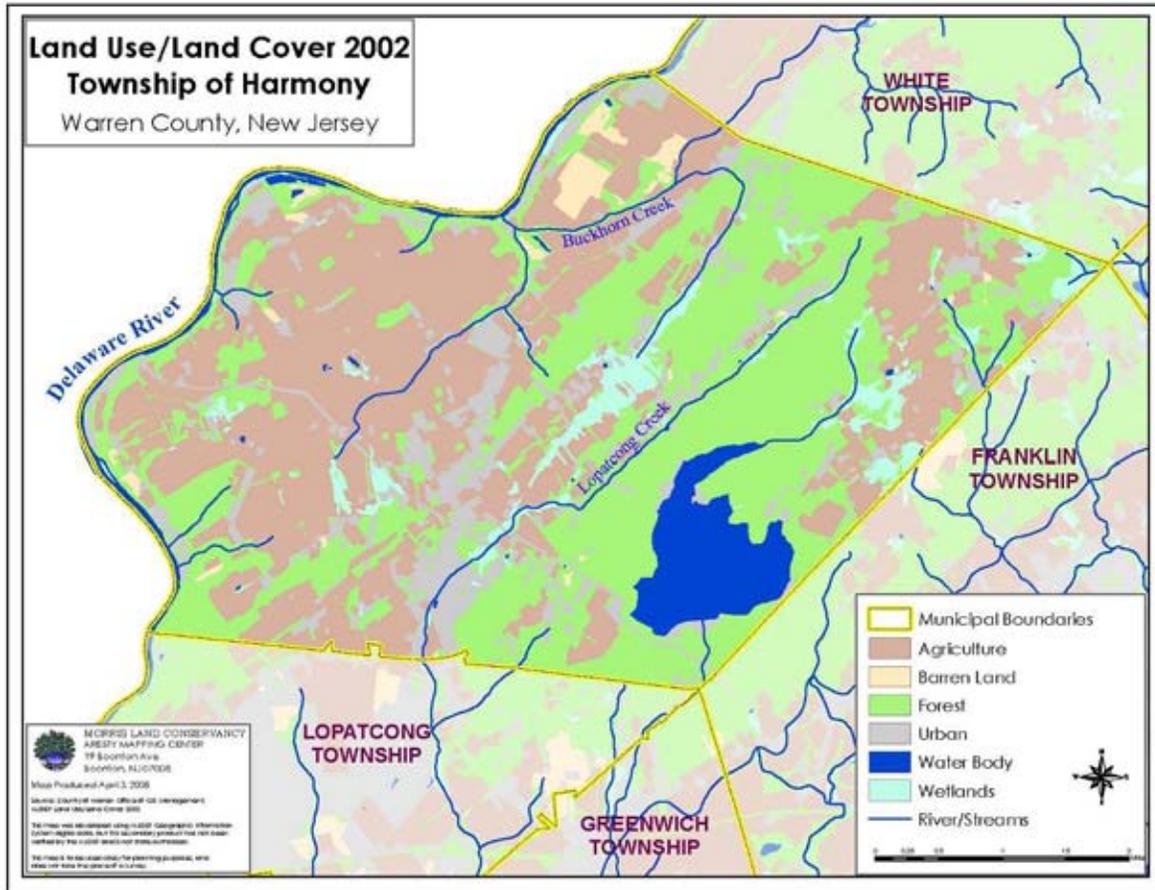


Agricultural Landscape

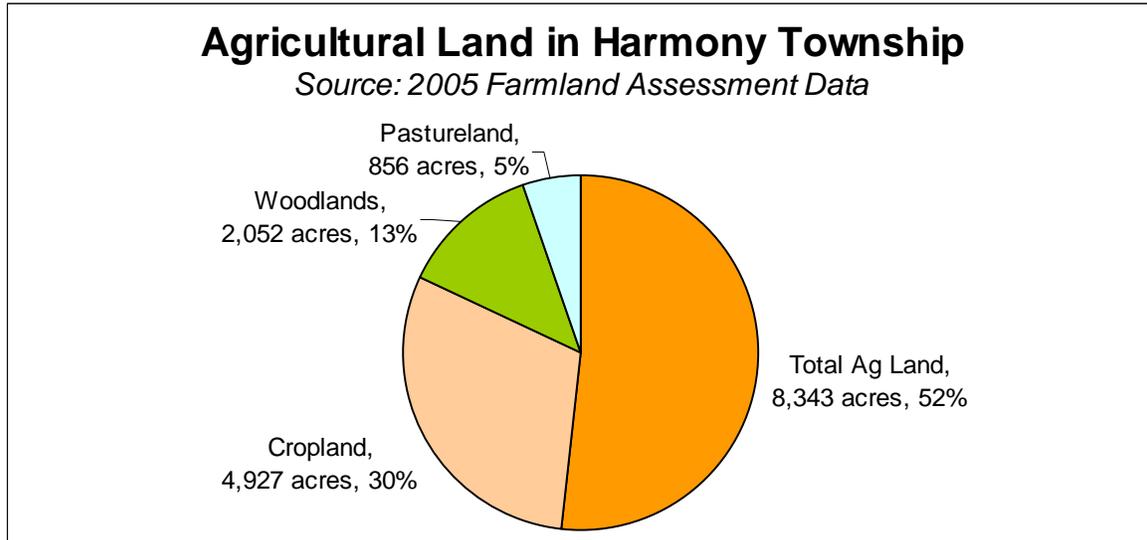
The Township of Harmony is a pastoral community that sits on the Delaware River – New Jersey’s western border with Pennsylvania. It is bordered to the north by the Township of White, to the east by the Township of Franklin, and to the south by the Township of Lopatcong. County Route 519 runs north-to-south through the Township, and forms the approximate boundary between the two types of landscapes in Harmony. East of CR-519, Scott’s Mountain (Highlands Ridgeline) contains steeply sloping, forested land that supports pristine woodland wildlife habitat and the Merrill Creek Reservoir. West of CR-519, the Delaware Valley and its gently rolling farm fields are underlain by excellent farmland soils and support a broad, unbroken belt of prime farmland.

Agricultural lands constitute the majority of Harmony Township with roughly 8,343 of the Township’s 15,405 acres (54%) assessed as farmland (see *Land Use* chart below). (2005 Warren County Farmland Assessment)¹ Approximately another 20% of the Township is occupied by the Merrill Creek Reservoir and its surrounding lands, which are maintained as a natural resource area. Residential development occupies a small but growing percentage of Harmony (13%), commercial development remains clustered in small villages along the Township’s principal arterial roadways, and industrial sites are generally located along the Delaware River. (*Harmony Township Master Plan*)²

The geography of Harmony Township plays an important role in determining what agricultural activities can be supported there. A combination of physical factors, including topography, soils, and surface water, has created two distinct regions within the Township that are better suited to accommodate different types of agriculture. The western portion of the Township is primarily planted with field crops, such as corn and soybeans, which are generally more successful on flat, dry land with good soils. The eastern portion of the Township is predominately covered by rocky soils and steeper slopes, which are better suited to woodland agriculture, natural resource management, and pastureland (see 2002 *Land Use/Land Cover Map* below).



Most of the Township’s farmland falls within the Delaware Valley, where conditions are well-suited to field crop agriculture. Consequently, corn and soybeans are the Township’s staple agricultural products. The Township contains 4,927 acres of cropland (field crops), 856 acres of pasturelands, 2,052 acres of privately owned woodlands, as well as about 500 acres of other agricultural lands, such as farmhouses and support structures (see *Agricultural Land Chart* below). (2005 Warren County Farmland Assessment)³



Soils

Harmony Township contains 49 different types of soils (see *Soils* chart below). (NRCS Soil Data Mart website)⁴ Soil types are determined by the parent bedrock material from which they were formed, local drainage characteristics, and the steepness of the slopes on which they are found. Most of Harmony’s soils, except for some small areas in the northwest, eroded from bedrock or were formed from glacial till. (Warren County Soil Survey)⁵ On a broad scale, soils in the western part of the Township tend to have higher water capacities and fewer rocks, making them generally better suited for agriculture than the mostly rocky and steeply sloping soils to the east. These features were established by geological activity that created the Highlands Ridgeline in eastern Harmony Township and the glacial activity that followed it, which deposited thick layers of till material and minerals in the western portion of the Township.

Localized conditions further determine the agricultural characteristics of individual soils. For instance, soils located in areas that are frequently flooded are less able to hold nutrients or support the root systems of some crops, making them less suitable for agricultural production than soils in drier locations. Soils on steep slopes are more easily eroded and less productive than soils on slightly sloping or flat ground. Depth to bedrock, or fragipan, may limit the root systems of certain crops, making deeper soils more appropriate for intensive field crops, such as vegetables, and shallower soils more appropriate for less intensive uses, such as pastures.

Natural Resource Conservation Service (NRCS) classifies soils as prime, statewide important, or unique based on their agricultural productivity.

- **Prime farmland soils** have the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and are capable of producing sustained high yields when managed with acceptable farming methods. Prime farmland soils are not easily eroded or saturated with water, and rarely flood.
- Although **soils of statewide importance** produce high crop yields, they are generally not capable of the same levels of productivity as prime farmland soils.
- **Unique soils** exhibit specific qualities that favor production of specialized crops. (*NJ NRCS website*)⁶
- Soils of **local importance** are no longer mapped or designated by NRCS, but can support field crops, hay, livestock pasturing, and some fruits and vegetables.

Harmony Township Soils					
Source: NRCS Soil Data Mart					
ABBR	Category	Acres	ABBR	Category	Acres
AnD2	Other	341	AnB2	Prime	954
AsB	Other	14	BaA	Prime	67
AsC	Other	97	BaB	Prime	758
AsD	Other	50	CbB	Prime	407
CcB	Other	28	EdB	Prime	1,027
CoA	Other	213	HbB	Prime	34
CoB	Other	253	HfB	Prime	40
CsB	Other	115	HkB	Prime	17
Ee	Other	222	Md	Prime	53
EeC	Other	798	PnA	Prime	113
EPD	Other	589	PnB	Prime	205
HfD	Other	7	PoA	Prime	459
HfE	Other	25	PoB	Prime	863
LyA	Other	103	WaA	Prime	86
LzB	Other	28	WaB	Prime	2,234
PbD	Other	232	WmB	Prime	61
PbE	Other	43	AnC2	Statewide	572
Pd	Other	67	BbC	Statewide	65
ROF	Other	52	CbC2	Statewide	237
RPF	Other	1,454	EdC	Statewide	408
RWF	Other	142	HfC	Statewide	141
WaD2	Other	543	WaC2	Statewide	867
Wat	Other	230			
WgD	Other	5		Prime	7,381
WnC	Other	29		Statewide	2,289
WnD	Other	19		Other	5,735
WOC	Other	23		TOTAL	15,405

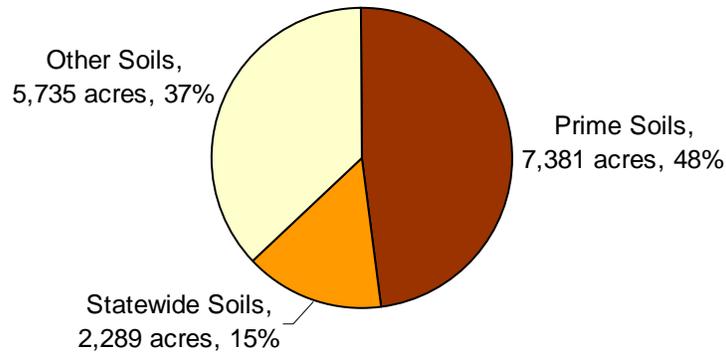
Active Farmland Acres by Soil Category			
Source: NRCS Soil Datamart website; 2002 NJDEP LU/LC data			
	Total Acres	Active Farmland	% of total
Prime Farmland Soils	7,380.6	4,460.7	60.4%
Statewide Important Soils	2,289.2	1,003.4	43.8%
Soils of Unique Importance	-	-	0.0%
Other Soils	5,735.2	541.6	9.4%
Total	15,405	6,005.7	39.0%

The *NRCS Soil Data Mart* reports that 9,670 acres (63%) of the Township are covered by soils of prime or statewide importance (see *Soils Chart* below). No unique farmland soils were identified within Harmony. The *Harmony Township Farmland Soils Categories*

*Map*⁷ shows that these soils are concentrated west of CR-519 in the Delaware Valley with additional strips of high quality soils on the flat portions of the Highlands Ridgeline. Much of the areas with high-quality soils are utilized as farmland in Harmony Township (see *Active Farmland Acres Chart* above).

Soil Categories in Harmony Township

Source: NRCS Soil Data Mart Website



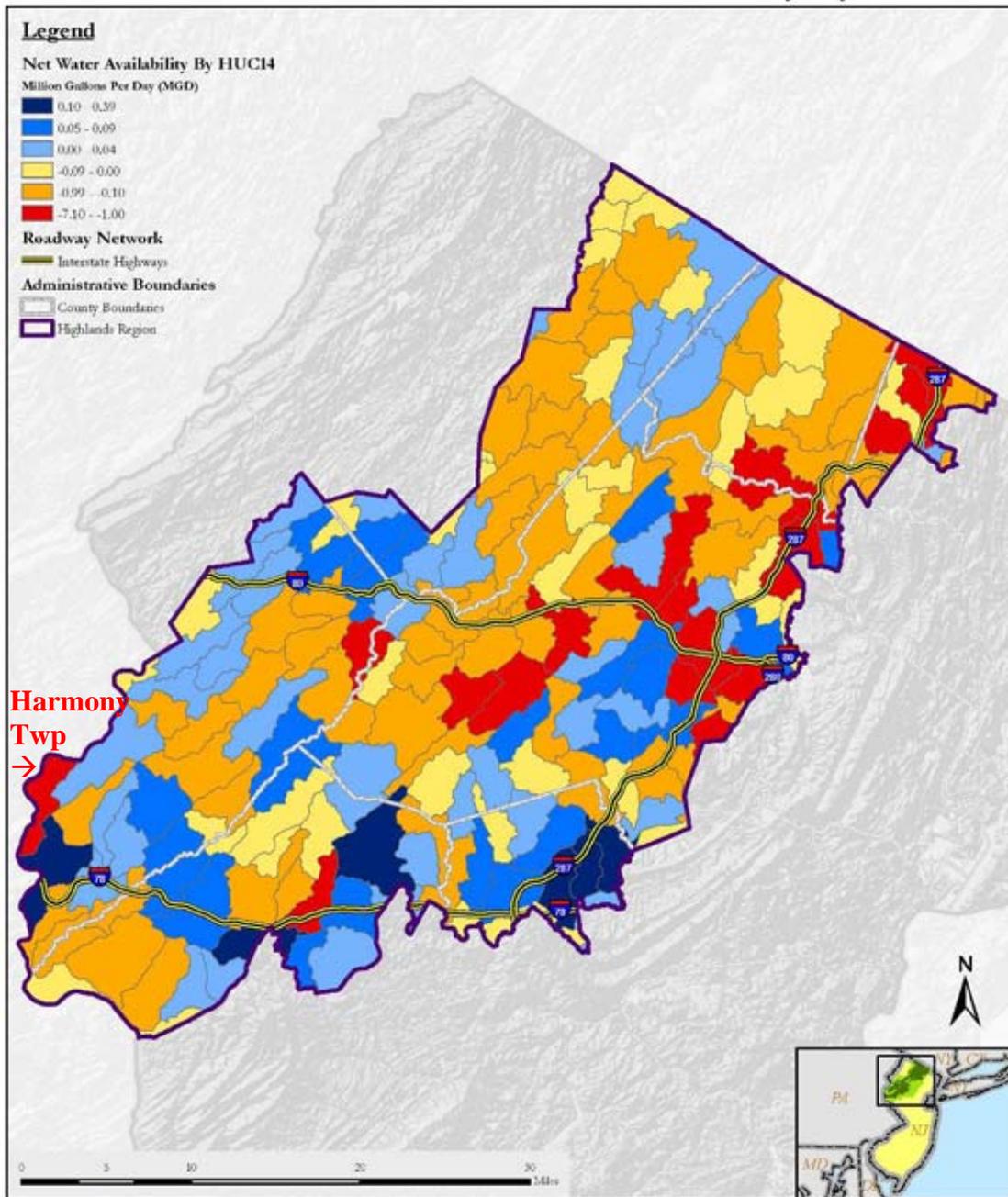
Irrigated Land & Water Sources

Groundwater provides the only supply of water for irrigation in Harmony Township. Harmony is underlain by excellent groundwater aquifer systems, including carbonates (Jacksonburg Limestone, Kittatinny Supergroup, and Hardyston Quartzite) and Precambrian metamorphic bedrock species. Carbonate bedrock, which exists in the western portion of the Township, supports Warren County's most productive groundwater aquifers. Wells that tap these aquifers can yield more than 100 gallons per minute. (*1999 Warren County Open Space Plan*)⁸ The igneous and metamorphic bedrock in the eastern, Highlands portion of Harmony do not transmit as much groundwater as carbonate rocks, and are less susceptible to contamination from surface pollution.

Despite the abundance of local groundwater reserves, water rights for agricultural use in Harmony Township are difficult to obtain. The *Net Water Availability Map* below shows that the Delaware Valley in Harmony Township runs a water deficiency of nearly one million gallons per day. (*Highlands Regional Master Plan*) This deficit is due to the base flow requirements of the adjoining Delaware River and the industrial businesses and homes that have been developed in this part of Harmony Township. However, directed flows to the Delaware River from the Merrill Creek Reservoir help maintain adequate base flow during dry periods. Consequently, local farmers have been able to sustain agricultural operations in the Delaware Valley without harming the Upper Delaware River ecosystem.

Harmony Township's farmers irrigated 30 acres of cropland in 2004, representing less than 1% of the Township's agricultural land base. (*2005 Warren County Farmland Assessment*) However, the amount of land irrigated in Harmony Township is highly dependent seasonal precipitation, and can vary drastically from year-to-year. Farms that grow the primary crops of Harmony Township – corn, soybeans, hay – require access to local water to ensure consistent annual harvests. Additionally, the number of water-intensive agricultural operations, such as nurseries and vegetable farms, has increased in recent years. The future of agriculture in Harmony Township hinges upon the ability of its farmers to fully utilize local water resources.

Net Water Availability by HUC14



The Highlands Council makes no representations of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied with respect to the information contained on this map. The State of New Jersey shall not be held liable for any actions taken or omissions made hereafter, on any information contained herein from whatever source and shall the State be liable for any other consequences from any such actions. Additional sources of information may include NJDOT and NJDEP GIS digital data, but this secondary product has not been verified by NJDOT or NJDEP.

Highlands Regional Master Plan
Final Draft, November 2007

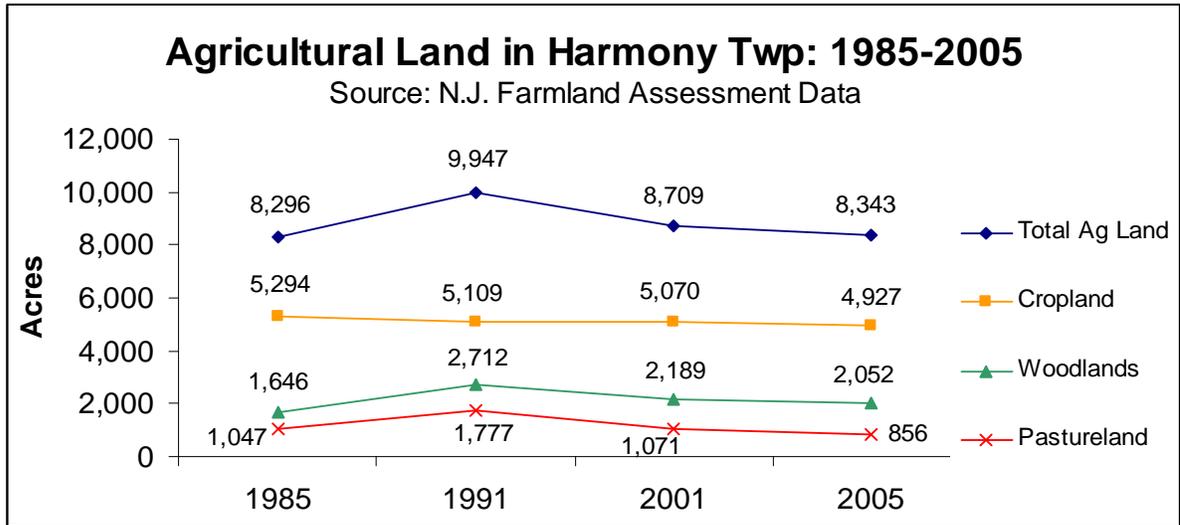


Sources:
New Jersey Highlands Council, 2007
New Jersey Department of Environmental Protection, 2006

Source: New Jersey Highlands Draft Regional Master Plan

Farmland Trends & Statistics

The size of the agricultural land base in Harmony Township has experienced some fluctuations in recent years. The total agricultural land base has declined more than 16%, from 9,947 acres in 1991 to 8,343 acres in 2005 (see *Farmland Acreage* chart below). Most of this decline has occurred among pastured lands, which lost 921 acres (more than half of its area) during this period. Smaller, but notable, declines have also been observed among woodlands (24%) and harvested croplands (7%) since 1991. (*2005 Warren County Farmland Assessment*) Similar trends were observed throughout Warren County, where all agricultural lands declined 11% during this period.



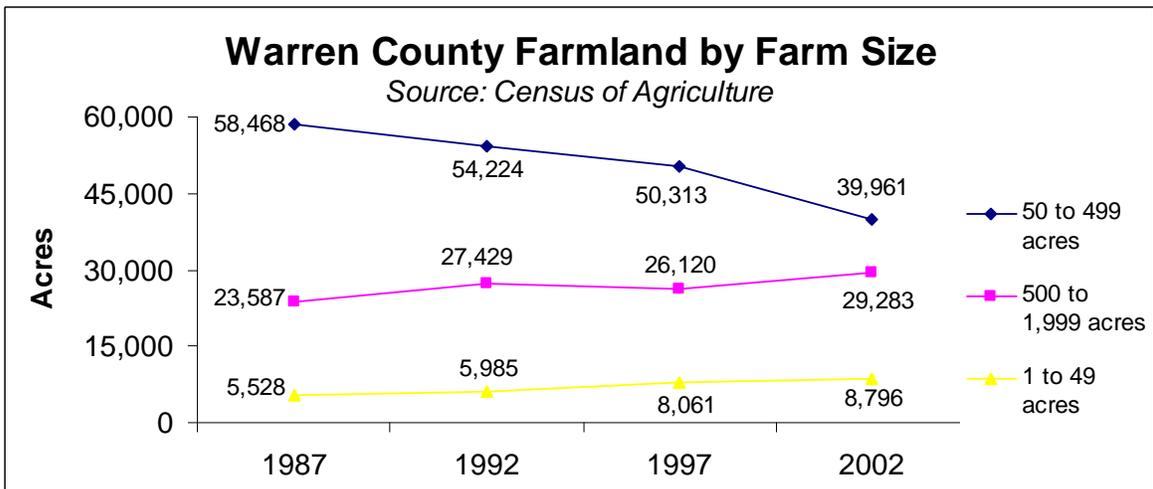
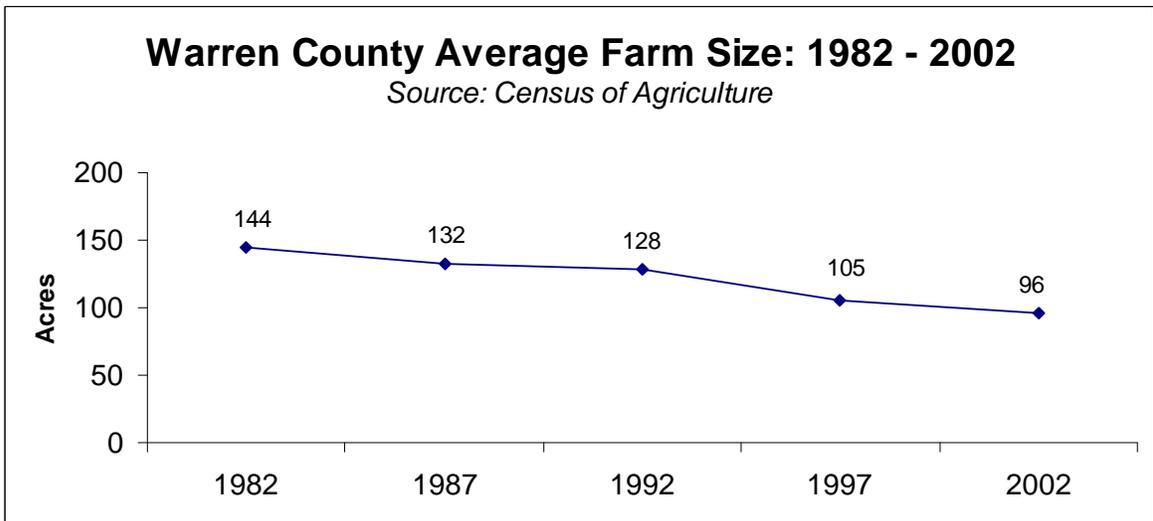
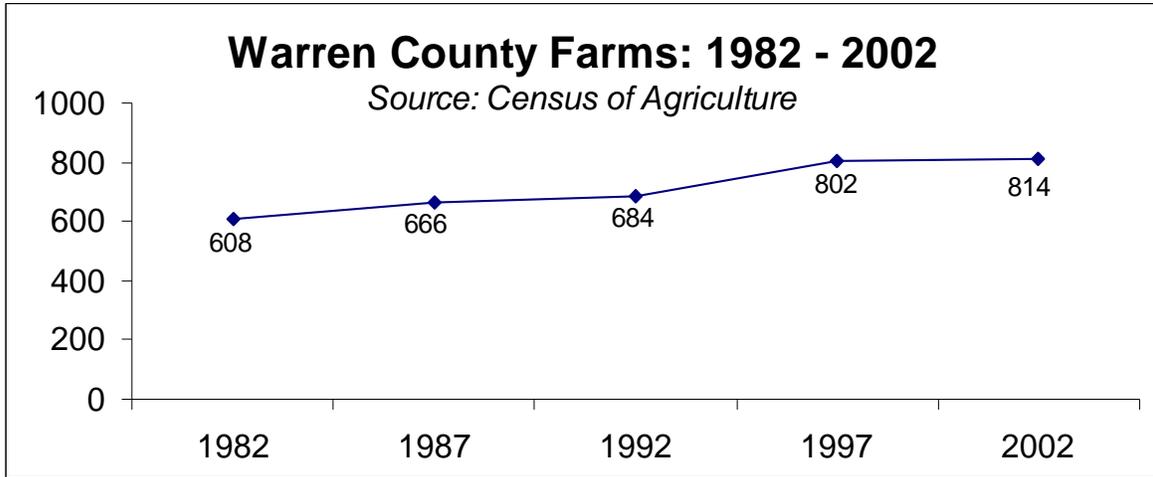
Falling farmland acreage has not prevented new farmers from entering the industry, however. Warren County has added over 200 farms since 1982, bringing the total number of farms in the County from 608 to 814 (see *Farms* chart below)ⁱ. At the same time, the acreage of farmland available to farmers has declined. (see *Farmland* chart above) The combination of these trends has caused the average size of farms throughout the County to drop dramatically. (see *Average Farm Size* chart below)

There are two primary causes of this trend towards smaller sizes. Many farmers have chosen to subdivide their land and remain farming on only a portion of it. The remainder is converted to other land uses or is farmed by another farmer. The number of “farmettes” – residential parcels that occupy less land than most farms, yet produce enough agricultural sales to qualify as active farming operations – has grown substantially as well.

The median size of Warren County farms was 31 acres in 2002, down from 37 acres in 1997. This indicates that there are many small farms and farm parcels (less than 50 acres) in the County, and that their numbers are rising. Additionally, the acreage within medium

ⁱ The Census of Agriculture does not calculate the number of farms at the municipal level. The N.J. Farmland Assessment records farm parcels at the municipal level, but employs different criteria to define a farm unit. Therefore, the Census of Agriculture and New Jersey Farmland Assessment figures are not comparable.

size farms (50 to 499 acres) is decreasing, indicating that many of these farms are breaking up into smaller operations (see *Farmland by Farm Size* chart below). (2002 Census of Agriculture)



The agricultural parcels in Harmony Township tend to be among the largest in Warren County. (*2005 Warren County Farmland Assessment*) The Delaware Valley is conducive to large-scale field crop agriculture operations, which often benefit from economies of scale in their production. However, Harmony's large agricultural parcels also make attractive candidates for development. The soils in the Delaware Valley are capable of supporting septic densities as low as 2.5 acres per system and large lots offer more options to potential developers. (*Harmony Township Environmental Resources Inventory*)⁹ Consequently, many of the Township's best agricultural lands may be at heightened risk for development in the future.

¹ New Jersey State Agriculture Development Committee. Warren County Farmland Assessment 2004.

² Harmony Township Planning Board. Harmony Township Master Plan. June 2004.

³ New Jersey State Agriculture Development Committee. Warren County Farmland Assessment 2004.

⁴ Natural Resource Conservation Service. Soil Data Mart. Online at: <http://soildatamart.nrcs.usda.gov/>. Accessed 17 September 2007.

⁵ Soils Conservation Service. Soil Survey of Warren County, New Jersey. United States Department of Agriculture. April 1979.

⁶ New Jersey Office of the Natural Resource Conservation Service website. "Soils" Online at: <http://www.nj.nrcs.usda.gov/technical/soils/>. Accessed 16 September 2007.

⁷ The NRCS has recently completed the update to Warren County's soil survey. This Plan references the soil survey information available as of September 2007. Future updates to this Plan will reference the updated soil survey information.

⁸ Warren County Planning Department. 1999 Warren County Open Space Plan.

⁹ Harmony Township Environmental Commission, prepared by White Environmental Services. Harmony Township Environmental Resources Inventory – Recommended Maximum Septic System Density Map. 2005.

CHAPTER 2: AGRICULTURAL INDUSTRY IN HARMONY TOWNSHIP



The large and fertile land base of Harmony Township supports a thriving farming industry. Much of the Township falls within the Delaware Valley – one of three major agricultural belts in Warren County. Harmony is located between the towns of Belvidere and Phillipsburg, which offers local farmers easy access to potential buyers and support businesses. Additionally, the various types of land in Harmony can support many forms of agriculture, including field crops, livestock, woodlands, and other kinds of farming. For these reasons, agriculture is a viable industry in Harmony Township.

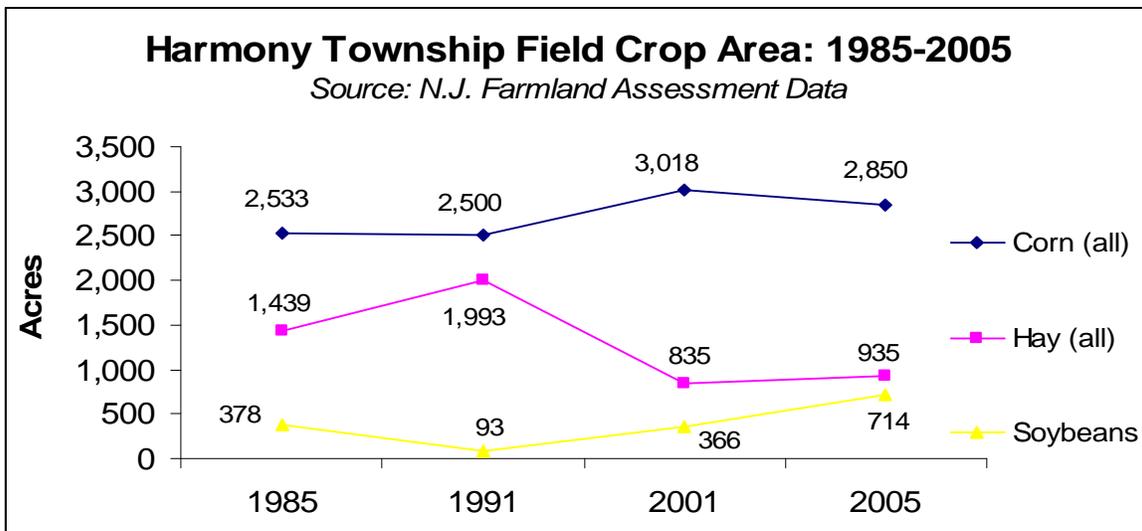
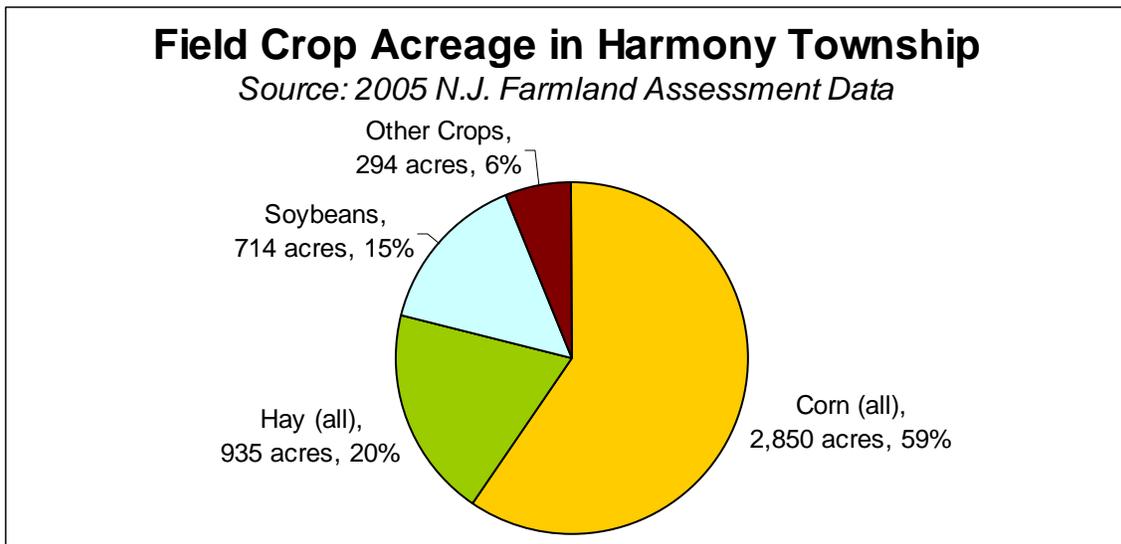
Agricultural History

Agriculture has been the historically dominant fixture in the landscape of Harmony Township. The Township developed as a rural, agricultural community with most of its early settlers establishing farmsteads along the area's main carriage route (now CR-519). Field crops were planted in the fertile soils of the Delaware Valley, and dairy farms came to occupy much of the Scott's Mountain area. The agricultural products that came from Harmony could be transported easily to the markets of Philadelphia and New York by land or water. The Morris Canal ran through neighboring Franklin Township, and offered farmers access to bulk transportation for their products. Also, the Belvidere and Delaware Railroad line was completed along the Delaware River during the nineteenth century, which facilitated agricultural goods movement from the Township as well.

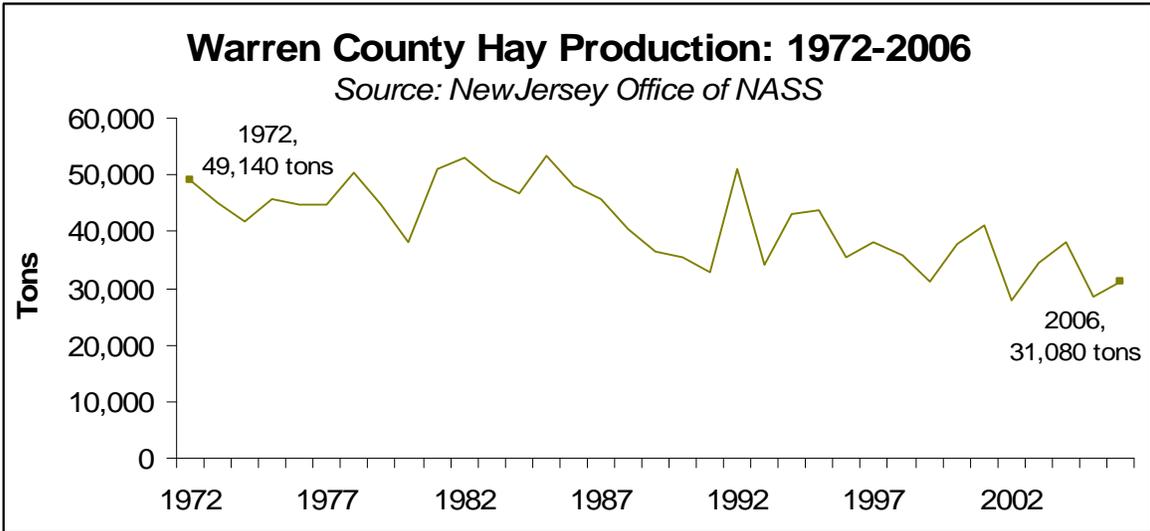
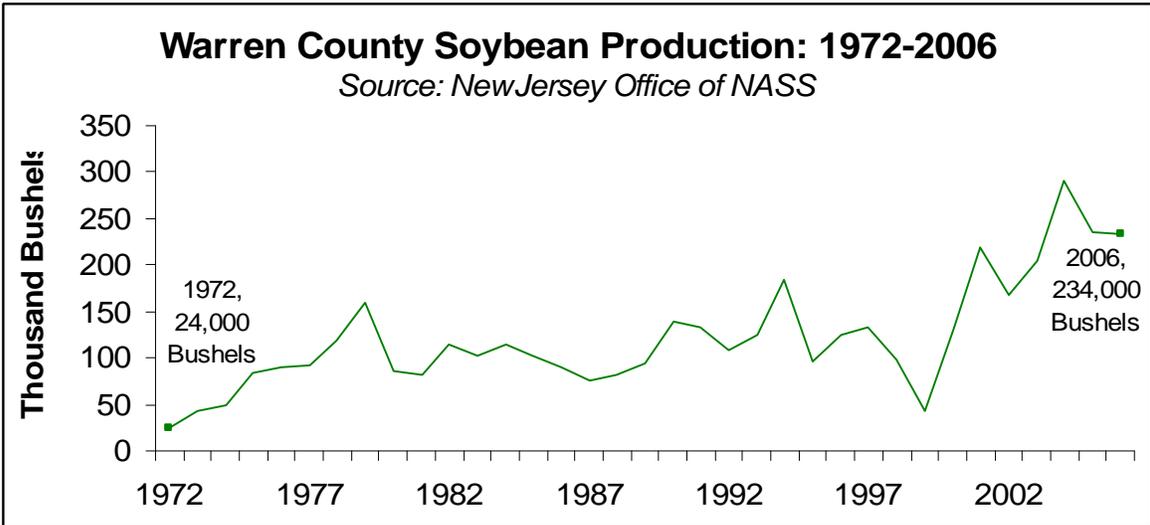
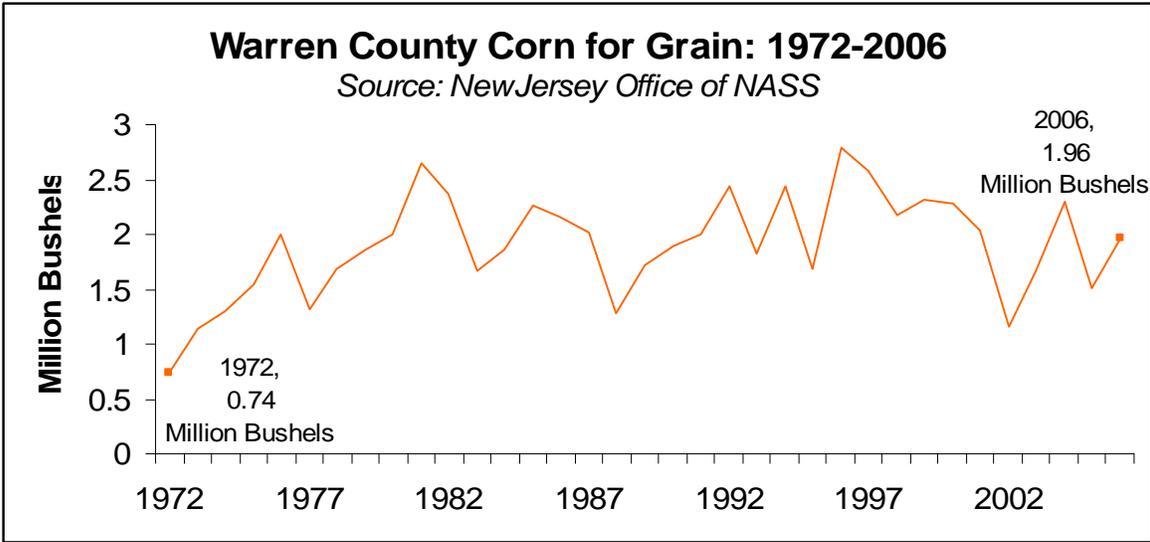
Beginning in the 1960's, a number of factors combined to weaken the dairy industry throughout Warren County. Improvements in refrigerated transportation technology reduced the dependence of the nearby metropolitan markets upon the dairy industry of western New Jersey. The greater availability of dairy products across the country caused milk prices to fall sharply, which hurt the economic viability of local dairy farmers. The price of fuel – a significant input to the transportation-dependent dairy industry – spiked as well. Consequently, most dairy farmers fell into debt or retired, and the number of local dairy farms steadily dropped over time. Today, agriculture in Harmony is heavily oriented towards traditional field crops, especially corn, hay, and soybeans, rather than dairy products.

Agricultural Production Trendsⁱ

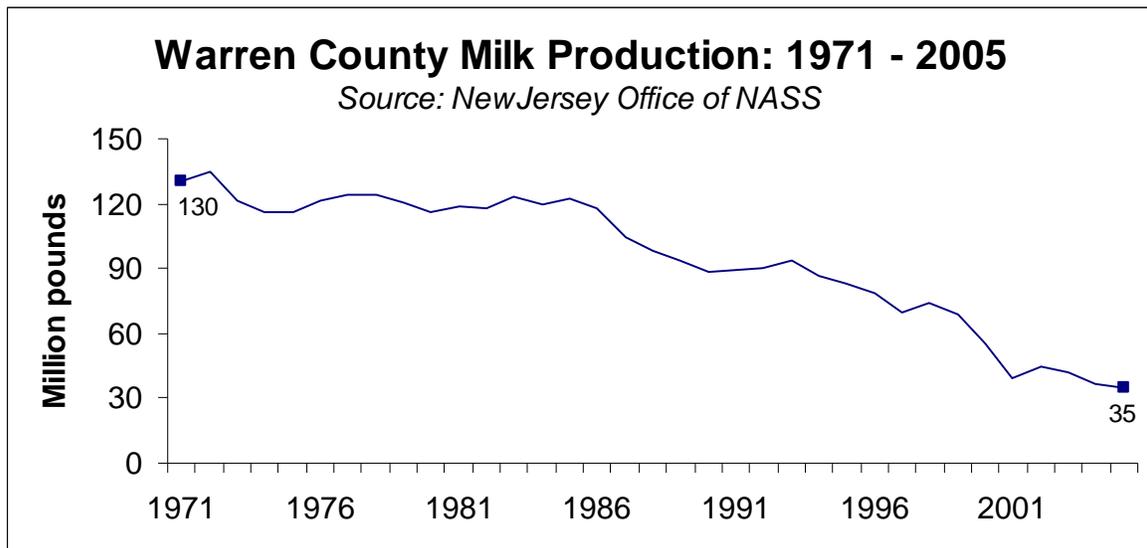
Corn, hay, and soybeans are the primary field crops in Harmony Township (see *Field Crop Acreage*¹ chart below). Trends in the acreage of land planted for these three field crops are dictated by both short-term and long-term market fluctuations (see *Field Crop Area* chart below). Short-term trends include seasonal weather conditions and prices of inputs, such as fertilizers and fuel. For instance, Warren County’s field crop production was significantly affected by severe drought conditions during 2002, causing historically low outputs of corn and hay (see *Corn Production*² chart below). Long-term trends include availability of support services, land prices, and local demand for certain crops. For example, the declining dairy industry and increasing development pressures in Warren County have strained the production of low-value, land-intensive hay (see *Hay Production* chart below).



ⁱ Agricultural production trends are not available at the municipal level. Land area calculations and livestock counts are the only municipal level figures that are available.

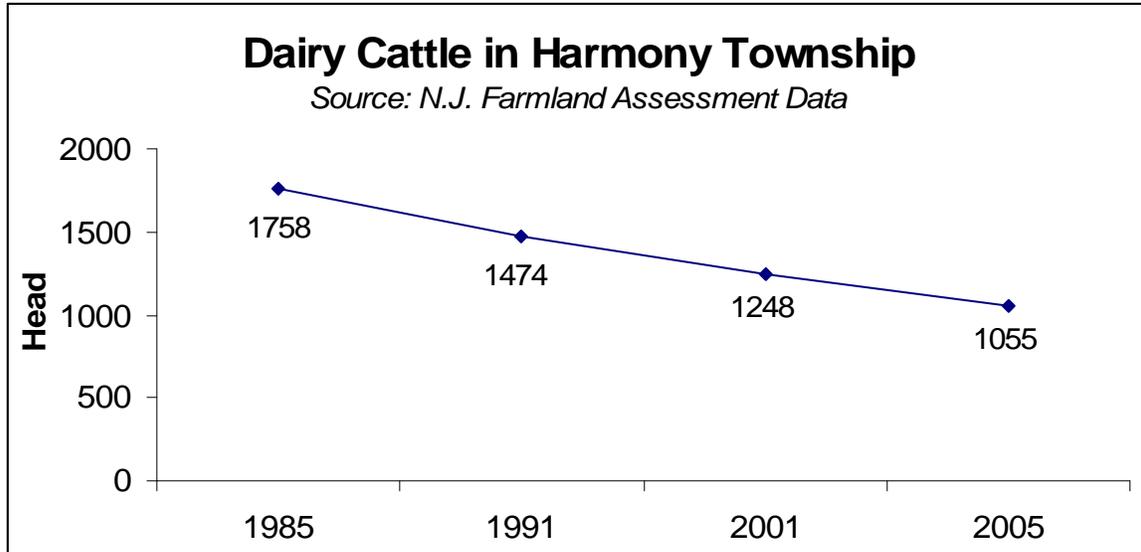


The dairy and livestock industries have experienced significant declines since the 1970's (see *Milk Production* chart below). Decreasing demand for their products and other unfavorable market conditions have driven most dairy farmers out of Harmony Township. A combination of high input costs, historically low milk prices, and weather related losses in 2005 created a scenario that the New Jersey Department of Agriculture likened to “a perfect storm”. (*2006 Annual Report of the New Jersey Department of Agriculture*)³ Dairy prices have since rebounded, causing increased stability among dairy farmers. Among the most significant input costs faced by New Jersey's dairy farmers are high land prices and property taxes. Dairy farms require more extensive plots of land than most agriculture operations, and rising land prices and property taxes have made other uses of dairy land more economically attractive to many farmers.



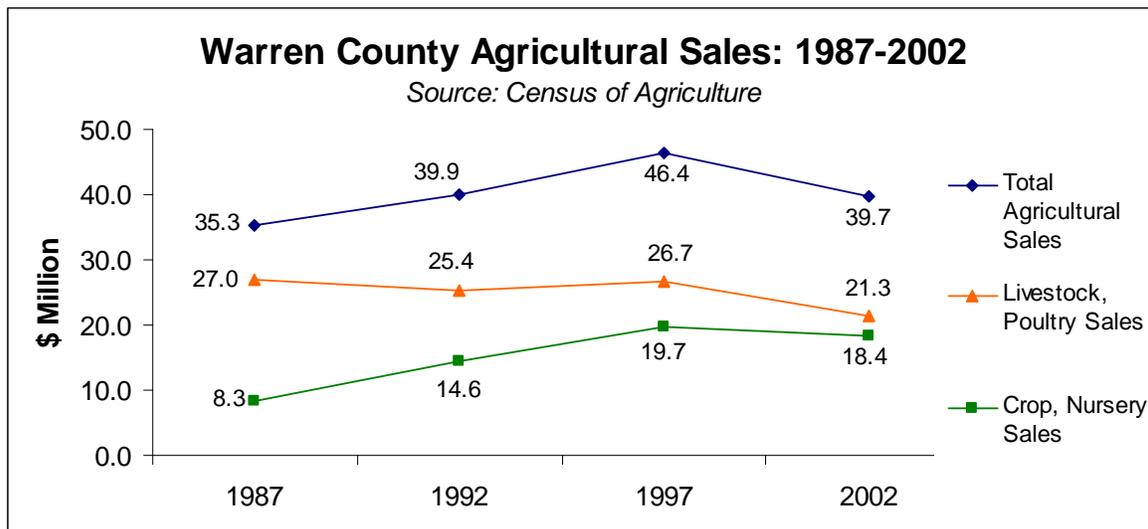
Erosion of the local supporting infrastructure has impacted dairy producers as well. After the demand from New York and Philadelphia for New Jersey dairy products dropped during the 1960's, many dairy support businesses relocated or closed. Consequently, there are no remaining creameries in Warren County, which forces dairy producers to ship their products over considerable distances to be processed. Additionally, the shortage of large animal veterinarians in the region has made keeping livestock less feasible and more expensive (see *Dairy Cattle* chart below).

The expenses incurred by dairy farmers due to poor market conditions and inadequate support services have influenced those that wish to remain in agriculture to transition their operations towards less infrastructure-intensive practices, such as field crop production. Many former dairy farmers have decided not to continue farming at all, opting instead to sell their farms. These factors present significant risks to the future success of the dairy farms in and around Harmony Township.



Agricultural Sales Trendsⁱⁱ

The Census of Agriculture separates agricultural activities into two categories: “livestock, poultry and their products” and “crops, including nursery and greenhouse products”. “Livestock, poultry and their products” from Warren County produced \$21.3 million in sales during 2002, down 25% from \$26.7 million in 1997. Sales from the “crops, including nursery and greenhouse products” category were down 7% from \$19.7 million in 1997 to \$18.4 million in 2002. Similar declines were seen across New Jersey due to the severe drought conditions that were observed during the 2002 Census year.



ⁱⁱ Agricultural Sales figures are only calculated at the County level every five years. Much of the data and text in this section has been taken from the *Warren County Comprehensive Farmland Preservation Plan*.

Livestock and Poultry Products

Dairy and livestock sales are the most significant economic contributor to the agricultural economy of Warren County. Warren County supports the largest concentration of dairy and livestock operations in New Jersey. The livestock industry helps support field crop production as well because much of the grain and hay that is produced in Harmony is sold to local dairy or livestock farmers to feed their herds. Consequently, the viability and continued growth of the County's livestock farms are fundamentally important to the region's agricultural industry as a whole.

Dairy has been the dominant subsector in Warren County throughout its history. Unfortunately, dairy sales have declined from over \$12.6 million in 1987 to just over \$9.0 million in 1997⁴. This corresponds to a similar decrease among the number of farms that sold dairy products within the County (from 118 in 1987 to 45 in 2002). Milk production trends show that the decline in Warren County's dairy industry has been occurring gradually for some time. The County's best year on record in terms of milk production was 1972 when it produced over 135 million pounds, while its worst year on record was 2005 when it produced less than 35 million pounds (see *Milk Production* chart above).

"Other livestock" (24,075) is the largest subcategory of livestock in Harmony Township. This is due mostly to the large number of birds kept at the Buttonwood Pheasant Farm. Dairy cows (1,055 head) are the second most common livestock animal in Harmony Township, with sheep (102 head) a distant third. (2005 N.J. Farmland Assessment data)

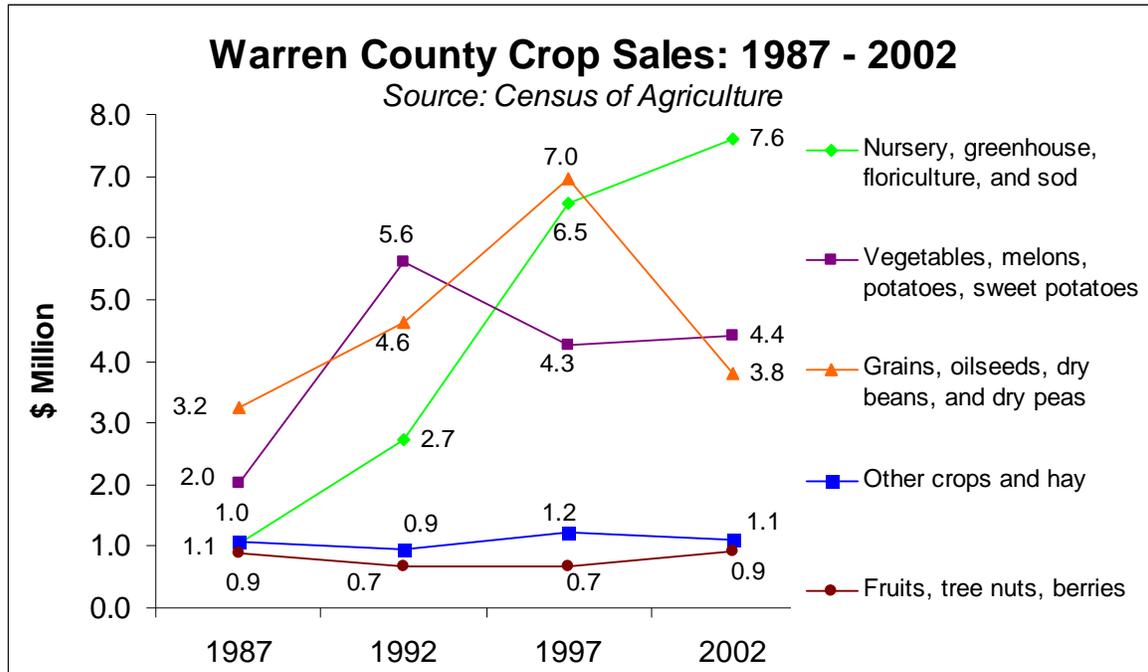
Field Crops

Crops in Warren County sold for a total of \$18.4 million in 2002, slightly less than in 1997. Within this category of agricultural products, nursery and greenhouse operations have become the County's highest grossing subsector. Sales of **nursery and greenhouse products**, including sod, account for roughly 41% of the County's agricultural sales, which corresponds to \$7.6 million (see *2002 Crops Sales by Category* chart below). Approximately 70 acres of land in Harmony Township was occupied by nursery products in 2005. The most common products were Christmas trees (42 acres) and sod (20 acres). (2005 N.J. Farmland Assessment data)

Nursery and greenhouse yields were not as adversely affected by drought conditions during the 2002 Census year as the yields of other field crops, and thus their share of Warren County's crop sales may be somewhat inflated. However, the nursery and greenhouse industry has experienced far more growth than any other agricultural sector in the County over the last 20 years, indicating a continuing upward trend (see *Crop Sales* chart below).

Vegetables were the County's second highest earning crop during 2002 with \$4.4 million in sales. Roughly 130 acres in Harmony Township were planted with vegetables during 2005, with the largest acreages devoted to other/mixed vegetables (90 acres) and cucumbers (25 acres). Vegetables do not require as much land as other field crops, and most vegetable-producing farms use only a few acres or less for each vegetable crop.

While vegetables account for a large percentage of Warren County’s agricultural sales, the expenses incurred by the County’s vegetable farmers tend to exceed those of other farmers. Vegetables require more intensive irrigation than most field crops, and may require seasonal laborers during their harvest. These additional expenses reduce the overall profit derived from vegetable production compared with similar sales of other field crops.



The **grains** subcategory encompasses corn for grain and soybeans – Harmony Township’s most common field crops in terms of acres planted in 2005 (see *Field Crop Acreage* chart above). Sales from this subcategory were heavily influenced by extreme weather conditions during the 2002 Census year, which reduced the available supply to historically low levels. Grains have traditionally been the highest selling field crops among the County’s farms, and are likely to remain the most common products in Harmony.

A small but significant portion of Warren County’s agricultural sales come from other crops, such as **hay**. Warren County produced roughly 28,000 tons of hay during 2002 and 2005, which was the third highest hay yield in the state. Due to severe weather conditions and declining acreage, the County’s 2002 and 2005 production totals are the lowest that have ever been recorded. Harmony Township supports 935 acres of hay. (2005 N.J. Farmland Assessment data)

Warren County is home to many **fruit** farms as well. These farms are currently experiencing a surge in production. Warren County produced roughly four million pounds of apples in 2005 – three times more than it did during the 2002 Census year. Peaches and grapes greatly supplement the County’s fruit production, and are being produced by many more farms in recent years. Harmony Township contains 40 acres of land that supports apple orchards (21 acres), peaches (13 acres), and berries (6 acres). (2005 N.J. Farmland Assessment data)

Agricultural Support Services and Related Industries

The agriculture support services in Harmony Township and Warren County are predominantly oriented towards supplying the raw materials necessary for farming. They include businesses such as tractor sales and supply stores, feed vendors, and hardware/equipment retailers. The largest cluster of agricultural support firms in Warren County is located in and around Washington Borough where equipment and tractor retailers, such as Smith's Tractor and Frank Rymon and Sons, are located. Hackettstown contains a second notable concentration of agricultural support firms. It houses the largest agricultural auction house in New Jersey – the Livestock Cooperative Auction Market – where local farmers can sell or trade their products as well as general farm supply stores, such as Tickner's. Also, local hardware and grocery stores throughout Warren County serve as vendors for farming goods and supplies.

Local support businesses are often insufficient to meet all the needs of the Township's agricultural community. Consequently, local farmers have become adept at minimizing the need for many repair services by fixing a variety of mechanical problems themselves. Farmers tend to specialize in some kind of agricultural repair and supplement their incomes by offering their services to other farmers.

The Township's farmers also rely heavily upon mail order and out-of-state retailers for their agricultural supplies. Processing facilities such as creameries and lumber mills have become absent from the area, which forces farmers to ship their products out-of-town to be processed. Some farmers have found that reliance upon out-of-state suppliers and non-local processing facilities imposes transportation costs that cut deeply into their operations' profitability.

Despite the loss of many support businesses from the region, local farmers still benefit from the wide range of these services throughout Warren County, northern New Jersey, and eastern Pennsylvania. The Rutgers Cooperative Extension of Salem County has compiled a comprehensive listing of all the agriculture-related businesses, organizations, and markets in the State of New Jersey called the *Green Pages*⁵. The agricultural businesses listed in these Green Pages that are located in or around Warren County are provided below.

Agricultural Businesses Servicing Warren County, New Jersey

Source: Rutgers Cooperative Extension of Salem County, New Jersey

Construction

Morton Buildings, Inc.
PO Box 126
Phillipsburg, NJ 08865-0126
Phone: (908) 454-7905
Web: <http://www.mortonbuildings.com>

Tim Terry
Washington, NJ 07882
Phone: (908) 689-6934

Equipment

Warren County Service Center, Inc.
228 Route 94

Columbia, NJ 07832
Phone: (908) 362-6916

Tractor Supply Co.
398 State Route 57W
Washington, NJ 07882
Phone: (908) 689-3202

Feed

Pursel's Agway Feed Mill
1127S. Main St.
Phillipsburg, NJ 08865
Phone: (908) 454-1127

Harmony Dale Farms
166 Brainards Rd
Phillipsburg, NJ 08865
Phone: (908) 859-2616

Global Ag, Jacob Bilyk
Route 519, Hazens Corner, Harmony

Hoffmans Supply
35E Mill Road
Long Valley, NJ 07853-3193
Phone: (908) 876-3111

K & D's Feed and Tack Emporium
324 State Route 24
Chester, NJ 07930-2631
Phone: (609) 654-4312

Financial Services

First Pioneer Farm Credit, ACA
North Jersey Division 9
County Road 618
Lebanon, NJ 08833-3028
Phone: (908) 782-5011
NJ: 1-800-787-FARM (3276)
Fax: 908-782-5229
Website: www.firstpioneer.com

FSA: Warren-Morris-Sussex Counties
Hackettstown Commerce Park
101 Bilby Road, Bldg. 1-H
Hackettstown, NJ 07840
Phone: (908) 852-2576 Fax: (908) 852-4666
Fax: (908) 852-4666

Wachovia
2W. Washington Avenue
Washington, NJ 07882
Phone: (908) 689-0661
Website: www.wachovia.com

First Hope Bank
1301 Hope Bridgeville Road
Hope, NJ 07844
Phone: (609) 459-4121
Website: www.firsthope.com

Hoof Trimmers & Farriers

Doug Craig
Chester, NJ
Phone: (908) 879-2793

Lehigh Valley Farrier Service
Phillipsburg
Phillipsburg, Warren County, NJ 08865
Phone: (732) 744-0122
anglotrake@yahoo.com

Livestock Haulers

Craig Ackerman Livestock Hauling
Phone: (201) 317-8623

<p>Feed (continued) Penwell Mills Feed 448 Penwell Rd Port Murray, NJ 07865 Phone: (908) 689-3725</p> <p>Tickner's Inc. 90 Main St. Hackettstown, NJ 07840 Phone: (908) 852-4707</p> <p>North Warren Farm & Home Supply Blairstown, NJ 07825 Phone: (908) 362-6117</p>	<p>Seed Suppliers Penwell Mills, LLC 448 Penwell Road Port Murray, NJ 07865 Phone: (908) 689-3725 Phone: (800) 273-5201</p> <p>Large Animal Veterinarians Brockbrader, Nordstrom & Ellis Tranquility Large Animal Vet Andover, NJ Phone: (908) 852-1300</p> <p>Frey Alpha Veterinary Care Alpha, NJ 08865 Phone: (908) 454-8384</p>
<p>Fertilizers & Chemicals Growmark FS, Inc PO Box 116 Bloomsbury, NJ 08804 Phone: 908-479-4500 or 800-248-4649 and. Growmark FS, Inc. Route 519 Harmony, NJ</p>	<p>Dr. Grodkiewicz Washington Animal Hospital Washington, NJ 07882 Phone: (908) 689-3267</p> <p>Dr. Wessel & Zaccheo Warren Animal Hospital Phillipsburg, NJ Phone: (908) 859-0702</p>

Future of Agriculture

The future of agriculture in Harmony Township is being shaped by market forces and social trends that are occurring throughout New Jersey. These trends have already begun to redefine the traditional agricultural industry in Harmony Township. Among the most substantial trends shaping local agriculture has been the extended decline in the dairy market. Dairy is the foundation of the region’s agricultural industry, and its continued decline would impact dairy farmers and their support businesses as they transition towards other forms of agriculture. Consequently, grain and hay farms that support them may move toward different agricultural activities as well.

Another challenge facing the area’s farmers is increasing land prices and property taxes. This trend dictates that farmers will show a greater preference for renting land rather than owning land, and that farm operations will take up less space and utilize more intensive practices on their land. Increasing land prices also threaten to replace many of Warren County’s farmlands and open space areas with residential and commercial developments that are less compatible with agricultural production.

The combination of traditional agricultural markets declining and land costs increasing promises to promote innovation in the ways that farmers supplement their incomes. Farmers are currently trying to meet these challenges by producing goods with higher rates of return, such as nursery goods and sod, farm stand merchandise, and equine services. Agritourism facilities, such as farm stands, pick-your-owns, and petting zoos, may become more numerous as the County's residential population grows and the market for these types of services expands.

Returns from "direct" sales of agricultural products to consumers have increased in recent years. This indicates that the anticipated trends towards more innovative farming practices have already begun to influence agriculture in Warren County. Direct agricultural sales generated \$1.28 million for 162 Warren County farms in 1997 – a figure which, despite unfavorable growing conditions, grew to \$1.55 million from 174 farms in 2002. (*2002 Census of Agriculture*) Niche products, such as packaged and organic goods, that generate "value added" revenue streams are likely to increase as well.

One innovative form of agriculture that is being employed in Harmony is the game preserve. The Buttonwood Game Preserve offers hunters the opportunity to pay to hunt pheasants on site. The Game Preserve also assumes an environmental stewardship role by paying "as much attention to the hunting grounds as to the quality of the birds liberated on them". (*Buttonwood Game Preserve website*⁶)

¹ New Jersey Farmland Assessment data. Warren County – Harmony Township. 2005. (provided by the State Agriculture Development Committee)

² New Jersey Office of the National Agriculture Statistics Service. Data available online at: http://www.nass.usda.gov/Statistics_by_State/New_Jersey/index.asp . Accessed December 2007.

³ New Jersey Department of Agriculture. New Jersey Agriculture 2006 Annual Report. www.state.nj.us/agriculture/pdf/06AnnualReport.pdf

⁴ The 2002 Census withheld this data to avoid disclosing information for individual farms.

⁵ Rutgers Cooperative Extension of Salem County. Green Pages: An Agricultural Resource Guide. Online at: <http://salem.rutgers.edu/greenpages/index.html> . Accessed 27 November 2007.

⁶ Buttonwood Game Preserve. Home page. Online at: <http://www.buttonwoodpreserve.com/home.htm> . Accessed 3 December 2007.

CHAPTER 3: LAND USE PLANNING CONTEXT OF HARMONY TOWNSHIP



Land Use Patterns

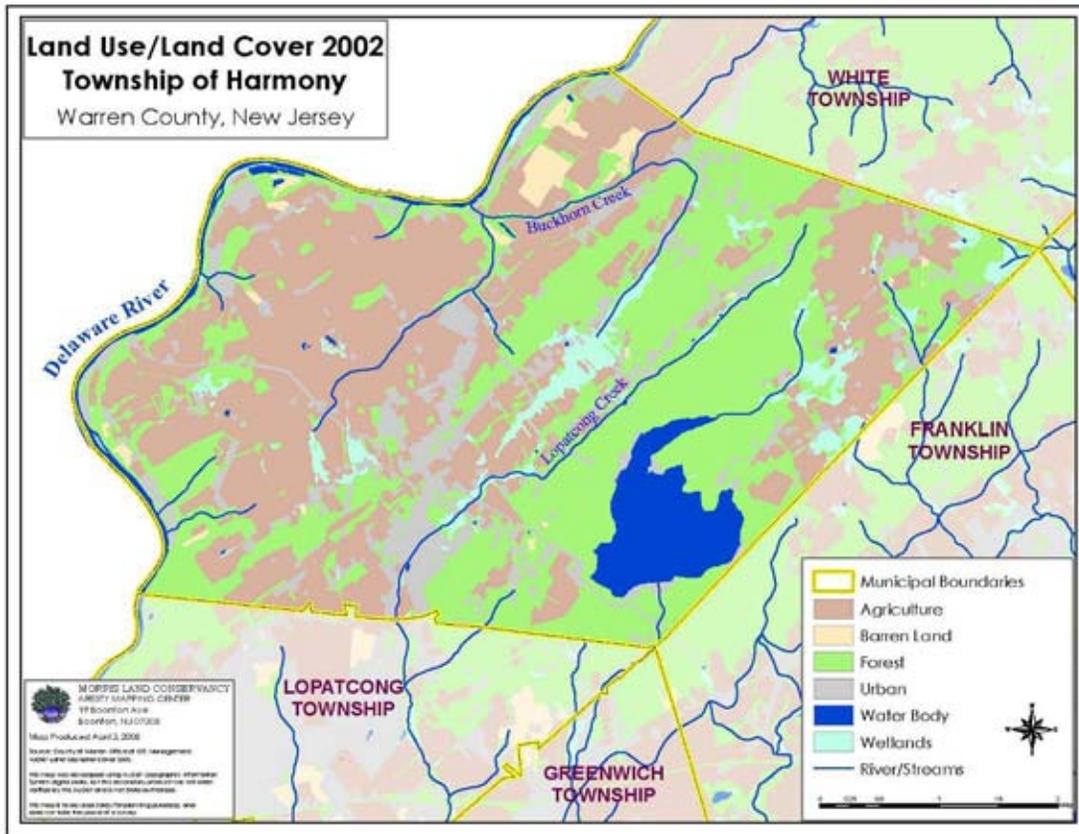
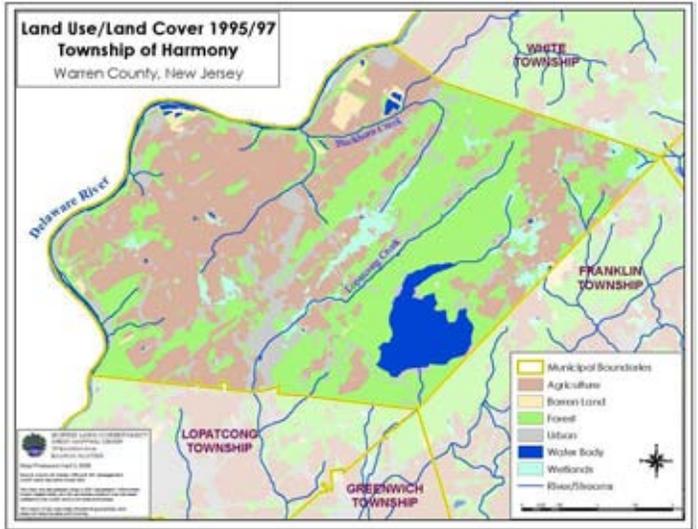
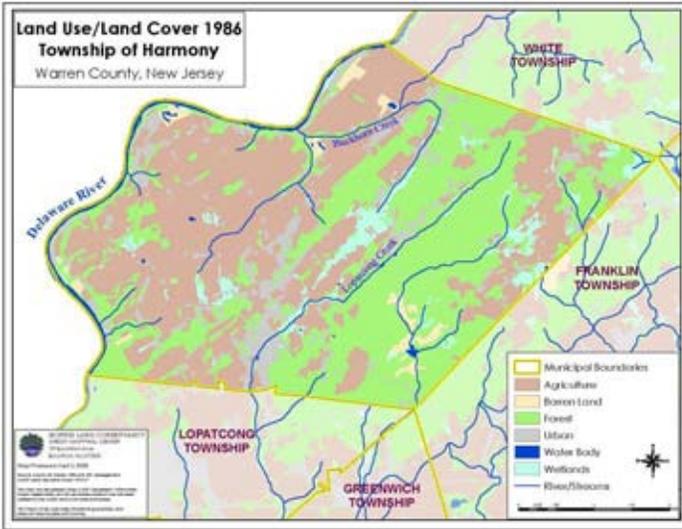
The land use patterns of Harmony Township were first established during the eighteenth century. The area was originally settled by Quakers who founded small settlements along the Delaware River. One of these communities – Brainards – remains today. As the northeast grew into one of the major commercial areas on the continent, regional transportation routes were established throughout the area. The major thoroughfare between Kingstown, New York, and Philadelphia, Pennsylvania, (now CR-519) ran along the foot of Scott’s Mountain through Harmony. Agricultural enterprises, such as grist and saw mills, gradually migrated along this road to the Harmony area. Clusters of blacksmith shops, saddle repair stores, and taverns were founded at busy crossroads – such as Harmony, Lower Harmony, and Roxburg – to serve these growing businesses. (*Harmony Township Master Plan*¹)

During the nineteenth century, the Belvidere and Delaware Railroad was completed along the Delaware River. It stimulated new industrial and residential development on the River, and new communities grew up at Hutchinson and Harmony Station. These areas evolved into vacation communities during the early 1900’s, and eventually became more permanent neighborhoods after severe flooding in the 1950’s washed away the original summer homes. (*Harmony Township Master Plan*)

This centers-based land use pattern, with development in small towns and agricultural or natural areas surrounding them, remained prevalent throughout Harmony and Warren County into the mid-twentieth century. Following World War II, suburban-style development expanded westward from New York City and eastern New Jersey. These development patterns were promoted by government incentives that encouraged the construction of single-family homes and the construction of Interstate highways, including Interstates 78 and 80, that greatly increased the ease of living in rural communities away from traditional employment centers.

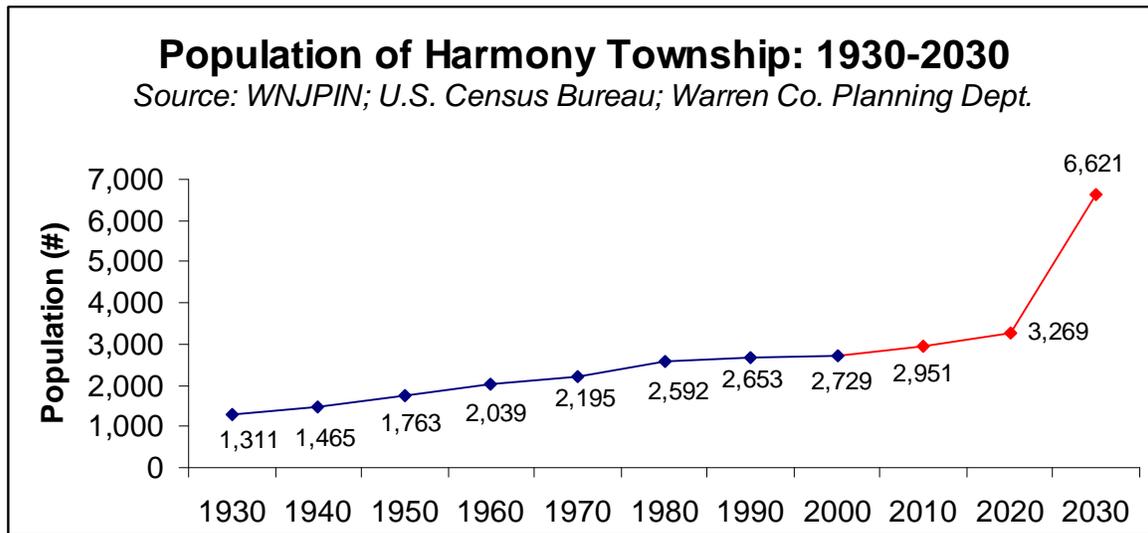
Belvidere to the north and Phillipsburg to the south have served as the traditional centers of commerce and industry for Harmony Township. These areas and their immediately adjoining areas absorbed much of the rapid growth that occurred after World War II. Consequently, Harmony still resembles the agricultural community it was fifty years ago.

Today, the CR-519 and Delaware River corridors remain the most notable concentrations of commercial and residential development in Harmony Township. Industrial areas are confined to the Brainards and Hutchinson areas along the Delaware River, and scattered residences have been established along CR-647 and Ridge Road in the eastern part of the Township. The remainder of Harmony is either active agricultural lands (mostly in the west) or environmentally-sensitive ridgelines, water bodies, and forests (mostly in the east). (See *Land Use/Land Cover Maps* below)



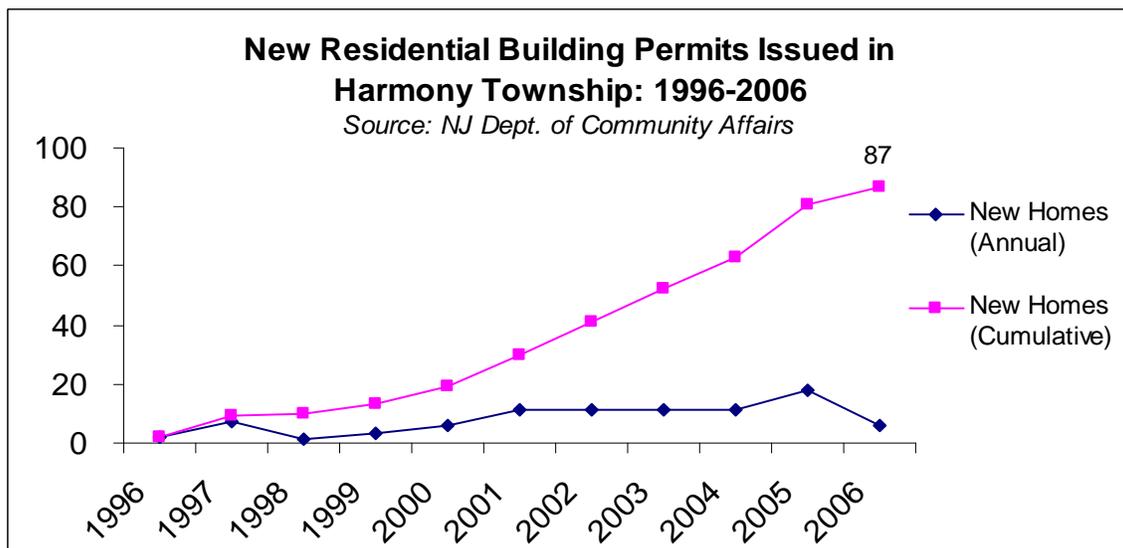
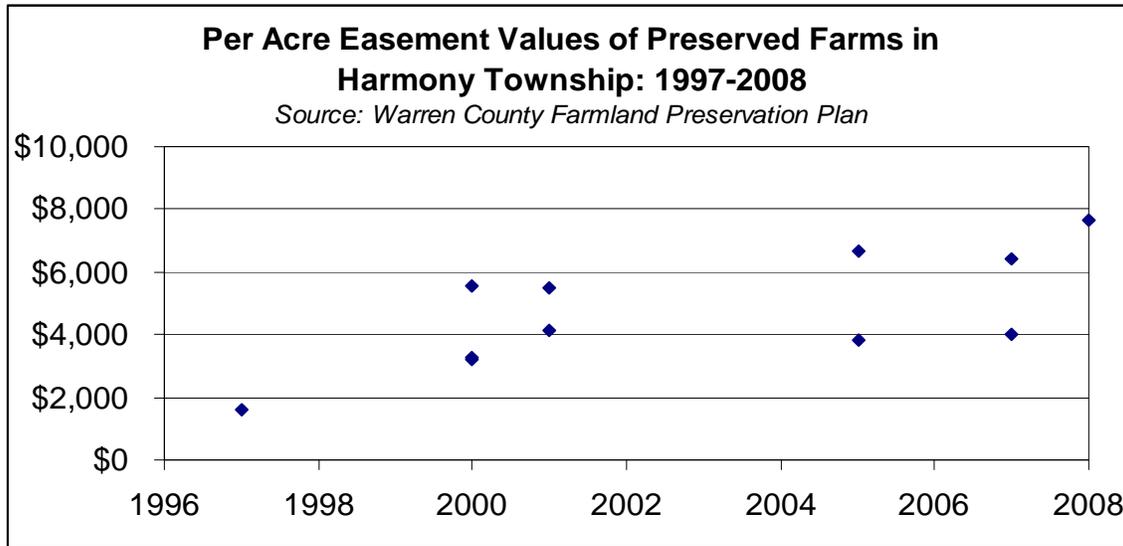
Development Pressures

Despite its limited access to regional highways and mass transit, Harmony Township has experienced significant growth in recent years. Harmony's population has more than doubled since World War II (see *Population* chart below). (*Workforce New Jersey Public Information Network (WNJPIN)*²; *U.S. Census Bureau*³) Almost all of this growth has accumulated from individual homes constructed on small lots along the Township's road network. Large, multi-home subdivisions are virtually absent from Harmony Township. Some industrial and commercial development has taken place in the Delaware River and CR-519 corridors to support these new residents.



Development pressures are expected to intensify in Harmony during the near future. The adjacent Townships of White and Lopatcong have seen increasing growth of single-family residential neighborhoods during the past thirty years, and the development footprint of Phillipsburg has extended through Lopatcong to the Harmony border. Future development north of Phillipsburg would most likely in occur in Harmony Township. Consequently, land values have risen sharply during the past ten years. Per-acre easement values paid to preserve farmland in Harmony Township have grown from below \$2,000 per acre in 1997 to nearly \$8,000 per acre in 2008 (see *Per Acre Easement Value Chart* below).

The Township's affordable housing mandate has produced a "developer's remedy" lawsuit that will result in the addition of 315 residential units, and approximately 900 new residents, on prime agricultural land. This single development will more than triple the amount new development that has taken place in Harmony since 1996 (see *Building Permit Chart* below). For these reasons, the population projections developed by the Warren County Planning Department anticipate that the population of Harmony Township will increase nearly 150% by 2030 (see *Population* chart above). (*2005 Warren County Strategic Growth Plan*)⁴



Public Infrastructure – Sewer and Water

There is no publicly provided sewer water service in Harmony Township. The parcel on Garrison Road that is designated for affordable housing will have private sewer service in the future. Water service in Harmony Township is provided entirely by private wells. Two water systems in the Township are operated by the Brainards Mutual Water Association – a local group that provides piped water to 50 customers in Brainards village – and Harkers’ Hollow Heights, which serves some residents near the Township’s southern border. There are no plans to expand this service in the future. The Township established a franchise agreement in the 1980’s with New Jersey Consumers’ Water Company (formerly Garden State Water Company) in anticipation of booming development trends in the Delaware Valley. The level of anticipated development has not occurred to date, and this agreement will be modified to accommodate only the existing developed areas and future affordable housing sites in the Township. (*Harmony Township Master Plan*)

Land Use Planning Initiatives

Harmony Township has been the subject of extensive and sustained land use planning efforts undertaken by all levels of government. Through the *State Development and Redevelopment Plan* and the *Highlands Regional Master Plan*, New Jersey has recognized Harmony as the location of prime agricultural and natural resource lands. The Township incorporates a large portion of the State's policy directives from these plans into its own *2004 Master Plan*. Harmony has also expressed the desire to implement more stringent zoning standards and innovative land use policies that will further its preservation goals.

State Development and Redevelopment Plan

The New Jersey State Planning Commission has drafted the *State Development and Redevelopment Plan (SDRP)*⁵ that outlines general policy objectives concerning land use and future development in the State. The SDRP identifies five Planning Areas within the State where different sets of goals and guidelines are considered appropriate to determine development activities (see *N.J. State Development and Redevelopment Plan* map below). These Planning Areas are labeled as Metropolitan, Suburban, Fringe, Rural and Environmentally Sensitive lands.

The SDRP also identifies Designated Centers where future development and redevelopment activities are most appropriate and will be actively promoted. Centers are categorized as Urban Centers, Regional Centers, Towns, Villages, and Hamlets corresponding to criteria including size, regional location, population, residential and employment densities, and available housing stock. The combination of Planning Areas and Designated Centers establishes a comprehensive framework for pursuing land use and development regulation throughout New Jersey.

Metropolitan Planning Areas are comprised of the most intensely developed regions in the state. The goals in this planning area revolve around revitalizing existing cities and towns by encouraging compact growth and redevelopment. The Metropolitan Planning Area is identified as the most appropriate location for future development in New Jersey. Harmony Township contains no land within the Metropolitan Planning Area.

Suburban Planning Areas are called upon to support most of the new development that will occur in New Jersey while maintaining the character of existing communities there. Growth in suburban town centers is especially encouraged in order to help protect and preserve the natural resources that exist in these areas. The Suburban Planning Area is meant to complement metropolitan areas, and is most commonly found outside heavily urban areas. Harmony Township contains no land within the Suburban Planning Area.

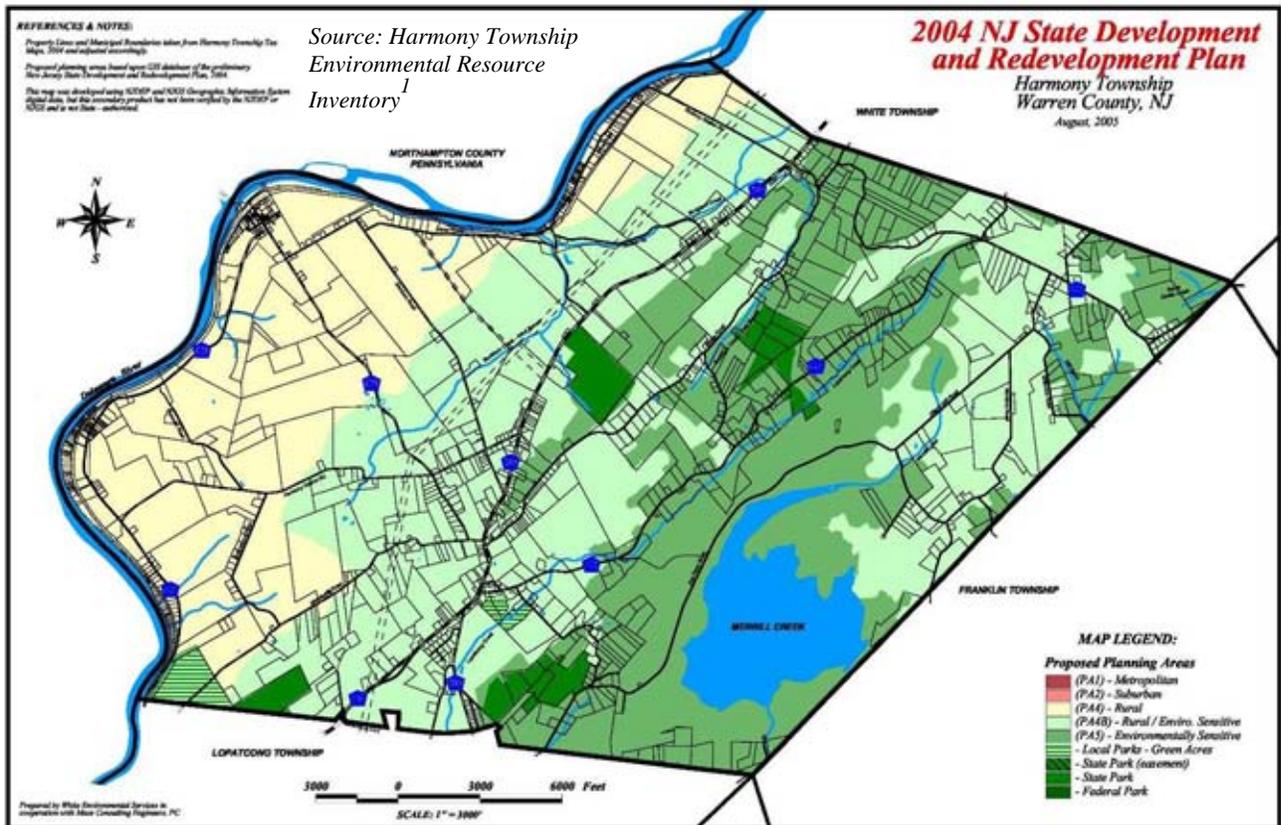
Fringe Planning Areas serve as an appropriate interface between suburban and rural areas. They are not as developed as metropolitan and suburban areas, but support more development activity than nearby rural lands. Fringe Areas play the important role as a buffer between these largely incompatible land uses. Consequently, they are often the frontlines of urban sprawl, and must be carefully planned to ensure that development is

appropriately restricted to existing urbanized areas. Harmony Township does not contain any land within the Fringe Planning Area.

Rural Planning Areas are suitable for the preservation of large contiguous areas of farmland. Sustaining the agricultural industry while confining development and redevelopment within existing towns are included among the policy objectives applicable to these areas. Lands within the Rural Planning Area in Harmony Township total 3,597 acres, which are all located in the western part of the Township along the Delaware River.

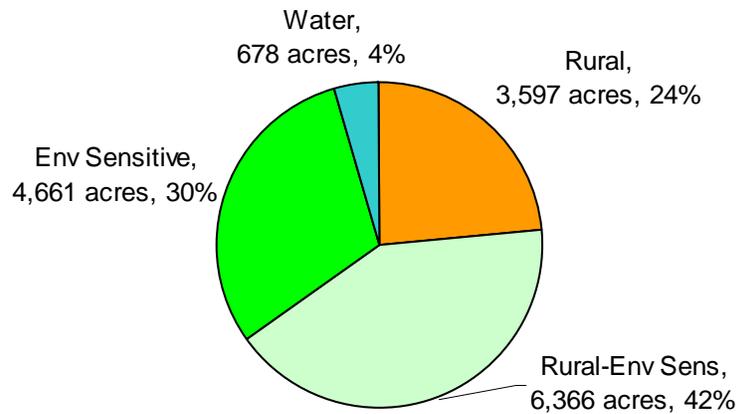
Much of the land within the Rural Planning Area supports environmentally-sensitive resources such as underground aquifers or critical wildlife habitats. These areas are designated as the *Rural-Environmentally Sensitive Planning Area*, and number 6,366 acres in Harmony. The Rural-Environmentally Sensitive Planning Area in Harmony falls within two north-to-south running strips of land: one roughly follows the CR-519 corridor along the base of Scott’s Ridge and the other covers most of the Township’s northeastern corner.

Environmentally Sensitive Planning Areas contain lands where natural resource preservation should be the primary planning consideration. Development should be minimized or constrained to existing centers while large contiguous natural areas should be preserved as open space. Large areas of Harmony Township along Scott’s Ridge fall within the Environmentally Sensitive Planning Area. This Planning Area occupies 4,661 total acres in the Township.



SDRP Planning Areas in Harmony Township

Source: State Development and Redevelopment Plan



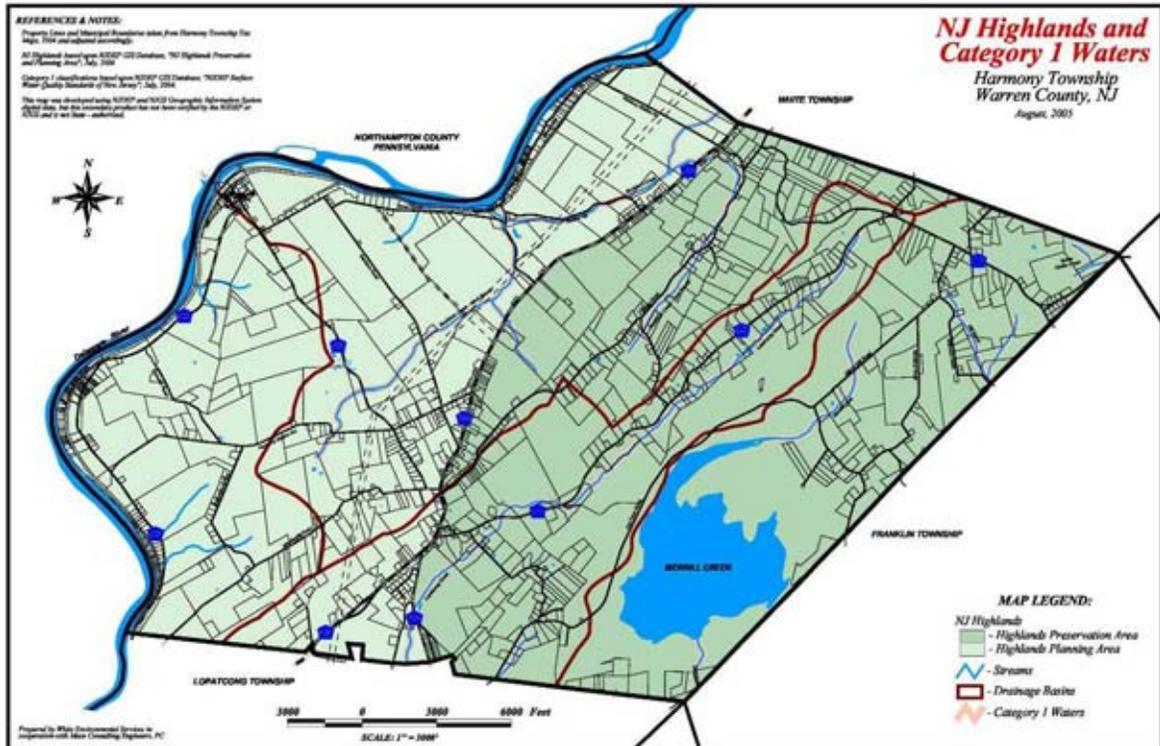
Centers are defined by the New Jersey State Planning Commission as “compact forms of development that, compared to sprawl development, consume less land, deplete fewer natural resources and are more efficient in the delivery of public services.” (*SDRP*) Centers become designated after the municipalities or counties that encompass them submit development plans to the State Planning Commission, which are subsequently endorsed by the Office of Smart Growth. Five hamlets were designated at Lower Harmony, Harmony Station, Brainards, Roxburg Station, and Hutchinson. These hamlets were un-designated because the Township found that they were too small to qualify for center designation and that increased development there would be undesirable. (*Harmony Township Master Plan*)

Highlands Regional Master Plan

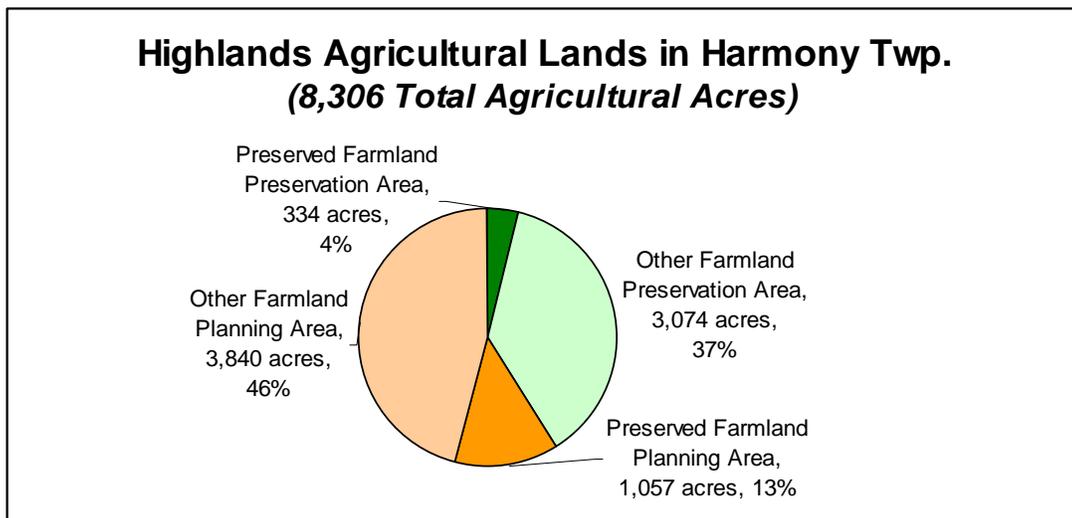
The New Jersey State Legislature enacted the Highlands Water Protection and Planning Act on August 10, 2004. In an effort to ensure the integrity of the northern New Jersey’s drinking water resources, the Highlands Act imposes strict land use controls over large parts of the 88-municipality region, known as the Highlands Preservation Area. Lands within the Preservation Area are subject to heightened restrictions on development, water use and activities that affect water quality or environmentally sensitive lands. The Act expands mandatory buffers around the region’s streams and water bodies, sets limits on impervious coverage for individual properties and requires master plan conformance from Preservation Area municipalities, among other criteria.

All of Harmony Township is located within the Highlands region. Roughly 8,387 acres (54% of the Township) east of CR-519 fall within the Highlands Preservation Area and are subject to the restrictions that apply there (see *Highlands* map below). The Preservation Area in Harmony Township incorporates the Highlands Ridgeline (Scott’s Mountain) and all the wooded and wetland areas which surrounds it. The Preservation Area also encompasses about 41% of the Township’s total farmland (see *Highlands Agricultural Land* chart below). All land west of CR-519 in Harmony Township (approximately 7,108 acres) falls within the Planning Area. (*Highlands Draft Regional Master Plan*)⁶

The Highlands Council – the regional planning body charged with implementing the Highlands Act – has established the preservation of farmland and the industry of farming as one of its principal objectives. To this end, the *Highlands Draft Regional Master Plan* identifies an Agricultural Resource Area that will receive the bulk of future funding and institutional support from the Highlands Council. The Agricultural Resource Area encompasses areas that contain contiguous farmbelts and quality agricultural soils. Virtually all of Harmony Township falls within the Agricultural Resource Area. (see *Agricultural Resource Area* map below)

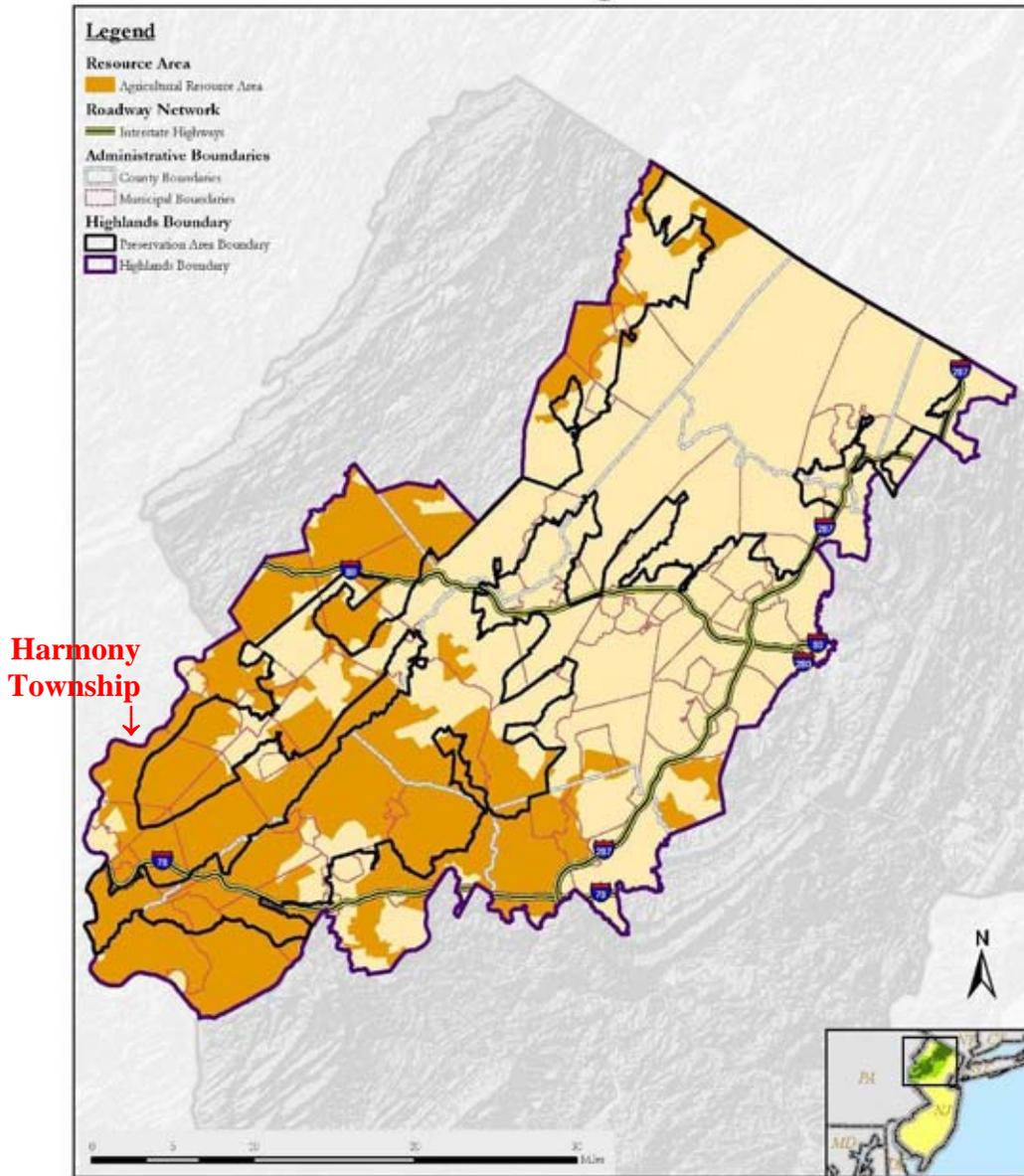


Source: Harmony Township Environmental Resource Inventory



The Highlands Council also identifies Agricultural Priority Areas – subsets of the larger Agricultural Resource Area that are particularly well-suited to agricultural production. Criteria used by the Highlands Council to delineate these areas include soil quality, tillable acreage, buffers, development potential, local commitment, contiguity with other farm parcels and size. (*Highlands Sustainable Agriculture Technical Report*)⁷ Most of the land west of CR-519 in Harmony Township is designated as High Priority Agricultural Areas (see *Agricultural Priority Areas* map below).

Agricultural Resource Area



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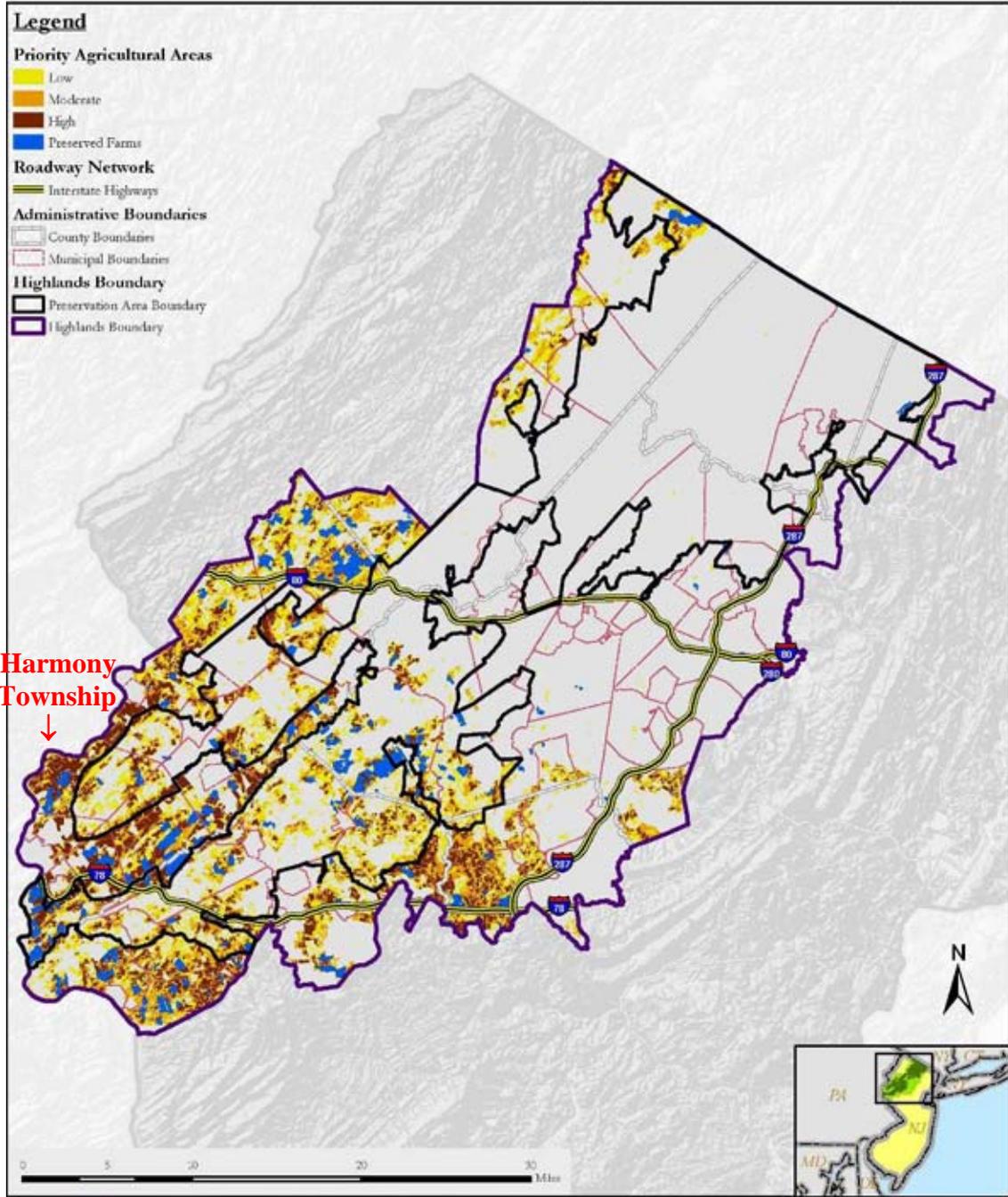
Draft Regional Master Plan, November 2006



Sources:
New Jersey Highlands Council, 2006

Source: New Jersey Highlands Council

Agricultural Priority Area



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Draft Regional Master Plan, November 2006



Sources:
 New Jersey Highlands Council, 2006
 New Jersey Department of Agriculture -
 State Agriculture Development Committee, 2006

Source: New Jersey Highlands Council

Warren County Strategic Growth Plan

The *Warren County Strategic Growth Plan* fulfills the requirement set forth by the New Jersey County Planning Enabling Act (NJRS 40:27-2) that counties must adopt a plan that governs their physical development. The *Strategic Growth Plan* was adopted in December 2004 and revised in October 2005, and serves as an update to the County's 1979 *General Development Plan* and the 1984 *Transportation Plan*. The *Strategic Growth Plan* is an effort to enhance intergovernmental coordination by serving as an intermediary between State and local governments. As such, it is a vital link in the planning process that connects policy with action. It incorporates State-level land use policies, as outlined in the State Plan, into plans for local, on-the-ground initiatives such as center designations and resource conservation efforts.

The *Strategic Growth Plan* was developed with input from the Warren County Planning Board, an 88-member steering committee and eight public meetings held throughout the planning process. Input from these groups yielded a series of general policy goals and indicators that measure the progress being made towards these goals. The number one goal identified in the *Strategic Growth Plan* is the preservation and enhancement of the County's rural character. Corresponding indicators include preserved open space and farmlands, designated historic sites, agricultural output and agricultural land base. Among the goals identified by the *Strategic Growth Plan* are concentrating growth in existing centers, improving public infrastructure in these centers, and maintaining quality of life for local residents. (2005 *Warren County Strategic Growth Plan*)

The *Warren County Strategic Growth Plan* supports an alternative, centers-based scenario where commercial and industrial zones are restricted to existing centers of development. Public opinion surveys that were conducted as part of the *Strategic Growth Plan* identify this alternative scenario as the preferred option to the existing zoning scheme. The Plan's transportation modeling also shows that the alternative zoning is less likely to induce additional traffic delays. (2005 *Warren County Strategic Growth Plan*)

The *Strategic Growth Plan* concludes with a series of recommendations that are aimed at advancing this alternative, centers-based scenario. Many recommendations are focused on promoting development in existing centers. These include allowing non-residential zones only in existing centers, reviewing and improving local design standards, creating transportation financing districts and pursuing downtown revitalization through brownfield redevelopment and Urban Enterprise Zone designation. Other recommendations advocate resource preservation efforts such as open space and farmland preservation, stormwater planning, density transfer programs (including TDR) and subdivision design ordinances that mandate clustering or conservation design. (*Warren County Strategic Growth Plan*)

The *Strategic Growth Plan* identifies two village clusters in Harmony Township – Brainards and Harmony. It also proposes that the Phillipsburg Town Center be extended north between CR-519 and CR-646 into Harmony. Harmony disagrees that any centers should be designated or promoted within the Township. The concentrated growth clustering advocated by this Plan is not consistent with the rural backdrop of these areas.

Municipal Planning

Harmony Township has developed a comprehensive *Master Plan* that emphasizes farmland and open space preservation as principal objectives. The *Farmland Preservation Element* of this Plan lists the following goals and objectives:

1. Encourage the preservation of agriculture through proactive planning where there are suitable conditions for the continued operation and maintenance of agricultural uses;
2. Retain productive agricultural land for future agricultural use and preserve a large contiguous land base to assure that agriculture remains a viable, permanent land use;
3. Aggressively maintain local support for funding and purchasing farm development easements;
4. Continue to coordinate agricultural preservation activities with the State Agriculture Development Board (SADC), Warren County Agriculture Development Board (CADB) and other open space preservation activities in the Township;
5. Recognize agriculture as a significant economic industry in the community and encourage economic opportunities in this industry;
6. Provide enhanced opportunities for agricultural businesses that assist in maintaining agriculture as a viable economic activity. (*Harmony Township Master Plan*)

The *Master Plan* also identifies the following factors to consider when deciding to use municipal funds to preserve farmland:

- Soil suitability,
- Proximity to other farms,
- Eligibility for state and county funding,
- Ease of farm equipment movement, and
- Contribution to the Township's scenic, historic, and cultural landscape.

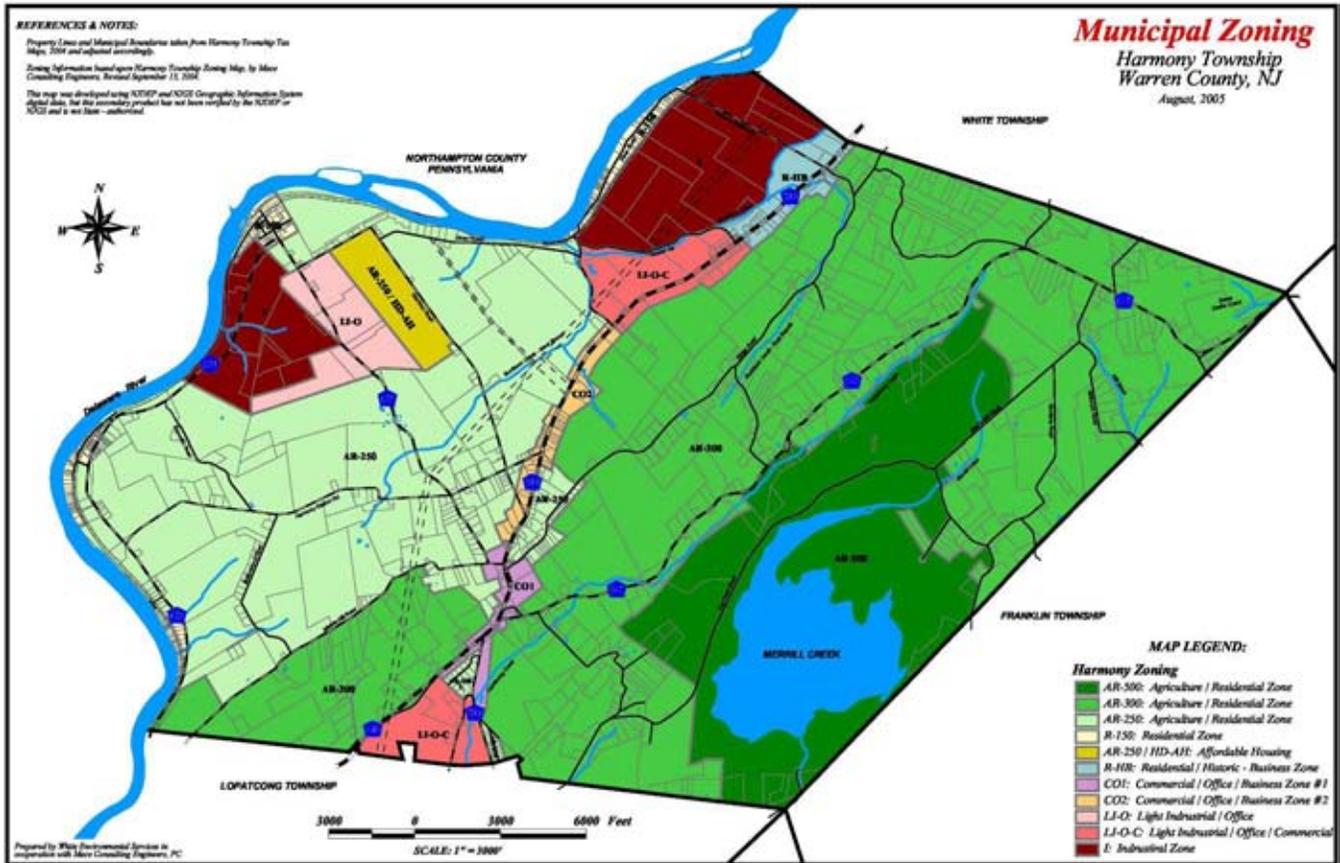
The *Land Use Element* of the *Harmony Township Master Plan* recommends the following planning strategies that would further the Township's preservation goals:

- Development clustering on parcels zoned for densities of less than one unit per acre;
- Lot size averaging within the proposed Low Density (LD) and Very Low Density (VLD) zones;
- Transfer of Development Credits from parcels that are desirable for preservation to parcels that are more appropriate for development;
- Transfer of Development Rights from areas that are desirable for preservation to areas that are more suitable for development; and
- Rural Estate Planning where financial incentives are provided for permanently preserving agricultural lands under a common ownership.

Harmony Township has also developed planning documents that are focused on natural resource and open space preservation and contain important suggestions that relate to farmland preservation. The *Harmony Township Environmental Resource Inventory* contains many thematic maps that highlight important natural and agricultural features. The *Harmony Township Open Space and Recreation Plan*⁸ identifies maintaining the local agriculture industry, preserving Scott's Mountain, and establishing regional partnerships among its recommendations.

Municipal Zoning

Most of Harmony Township (8,104 acres) is zoned for development densities of 5 acres per unit. Zones in which this density is enforced include the Agricultural Residential (AR) 500 and 250 zones as well as all of the Light Industry-Office-Commercial (LI-O-C) zones. Most of the remaining areas in the Township (6,857 acres) are zoned for residential densities between 1 and 3 acres per unit. Roughly 188 acres are zoned for Affordable Housing, and have not been assigned a development density.



Source: Harmony Township Environmental Resources Inventory

In the 2004 *Master Plan*, the Township reviewed options for reducing its zoning densities to more closely support the continuation of the agricultural landscape. As discussed in the *Master Plan*, low density development (5-10 acres per unit) would be proposed within the current AR-500 zone and low density development (3-7 acres per unit) would be established in the AR-300 zone. The remaining areas of the Township would be rezoned in a similar fashion. (*Harmony Township Master Plan*) The *Master Plan* also supports the implementation of a Ridge Protection Ordinance that would prevent development on slopes greater than 15% in an effort to minimize erosion in these areas and maintain their scenic qualities.

In addition to strategically locating development of high and low density, there are a number of other planning techniques that the Township is actively exploring to further its farmland preservation goals. Harmony may employ some of these methods in the future.

Cluster zoning allows development to occur on a smaller percentage of a site while retaining the net development density permitted by local zoning. A common cluster zoning provision would allow (or require) 50% of a site to be preserved in its natural or agricultural state and would permit the other half of the site to be developed at twice the allowable zoning density. Some clustering ordinances require that certain sensitive natural areas or prime farmlands on a development site be preserved. Cluster zoning would help supplement the Township's down-zoning initiative.

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

Non-contiguous cluster zoning, in contrast to regular cluster zoning, permits the transfer of development density *between* parcels instead of only within parcels. First, a "sending" parcel (where the permitted development density is reduced) and a "receiving" parcel (where the permitted development density is increased) are designated. Then, the total development potential on both properties is calculated. In a case where two fifty-acre parcels are undergoing non-contiguous clustering under ten-acre zoning, there are five permitted units on each lot and ten permitted units overall. Finally, the overall development potential (10 units in this case) is applied to the receiving parcel while the sending parcel is permanently protected from future development. Non-contiguous clustering allows for development to be moved out of prime agricultural areas and concentrated into more appropriate and desirable locations.

Transfer of Development Rights

Transfer of development rights (TDR) is a growth management tool that allocates development rights from one location (the preservation or "sending" area), to another (the development or "receiving" area). These development rights are purchased by developers, and allow them to build at higher densities within the receiving zone than what existing zoning there permits. Viewed as an equity protection mechanism, transfer-of-development rights provides for the preservation of important agricultural lands while fully compensating landowners and minimizing public expenditures. To date, this program has not been utilized by Harmony Township to preserve farmland.

The New Jersey State Transfer of Development Rights Act (*N.J.S.A. 40:55D-140*)⁹ authorizes the transfer of development rights by municipalities and outlines what a town must do in order to adopt or amend a TDR ordinance. First, the municipality must prepare a Real Estate Market Analysis (REMA) that quantifies the development potential of the sending zone(s) and the capacity of the receiving zone(s) to accommodate additional

development. It must then amend its master plan to include a Development Transfer Plan Element that outlines a mechanism for assigning development credits to areas in the sending zone and reapplying them to areas in the receiving zone. An updated Utility Service Plan and Capital Improvement Program for the receiving zone should be adopted as well. Finally, a town must receive approval from the State Planning Commission to adopt the TDR ordinance. (*N.J.S.A. 40:55D-140*)

There are several different transfer-of-development rights programs that may be instituted in Harmony Township. One such program is the *intra-municipal* TDR in which sending and receiving areas are located within the same town. *Inter-municipal* TDR programs establish sending areas in one municipality and receiving areas in another. Some form of tax-based revenue sharing is normally involved with inter-municipal TDR programs.

Harmony Township also has the opportunity to participate in a *regional* TDR program. The New Jersey Highlands Council is currently establishing a regional TDR program that will be open to all Warren County municipalities. Through the Highlands program, landowners in the Highlands Preservation Area may sell the development rights on their lands to developers, who will then exercise them in voluntarily designated receiving areas throughout the seven-county region. Municipalities containing these receiving areas will have the right to assess impact fees of up to \$15,000 per unit for all new development. They will also be able to apply for grants to offset the costs associated with amending their master plans municipal ordinances. Most of Harmony Township falls within the Highlands Preservation Area and is eligible for designation as a TDR sending area through this program.

In the future, the New Jersey TDR Bank may facilitate TDR activities statewide. It plans to offer Planning Assistance Grants to municipalities looking to establish municipal TDR programs, and may provide funds for the purchase of development credits. The State TDR Bank will also provide financial banking on loans secured using development credits as collateral, and keep records of all development credit transfers within the State. The New Jersey Office of Smart Growth (OSG) also offers Smart Future Planning Grants to municipalities in order to help them plan for and implement TDR programs. Harmony Township may benefit from participating in a TDR program.

¹ Harmony Township Planning Board. Harmony Township Master Plan. June 2004.

² Workforce New Jersey Public Information Network. Labor Market Information Website: <http://www.wnjp.in.net/OneStopCareerCenter/LaborMarketInformation/lmi01/poptrd6.htm> . Accessed July 5, 2007.

³ United States Census Bureau. American Factfinder – Warren County, New Jersey. www.factfinder.census.gov . Accessed July 5, 2007.

⁴ Warren County Planning Department. Warren County Strategic Growth Plan. Belvidere, NJ. 2005.

⁵ New Jersey State Planning Commission. New Jersey State Development and Redevelopment Plan. March 2001.

⁶ New Jersey Highlands Council. Draft Highlands Regional Master Plan. November 2006.

⁷ Highlands Sustainable Agriculture Technical Report. January 2007.

⁸ Harmony Township, compiled by Morris Land Conservancy. Open Space Plan for Harmony Township. April 2006.

⁹ New Jersey Statutes Annotated 40:55D: Municipal Land Use Law.

CHAPTER 4: FARMLAND PRESERVATION PROGRAM- OVERVIEW



Farmland is an irreplaceable natural resource that contributes to the economic and ecological value of a community. Farmers have been land stewards throughout most of history with agricultural uses contributing food and fiber, clean air, storm water management, groundwater recharge, wildlife habitat, and valued open vistas. In addition to providing employment, agriculture contributes to the local economy through the sale of produce and the purchase of equipment and other materials. Productive farmland is extremely beneficial to a municipality in that it helps keep municipal taxes down, increases property values, adds to the community's character, and creates a sense of open space.

Since 1997 Harmony Township has permanently preserved **1,273 acres** of farmland. The first farm preserved was the Risko Farm in 1997. Farmers and local officials in Harmony remain firmly committed to farmland protection and support the preservation of agricultural land throughout the Township.

Warren County Agricultural Development Areas (ADAs)

The Warren County Agriculture Development Board (CADB) developed the Warren County Agricultural Development Area (ADA) based upon both statutory and county criteria. The ADA designates land that has the potential for long-term agricultural viability. This agricultural use would be the preferred, but not the exclusive, use.

Statutory Criteria:

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

Prior to this year, the entire County had been designated as being part of the Agricultural Development Area (ADA) with the exceptions of Hackettstown, Belvidere, Philipsburg, and Washington Borough. As part of the 2007 Comprehensive Farmland Preservation Plan, the

Warren CADB updated their ADA designating land capable of supporting agricultural and excluding those lands that are protected as public open space, developed areas, and land contained within the developed Boroughs and Towns located within the County.

Utilizing the state's regulatory criteria for designating ADA and existing farmland assessment data, the County designated an ADA on a county-wide basis that does not exceed 90% of the County's agricultural land base. A map showing the location of the ADA within Harmony is included within the *Project Areas Map*.

County Criteria:

- Land is currently in agricultural production or has strong potential for agricultural production or is farm assessed through a woodland management plan.
- Agriculture is the preferred, but not necessarily the exclusive use.
- Agriculture is a use permitted by current municipal zoning ordinance or is allowed as a non-conforming use.

The *Farmland Map* in this Plan shows the farm assessed lands in the Harmony Township, including all preserved farms and the one farm enrolled in the eight-year program. Overall, there are 8,306 acres of farm assessed parcels in Harmony. All lands in Harmony Township are included in the Warren County ADA, except for the Merrill Creek Reservoir. Thus, all farm assessed land in Harmony is included within the Warren County ADA.

Farmland Preserved to date by program

In 1983, the New Jersey State Legislature adopted the State Agriculture Retention and Development Act and created the State Agriculture Development Committee (SADC), which provides funding for farmland preservation programs, establishes farmland preservation policy statewide, and oversees program administration. Ten years later, in 1993, a non-binding referendum was placed on the Warren County election ballot to provide dedicated revenue for land acquisitions. Warren County voters approved the referendum to create an Open Space and Farmland Preservation Trust by a 2 to 1 ratio, allowing \$.02 per \$100 of total county equalized real property valuation to be collected. This referendum gave Warren County elected officials the tools to “preserve prime farmland, including small operations, which receive low priority from the present state program”. (*Warren County Open Space Plan*)

Of the 150 permanently preserved farms in Warren County, 12 are located in Harmony. These farms permanently protect 1,273 acres. With an average cost of \$5,070 per acre, the State of New Jersey has spent \$3,213,509, or approximately 48% of the cost share, to protect farmland in Harmony. The County has spent a total of \$860,708 to protect farmland in Harmony, approximately 13% of the total cost share.

Preserved Farms in Harmony Township

Farm	Type of Acquisition	Acres	Total Cost	State Cost	County Cost	Cost Per Acre	Year Purchased
Risko, Louis	County Easement	97	\$158,623	\$126,898	\$31,724	\$1,633	1997
Heeres, Harold	County Easement	144	\$469,521	\$339,500	\$130,021	\$3,250	2000
Hengst Farm	SADC Direct	121	\$1,125,000	\$660,383		\$5,567	2000
Vegh Brothers	County Easement	110	\$351,514	\$254,847	\$96,666	\$3,194	2000
Fischer-Bigelow, Barbara	County Easement	176	\$722,408	\$366,364	\$356,044	\$4,111	2001
MacQueen, William	County Easement	55	\$299,844	\$136,293	\$163,551	\$5,500	2001
Magyar	SADC Direct	130	\$988,591	\$988,591		\$7,625	2002
F. Santini	SADC Direct	55	\$165,974	\$165,974			2004
Hengst, L.	County Easement	63	\$239,727	\$169,070	\$70,656	\$3,800	2005
Tjalma*	Municipal	219	\$1,463,700			\$6,682	2005
Hamlen/McNerney	Municipal PIG	20	\$103,585	\$5,589	\$12,046	\$4,000	2007
Schanzlin, Robert	County Easement	83	\$531,974	waiting for state funds		\$6,400	2007
TOTAL:		1,273	\$6,620,461	\$3,213,509	\$860,708	\$5,070	

*The development easement for the Tjalma Farm was purchased by the municipality. The Township is awaiting reimbursement funding from the CADB and SADC for the sale of the development easement.

The majority of projects (57% of the total preserved farmland) are protected through the County Easement Purchase program. The State Agriculture Development Committee Direct Easement program supported 24% of the total farmland preserved in Harmony. The remaining farmland was preserved directly by the Township (17%) or through the Municipal Planning Incentive Grant program (2%).

There are currently six farms pending preservation in Harmony Township through three different preservation programs. Three farms have applied for a County Easement Purchase. To date, the development rights for two of these farms have been purchased by the County, and the County is waiting for state funding for these projects. These three County projects total 208 acres. Two farms will be purchased through a fee simple acquisition by the Township using funds from municipal bonds, after which the development rights will be sold to the County and State. These two farms total 166 acres. One farm (totaling 129 acres) has applied to the SADC Direct Easement Purchase program for the sale of their development rights. Once these six projects are completed, the Township will have an additional **503 acres** of preserved farmland.

County Easement Purchase

County Easement Purchases involve the sale of farmland development rights to the county by the landowner. By selling their development rights to the county, the landowner agrees to restrict their land to agricultural use. The landowner still retains ownership of his or her farm and can sell it on the open market at any time, but the land is deed-restricted, in perpetuity, for agricultural use.

To be eligible for the County Easement Purchase program, the land must be in an Agricultural Development Area, and be eligible for farmland assessment. A landowner must complete an

application, which is reviewed by the CADB and then approved applications are forwarded to the SADC. In the past, these applications were distributed once a year. With the new County Planning Incentive Grant program there will no longer be an annual application date for the County Easement Purchase program.

Following review of the application and a site visit by the CADB two independent appraisals must be conducted. Each appraisal should determine the land's fair market value and its agricultural value. The difference between these two is the price of the farm's "development rights," also known as the easement value. This is the price that the State offers to the landowner, and if this price is accepted, the County has title work and a survey done for farms receiving final State, County and Municipal approvals, and then schedules a closing. The landowner still retains ownership of his or her farm and can sell it on the open market at any time, but the land is deed-restricted, in perpetuity, for agricultural use.

In Harmony, seven farms have been preserved through the County Easement purchase program, protecting 728 acres of farmland.

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. The State Agriculture Development Committee (SADC) has recently 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. Applications are now accepted year round. In order to qualify for PIGs, an agricultural advisory committee, for which the County Agriculture Development Board (CADB) functions for the county, is necessary. Additionally, the county must maintain a dedicated source of funding or alternative means for funding farmland preservation. Both county and municipal applications should correlate with county comprehensive farmland preservation plans. Warren County has developed their 2007 *Comprehensive Farmland Preservation Plan* in order to bring it in to compliance with the newly adopted guidelines and qualify for the County Planning Incentive Grant program.

Municipal Planning Incentive Grants

Municipal Planning Incentive Grants (PIGs) are very similar to the County PIGs in their goals, requirements, and implementation. Similar to the County PIGs, Municipal PIGs require a local financial commitment for preserving farmland. Upon the completion of a municipal Farmland Preservation Plan and application to the SADC, grants are provided by the SADC in order to purchase development easements. The Farmland Preservation Plan Element describes the farms that are the focus of the municipal PIG. In order to qualify for this program, the town must have an agricultural advisory board and a source of funding for farmland preservation. Farms to be preserved through a municipal PIG need to be approved by the CADB. Warren County requires matching funding (50:50) between the County and the municipality, as part of a municipal PIG.

Harmony Township is currently enrolled in the Municipal Planning Incentive Grant program and one farm has been preserved through this program. The municipal PIG for Harmony Township

encompasses the entire Township and includes three Project Areas. These will be discussed in greater detail in *Chapter 5*.

Municipal Farmland Preservation Program

Harmony Township preserved one farm, the 219-acre Tjalma farmland tract. The Township purchased the development rights to this farm in 2005.

SADC Direct Easement Purchase

Also important to Harmony farmers is the State Agriculture Development Committee (SADC). The SADC is the lead program in administering the state's Farmland Preservation Program. The SADC:

- Provides cost share funding for the purchase of development easements.
- Directly purchases farms and development easements from landowners;
- Administers grants to landowners in the Farmland Preservation Program to fund up to 50 % of soil and water conservation projects;
- Administers the Right to Farm Program (discussed in *Chapter 8*);
- Administers the Transfer of Development Rights Bank; and,
- Operates the Farm Link Program, which helps connect farm owners with potential tenant farmers.

The SADC Direct Easement Purchase is a program that allows a landowner to apply directly to the SADC for the sale of development rights. In most cases, the State will pay up to 100% of the certified appraised easement value in the direct easement purchase program. By participating in this program, the landowner 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.

In Harmony, three farms on 306 acres have been preserved through this program at a cost of \$1,648,974 in state funds.

Farm	Acres	Total Cost	Year Purchased
Hengst Farm	121	\$1,125,000	2000
Magyar	130	\$988,591	2002
F. Santini	55	\$165,974	2004
Total	306	\$2,279,565	

SADC Fee Simple

A fee simple acquisition involves an entire property being purchased directly by the state. The SADC pays the survey and title costs, the landowner is exempt from paying rollback taxes for farmland assessment and the transaction can be completed in a matter of months. The SADC negotiates a purchase price subject to recommendations of two independent appraisers and

review by a state review appraiser. The land becomes restricted so that it becomes permanently preserved for agriculture. In this type of acquisition, the landowner does not retain any rights. The property is then resold at auction, the SADC does not retain ownership. To qualify to participate in this program, the farmland must be within an ADA and be eligible for Farmland Assessment. No farms in Harmony have been preserved through a SADC fee simple acquisition.

Nonprofit Grant Program

Grants are provided to nonprofit organizations by the State Agriculture Development Committee. These grants fund up to 50% of the fee simple or development easement values on farms. These grants help to preserve farmland throughout the county and generally the transactions involve properties with both agricultural and environmental significance. These grants are obtained through an application process, in which the land is valued by independent appraisers. No farms have been preserved through this program in Harmony Township

Transfer of Development Rights

The transfer of development rights is a growth management tool that transfers development rights from one location, a preservation area, to another, an identified growth area. The development rights, purchased by the developer, are used to allow for development at a higher density than what the previous zoning of the receiving area allowed. To date, this program has not been used by Harmony to preserve farmland.

Consistency with SADC Strategic Targeting Project

The purpose of the SADC Strategic Targeting Project is to prioritize farmland to be preserved by targeting farms for preservation based on specific criteria, including the prioritization of prime and statewide soils in agricultural production outside sewer service areas. According to the SADC, the Strategic Targeting Project has three primary goals. These are as follows:

- The coordination of farmland preservation and retention of agricultural practices “with proactive planning initiatives.”
- To update and create maps which serve as a tool for more accurate preservation targets.
- To coordinate different preservation efforts, such as open space, with farmland preservation.

Through the use of the Strategic Targeting Program, the SADC hopes to more efficiently target and designate farmland for preservation and, by doing so, boost the State’s agricultural industry.

Harmony Township, through the completion of its 2008 Comprehensive Farmland Preservation Plan, meets each of the goals as outlined in the Strategic Targeting Project. As a participant in the Municipal Planning Incentive Grant program, Harmony Township’s Farmland/Open Space Committee will coordinate directly with the Warren CADB to identify and target farms for preservation in the Township.

Eight Year Programs

The 8-Year Farmland Preservation Program and the Municipally Approved 8-Year Farmland Preservation Program are both cost sharing programs for soil and water conservation projects, in which the farmer receives 50% cost sharing for these projects as well as protection against nuisance complaints, emergency fuel and water rationing, zoning changes, and eminent domain actions. In return, the farmer signs an agreement that restricts the land to agricultural use for eight years. For entrance into these programs and to qualify for benefits, a farm must be located within an ADA. Technical assistance for the soil and water practices comes through the Natural Resource Conservation Service.

In Harmony, one farm covering 140 acres is currently enrolled in the eight-year program.

Coordination with Open Space Preservation Initiatives

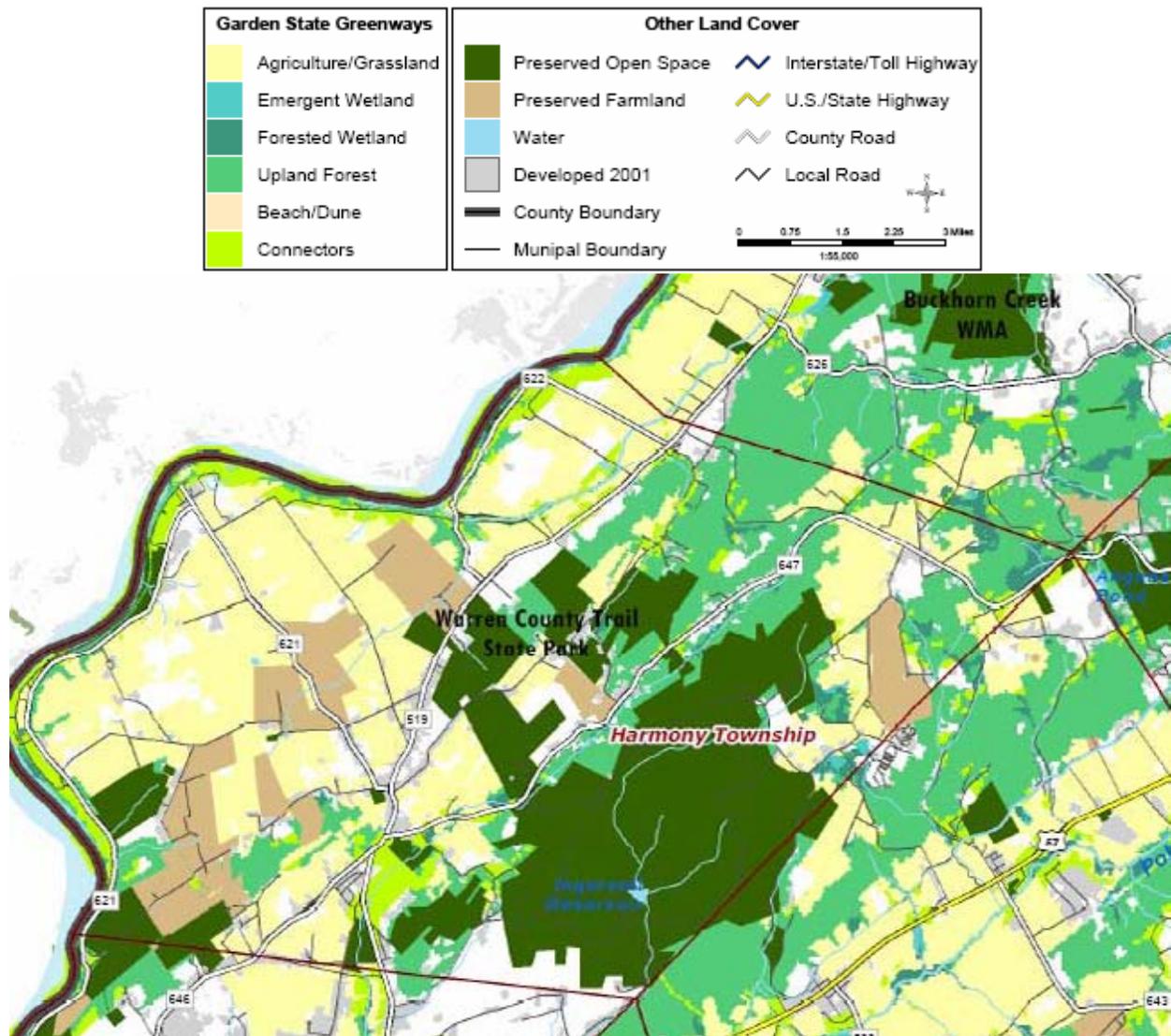
A cooperative project involves a partnership and/or funding from more than one agency. This kind of project leverages county farmland preservation dollars and makes use of municipal open space trust funds or grants to non-profit organizations. These “hybrid” projects are an opportunity to use traditional open space funds, where appropriate, to help preserve farm properties, especially where those properties are a mixture of cropland and woodland areas. The use of Green Acres funding, local open space trust funds, and nonprofit grant funds are becoming increasingly important to preserving agricultural landscapes. All publicly preserved open space is shown in “green” on the *Farmland Map*.

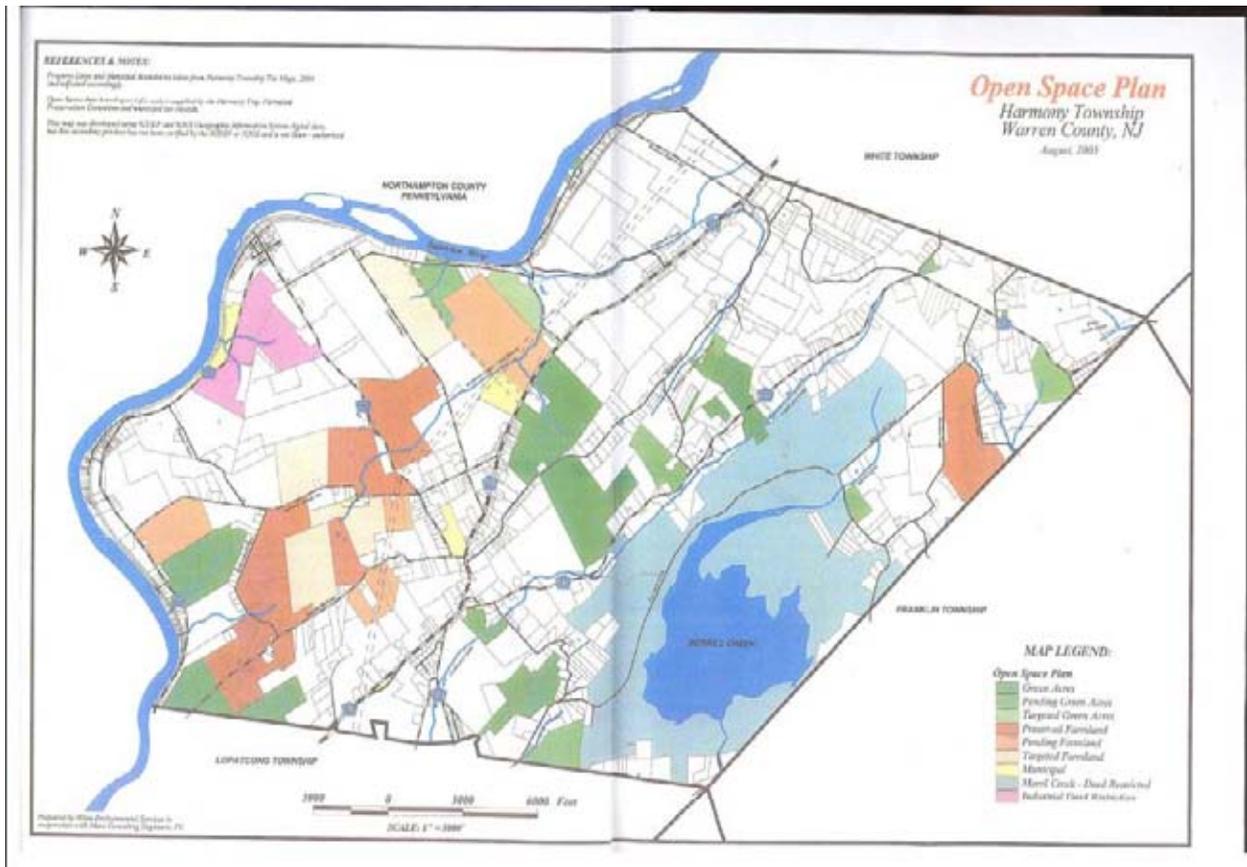
Farmland preservation and the identification of targeted farms should be coordinated with open space planning efforts. Trail easements and adjacency to proposed and existing active recreational facilities are potential areas of concern for farmers. Harmony Township has a municipal Open Space Trust Fund which is used to preserve open space and farmland. Additionally, the Township’s 2006 *Open Space and Recreation Plan* outlines the following goals for the Township’s open space program:

- Protect the agricultural and rural character of Harmony Township through preservation of Harmony’s characteristic scenic vistas, farm fields, wooded lots, and water resources.
- Maintain agriculture as a viable land use and economic industry for Harmony Township by retaining farmers and local agricultural operations.
- Provide for an adequate amount of active and passive recreation opportunities and facilities to be utilized by all residents.
- Establish a Greenway Plan for community connectivity to link Township residential areas and destination points with local recreation areas through the use of green corridors, which may include walking and bicycle pathways, such as the Warren Highlands Trail.
- Protect important water resources within Harmony Township including lands adjacent to Category One waters, trout production waters, aquifer recharge areas, wetlands, Merrill Creek Reservoir, and the Wild and Scenic Delaware River.
- Preserve important mature forested lands, especially the U.S. Forest Service designated “Important Area” known as Scott’s Mountain.

- Retain scenic vistas designated as part of the scenic corridors outlined in the 2004 Master Plan.

In Harmony, both farmland and open space preservation are coordinated through the Farmland/Open Space Committee. The Committee is guided by this *Comprehensive Farmland Preservation Plan* as well as the Township’s *2006 Open Space and Recreation Plan*. On the following page is Harmony Township’s Open Space Map identifying the Township’s pending and targeted open space projects. Below is the *Garden State Greenways* map for Knowlton Township. This map details the location of local and regional open space and recreational lands in and around Harmony Township. Both of these maps and plans may be used in conjunction with the Township’s *Project Areas Map* to identify land for open space and farmland protection.





Farmland Preservation Program Funding Expended to Date by Source

The Harmony Open Space Trust Fund was approved in 1998 by voter referendum. The fund created a tax that collected two cents (\$.02) per one hundred dollars (\$100) of assessed property value. The approved uses of the tax were primarily to preserve farmland and secondarily, to protect water resources and provide outdoor recreation.

In November 2000, ballot questions offered voters the choice of raising the tax to four cents (\$.04) or ten cents (\$.10) to provide additional funds for preservation. Both measures passed - the first by greater than a 2 to 1 margin and the second by a narrow margin. As a result, the Township Committee passed an increase to five cents (\$.05) per one hundred dollars in April 2001. The current tax rate remains at five cents and brings in approximately \$247,000 to the Open Space Trust Fund per year. The fund has a current balance of approximately \$1,200,000.

The chart below details the income generated by the Harmony Township Open Space Trust Fund and the rate of growth for the Trust Fund since its inception.

Year	Rate (\$/\$100)	Amount Generated	Percent Change
1999	\$0.02	\$70,726	
2000	\$0.02	\$70,740	0.0%
2001	\$0.05	\$175,671	148.3% (Trust increased from 2 cents to 5 cents)
2002	\$0.05	\$176,780	0.01%
2003	\$0.05	\$260,541	47.4% (The Township underwent a revaluation)
2004	\$0.05	\$262,673	0.01%
2005	\$0.05	\$265,242	0.01%
2006	\$0.05	\$256,038	-0.03%
2007	\$0.05	\$247,192	-0.03%

A total of \$1,200,000 is available for farmland preservation in 2007. This balance includes the 2007 allocation from the Open Space Trust Fund. To date, the Township has expended \$603,955 from their Open Space and Farmland Preservation Trust Fund to cover the costs of down payments on two municipal bonds as well as costs for appraisals, survey, and title work for land preservation projects. In 2005, Harmony Township used \$73,000 as a down payment on the bond ordinance for acquisition of the Tjalma farm. This bond appropriated a total of \$1,436,700 for the purchase of this farm tract directly by the Township. In 2006, the Township used \$250,000 as a down payment on a bond ordinance for the acquisition and permanent preservation of six floodprone properties for open space. This project was funded through New Jersey Green Acres and the Federal Emergency Management Agency.

Monitoring the Easements

The farms under easement in Harmony were preserved through the County Easement Purchase Program. In Warren County, when county funds are used for easements, the county monitors the property to verify that compliance with the deed restrictions on the preserved property is taking place. All farmland preservation projects completed by Harmony Township are done in partnership with Warren County. The Township's Farmland/Open Space Committee will notify the Warren CADB if violations are suspected. The Warren County Soil Conservation District performs annual inspections of the property, which consist of completion of a form during a field visit to the farm. The inspectors take note of the following:

- change in ownership since the previous inspection
- evidence of non-agricultural development (approved or otherwise)
- use of the premises for agricultural activities
- presence of expansion of non-agricultural activity since the previous inspection
- if the non-agricultural practice has been abandoned
- evidence of mining or removing of materials such as sand, gravel, rock, etc.
- evidence of dumping
- whether or not the farm has an approved conservation plan
- any improvements to farm buildings and residences
- any new agricultural buildings erected

Coordination with Transfer of Development Rights Programs

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

CHAPTER 5: FUTURE FARMLAND PRESERVATION PROGRAM



Preservation Goals

Harmony Township is 15,405 acres (24.07 square miles) in size. Of this, **8,306 acres** are under farmland assessment, which includes croplands, woodlands, farm structures and wetlands/waterways that occur on an agricultural property. Since 1997, Harmony Township has preserved **1,273 acres** of farmland. Thus, 7,033 acres of farmland remaining in Harmony, or 85% of the Township's agricultural base, are currently not protected through the farmland preservation program.

Of the 8,306 acres of assessed farmland in the Township, **4,560 acres** meet the State's Minimum Eligibility Criteria for soils and tillable land. According to the 2005 Farmland Assessment, **5,783 acres** in Harmony Township are in active agricultural land. Thus, nearly 79% of the active agricultural land is potentially eligible for preservation through the state program. Based on the amount of farmland that met the SADC Minimum Eligibility Criteria and available funding to purchase and preserve farmland, the following preservation goals are identified for Harmony Township:

One year target:	100 acres,
Five year target:	500 acres,
Ten year target:	1,000 acres.

Public Participation

For the development of this Comprehensive Farmland Preservation Plan, Harmony Township hosted two public meetings seeking input and direction from local residents, farmers, officials, and representatives of agencies and nonprofit organizations interested in farmland preservation. The first meeting was held towards the beginning of the plan development and the second meeting was held after the Draft Plan had been released to the public, in order to receive comments on the Draft Plan.

Public Hearing #1 – October 4, 2007

The Harmony Township Committee hosted an initial public meeting on Thursday, October 4, 2007. Present at the meeting were representatives from governing body, Farmland/Open Space Committee, the Warren County Department of Land Preservation, and local landowners and residents. Those present discussed their opinions regarding the current status and the future of agriculture in the Township. Attendees raised their concerns while offering suggestions for improving the existing program.

Mayor Tipton opened the discussion and Mr. Resker from the Warren County Department of Land Preservation reported on current activities at the County level. He noted that the County is in the process of developing a Comprehensive Farmland Preservation Plan. The Plan will allow the County to take advantage of the County PIG funding and the new rules will likely improve processing time for applications. The County strongly supports farmland preservation and will work closely with Harmony's Farmland/Open Space Committee to identify and preserve targeted farms. The County is looking at the Jansen, Schanzlin, Venner, Denjoe and Sakele properties.

For the state program, Mr. Resker reported that the SADC would probably look at minimum acreages of approximately 50 acres for future farmland preservation projects. The County will continue to target the next tier and will partner with municipalities to help preserve farmland of local and county importance. A committee member noted that the Township Farmland/Open Space Committee should consider prioritizing bigger properties as they are most attractive to developers and will provide the best value for the farmer and Township.

The Township Chief Financial Officer, Betty Dobes, noted that local funding for land preservation comes from the municipal Open Space Trust Fund. Ms. Dobes also noted that there is a question on the November ballot asking Harmony voters whether the municipal open space tax levy should be increased from 5 to 10 cents per \$100 of assessed property value*. She reported that the Township is currently paying debt service on the Tjalma bond and the 2007 bonds for the Denjoe and Sakele properties. The Committee reviewed several financial scenarios that were prepared by the CFO.

Abigail Postma, the Chair of the Farmland/Open Space Committee, stated that Committee's goal is to preserve the farmer and the economy of farmer, and to prevent development. She expressed a need for the Township to work together and move forward. She noted that if the County is going to preserve larger farms, there are approximately 25 larger farms remaining in the Township. Ms. Postma stated that the goal should be to look at target areas and move forward on the Township's update to their current Farmland Preservation Plan to bring it into compliance with the new SADC guidelines.

Mitchell Jones, a member of the Farmland/Open Space Committee requested the Township Committee's opinion on preserving farmland in the Highlands. While Mayor Tipton noted

* Note: The Township of Harmony's 2007 Open Space Ballot question was not supported by the voters and the question did not pass.

that they may not be a priority as they are technically not developable, Ms. Postma recommended that all farms should be targeted at 50 plus acres regardless of where they are located. Overall, the attendees agreed that prioritizing farmland for preservation would be difficult but felt they must move forward and agreed to proceed with the update to their Farmland Preservation Plan.

The notice and agenda for this meeting is included in the *Appendix*.

Public Hearing #2 –April 3 and April 17, 2008

Harmony Township held a second meeting on April 3, 2008 to gather input from local residents and farmers on the Draft Comprehensive Farmland Preservation Plan. The Harmony Township Planning Board held a meeting on April 17, 2008 to adopt the Plan as an Element of the Township's Master Plan.

The notice for the April 17, 2008 Planning Board meeting is included in the *Appendix*.

Project Area Summaries

The Harmony Township Farmland/Open Space Committee has identified three distinct project areas within Warren County's Agricultural Development Area for farmland preservation. All lands within the Township are within the County's ADA except for the Merrill Creek Reservoir. Combined the municipal Project Areas encompass all farmland in the Township. The Project Areas in Harmony Township are shown on the *Project Areas Map* and described below.

Project Area 1

Project Area 1 is located in the center of the Township. Bound by the Delaware River and the Merrill Creek Reservoir, its western border generally follows County Road (CR) 621 (Brainards Road) south to CR 519 (Belvidere Road). At the intersection of CR 519 and CR 647 (Harmony Brass Castle Road), the edge of the Project Area follows CR 647 north to Swamp Road and its intersection with Ridge Road. Following a line generally northeast to CR 519, the Project Area includes all farmland west of Reeder Road. This Project Area includes 472 acres of preserved farmland and several open space parcels.

Project Area 2

Project Area 2 is located in the southern portion of the Township, south of Project Area 1. The Delaware River forms the western border of the Project Area and the Township's boundary with Lopatcong Township forms the southern border. On its eastern edge, the Project Area abuts the Merrill Creek Reservoir. Project Area 2 includes all farmland south and west of Project Area 1. This Project Area includes one farm enrolled in the 8-year farmland preservation program and 648 acres of preserved farmland. There are also several preserved open space properties within this Project Area.

Project Area 3

Project Area 3 is located in the northern portion of the Township, north of Project Area 1. The Delaware River forms the western border of the Project Area. To the east, the Project Area is limited by Township's boundary with Franklin Township. The Township's boundary with White Township forms the northern border. All farmland north and east of Project Area 1 is included within this Project Area. There are 271 acres of preserved farmland within this Project Area, including one farm which extends into neighboring Franklin Township. There are several preserved open space properties within this Project Area.

The below Table summarizes the acreage and parcels within each of the Projects Areas in Harmony Township:

	Total Qfarm Parcels		Unpreserved Qfarm Parcels		Preserved Qfarm Parcels	
	Number of Parcels	Acreage	Number of Parcels	Acreage	Number of Parcels	Acreage
Project Area 1	72	2,119	67	1,646	5	472
Project Area 2	104	3,171	90	2,523	14	648
Project Area 3	154	2,979	150	2,708	4	271

Project Area Analysis and Minimum Eligibility Criteria

For each project area, an analysis was completed to identify the amount and density of preserved farmland, soils and size of the area. The minimum eligibility analysis involved a parcel-based screening of tax lot characteristics. Farmland preservation applications often include multiple lots; combining these lots may increase the acreage eligible for SADC cost share funding in Harmony Township. For each project area the following was determined:

- The size of the total project area (in acres);
- The total acreage of preserved farmland in the project area;
- The acreage of publicly held open space in each project area; and
- The total acreage of prime soils, soils of statewide importance, and unique agricultural soils in each project area.

For each of the above categories, the land area within each project area is expressed as a ratio between the total acreage for each category and the total acreage of the project area. Also included is the percentage of each category expressed as a percentage of the total project area.

Minimum Eligibility Criteria

Minimum Eligibility Criteria are based upon the State Agriculture Development Committee's recently adopted (*May 21, 2007*) rules for farmland preservation and project eligibility. In order to be eligible for preservation the site must be developable, have soils

capable of supporting agricultural or horticultural production and meet minimum tillable land standards. (N.J.A.C. 2:76-6.20) In summary:

For all lands less than or equal to 10 acres:

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

For lands greater than 10 acres:

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

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

The Township may proceed without State funding on projects that do not meet these Minimum Eligibility Standards. In all cases, the Harmony Township Farmland/Open Space Committee will work closely with the Warren CADB to review and process applications from landowners for farmland preservation. The Harmony Township Farmland/Open Space Committee will follow all County and State procedures to ensure consistency in application review and processing.

Within the identified project areas, Harmony Township has identified candidate farms (or “targeted farms” as referenced in the May 21, 2007 rules) that meet the tillable land and soils minimum eligibility standards. The following queries were made utilizing the ArcGIS 9.2 digital mapping software:

Farmland that meets the SADC Criteria for Agricultural Soils

Soil acreage was determined using the Soil Survey as prepared by the Natural Resource Conservation Service for prime farmland soils, soils of statewide importance and soils of unique importance. Farm parcels are sorted on size based upon the State Agriculture Development Committee (SADC) Minimum Eligibility Criteria for soils.

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

Farmland that meets the SADC Criteria for Tillable Land

Tillable acreage was determined using the N.J. Department of Environmental Protection 2002 Land Use/Land Cover mapping for agricultural lands. Farm parcels were sorted on size based upon the State Agriculture Development Committee (SADC) Minimum Eligibility Criteria for tillable land.

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

Farmland that meets SADC Criteria for both Tillable Land and Soils

Utilizing the tillable acreage determined from the N.J. Department of Environmental Protection 2002 Land Use/Land Cover mapping for agricultural lands and soil acreage determined using the Soil Survey as prepared by the Natural Resource Conservation Service for prime farmland soils, soils of statewide importance and soils of unique importance, farm parcels were sorted on size based upon the State Agriculture Development Committee (SADC) Minimum Eligibility Criteria for tillable land and soils.

The Project Area Summaries and Minimum Eligibility Criteria analysis for each project area are presented in the Tables (on *page 5-7*) and GIS Maps (included within the *Maps Section* of this Plan). As stated earlier, for each category, the land area within each project area is expressed as a ratio between the total acreage for each category and the total acreage of the project area. Also included is the percentage of each category expressed as a percentage of the total project area.

Project Area 1	Acreeage	Density Ratio	Percentage
Total Acres in Project Area	3,313		
Total Preserved Farmland	472	472: 3,313	14%
Total Open Space	441	441: 3,313	13%
Prime, Statewide, Unique Soils	2,562	2,562: 3,313	77%
QFarm Parcels with Productive Soils	1,482	1,482: 3,313	45%
QFarm Parcels with Tillable Land	1,342	1,342: 3,313	40%
QFarm Parcels with Soils and Tillable Land	1,334	1,334: 3,313	40%

Project Area 2	Acreeage	Density Ratio	Percentage
Total Acres in Project Area	4,844		
Total Preserved Farmland	648	648: 4,844	13%
Total Open Space	700	700: 4,844	14%
Prime, Statewide, Unique Soils	3,384	3,384: 4,844	70%
QFarm Parcels with Productive Soils	2,195	2,195: 4,844	45%
QFarm Parcels with Tillable Land	1,979	1,979: 4,844	41%
QFarm Parcels with Soils and Tillable Land	1,802	1,802: 4,844	37%

Project Area 3	Acreeage	Density Ratio	Percentage
Total Acres in Project Area	4,252		
Total Preserved Farmland	271	271: 4,252	6%
Total Open Space	231	231: 4,252	5%
Prime, Statewide, Unique Soils	2,410	2,410: 4,252	57%
QFarm Parcels with Productive Soils	1,844	1,844: 4,252	43%
QFarm Parcels with Tillable Land	1,424	1,424: 4,252	33%
QFarm Parcels with Soils and Tillable Land	1,424	1,424: 4,252	33%

There are a total of **4,560 acres** of farm assessed land (QFarm Parcels) that meets both the Minimum Eligibility Criteria for soils and tillable land. A complete list of these farms is included within the *Appendix* of this Plan.

There are **8,306 acres** of total assessed farmland in Harmony Township, of which **4,560 acres** meet both the soils and tillable land Minimum Eligibility Criteria for farmland preservation. According to the 2005 Farmland Assessment, **5,783 acres** are in active agricultural land in Harmony Township, which account for 70% of the total assessed farmland. Approximately 55% of the existing farmland in Harmony meets both the soils and tillable land Minimum Eligibility Criteria as defined by the SADC. Of the active agricultural land, nearly 79% meets both state criteria.

In addition to the State’s new Minimum Eligibility Criteria, the SADC has also identified an “Eligible Farm” standard as defined in section 17.2 of the newly adopted rules. In this case, grant funding will be based upon an individual farm having a rank score that is “*equal to or greater than 70% of the county’s average quality score of all farms granted preliminary approval by the SADC through the county easement purchase program and/or the county planning incentive grant program within the previous three fiscal years.*” The

SADC has released this rank score for Fiscal Year 2009 for Warren County, the minimum score for an Eligible Farm is 38. A detailed score listing is included within the *Appendix*.

County and Municipal Ranking Criteria

The Warren CADB currently utilizes the state ranking criteria as the basis for calculating the rank of each farm. The CADB has developed its own Ranking Sheet (included within the *Appendix*) that determines each of the following for individual applicant farms:

- the quality of the local soils
- total tillable acres available
- local buffers and boundaries
- zoning
- County growth and existing infrastructure
- municipal commitment to agriculture
- other financial commitment to agriculture

Points are received in each category relevant to the suitability of the local conditions for agriculture. The higher the score received, the higher the ranking.

As the County transitions to the new County Planning Incentive Grant program, the CADB will be using the State's minimum eligibility criteria as the basis for ranking farms for preservation. In special cases where a farm is of special interest, and the CADB purchases land without state funding, it may consider using its current ranking form to prioritize farmland for preservation.

Harmony Township's ranking criteria are consistent with the County and State Ranking Criteria. The Township's Farmland/Open Space Committee and Township Committee is committed to preserving as much of the Township's agricultural land base as possible and supports innovative funding mechanisms and preservation tools. The focus of the Township's farmland preservation program is to preserve the productive agricultural landscape of the community.

Municipal and County Policies Related to Farmland Preservation Applications

Harmony Township follows the policies established by Warren County regarding housing opportunities, division of premises, and exception areas. These policies are documented in the 2007 *Warren County Comprehensive Farmland Preservation Plan*. The Warren CADB follows the SADC's policies regarding these issues and below is a brief summary of the state policies for each issue:

Approval of Housing Opportunities

Agricultural labor housing: Agricultural labor housing is not currently protected under the Right to Farm Act in the State of New Jersey. However, the State Agriculture Development

Committee understands the need for this type of housing and does have a policy that a landowner must refer to in order to construct labor housing. These applications are reviewed by the State Agriculture Development Committee and the County Agriculture Development Board.

House replacement: The policy of the State Agriculture Development Committee on house replacement is that requests for replacement of a residence on permanently preserved land must be reviewed and approved on an individual basis by the CADB and the SADC, in order to minimize the impact on the agricultural operation. This is supported by the Harmony Farmland/Open Space Committee and Warren CADB.

Residual dwelling site opportunity allocation: Residual Dwelling Site Opportunities (RDSOs) are lingering potential housing prospects located within a deed-restricted farm. By designating an area as an RDSO, the landowner is implying that the land will be used for a residential unit or other structure as referred to in N.J.A.C. 2:76-6.17. These prospective residential units can be allocated to parcels that are at least 100 acres in size, but at a density not to exceed one residential unit per 100 acres. (This density calculation includes existing and proposed residential buildings.) The purpose of the building in question must be for “single-family residential housing and its appurtenant uses.” (*SADC Appraiser Handbook 2007*)¹ To qualify as an RDSO, the SADC requires that the use of the residential unit be for agricultural purposes and “at least one person residing in the residential unit shall be regularly engaged in common farm site practices.” This is supported by the Harmony Farmland/Open Space Committee and Warren CADB.

Division of the Premises

The goal of the State Agriculture Development Committee, and supported by the Warren CADB and Harmony Farmland/Open Space Committee, is to preserve large tracts of farmland. Therefore, a division of the premises is not an encouraged practice, however when division occurs it must be for agricultural purposes and must result in agriculturally viable land parcels. A landowner wishing to divide permanently preserved farmland must submit a written request. The application must be approved, in writing, by both the State Agriculture Development Committee and the CADB.

Approval of Exception

Exceptions are defined by the SADC as “acres within a farm being preserved” which are “not subject to the terms of the deed of easement.” When an exception is made, the landowner does not receive any compensation in the excepted area. Exceptions are not a practice that is encouraged by the SADC and, when they occur, it is recommended that they should be as small as possible. There are two types of exceptions that can occur; severable and non-severable.

Severable: A severable exception is defined by the SADC as an “area which is part of an existing Block and Lot owned by the applicant which will be excluded from the restrictions of the Deed of Easement and may be sold as a separate lot in the future.” (*SADC Appraiser*

Handbook 2007) A severable exception is made “if a landowner wants to be able to sell the excepted area separate from the deed-restricted farm.”

Non-severable: Non-severable exceptions are defined by the SADC as “area which is part of an existing Block and Lot owned by the application that will not be subject to the restrictions of the Deed of Easement but cannot be sold separately from the remaining premises.” (*SADC Appraiser Handbook 2007*) Unlike a severable exception, a non-severable exception is “always attached to the protected farm.”

Exceptions made to farmland have the potential to impact the value of the property. When an appraisal occurs, both severable and non-severable exceptions are considered in the determination of the restricted/ after value of the property. The Warren CADB and Harmony Farmland/Open Space Committee follow the exception policies as identified by the SADC.

Funding Plan

Installment Purchases and Donations/Bargain Sales

Harmony Township is supportive of donation/bargain sales and installment purchases. Both of these tools serve to leverage limited funding resources and are described below:

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

Installment Purchase: Through an installment purchase agreement, development rights may be acquired by the Warren CADB through a payment plan that provides payments to the landowner over time. Receiving the income from the sale in installments may provide the landowner with financial management and/or tax advantages. An example of this is the Marra Farm in Washington Township.

Overview of Warren County Trust Fund and Municipal PIG requirements

The Warren County Open Space Recreation Farmland Preservation Trust Fund generates approximately \$7.8 million annually. Of this, \$4.5 million is available for farmland preservation in 2007. Harmony Township works with Warren County according to its current cost-share requirements for preserving farms. The County’s policy is that Warren CADB will fund one-half of the difference between the amount the SADC funded and the total cost for preserving a farm, based upon the Certified Market Value, through the municipal Planning Incentive Grant program. The remainder is funded by the municipality.

Overview of SADC “sliding scale”

As part of the municipal PIG program, the SADC will cost share on an easement which has been, or is being acquired, by a municipality. The SADC will not authorize a grant for greater than 80% of the SADC’s certified fair market value of the development easement. If the landowner’s asking price is greater than the certified fair market value, the SADC’s cost share grant shall be based upon the SADC’s certified fair market value. The SADC percent cost share is based upon the following sliding scale:

Landowner's Asking Price	Percent Committee Cost Share
From \$0.00 to \$1,000	= 80% above \$0.00
From > \$1,000 to \$3,000	= \$800 + 70% above \$1,000
From > \$3,000 to \$5,000	= \$2,200 + 60% above \$3,000
From > \$5,000 to \$9,000	= \$3,400 + 50% above \$5,000
From > \$9,000 to \$50,000	= 60%
From > \$50,000 to \$75,000	= \$30,000 + 55% above \$50,000
From > \$75,000 to \$85,000	= \$43,750 + 50% above \$75,000
From > \$85,000 to \$95,000	= \$48,750 + 40% above \$85,000
From > \$95,000 to \$105,000	= \$52,750 + 30% above \$95,000
From > \$105,000 to \$115,000	= \$55,750 + 20% above \$105,000
From > \$115,000	= \$57,750 + 10% above \$115,000

Description of Municipal Funding Sources

The Harmony Farmland Preservation Trust Fund was approved in 1998 by voter referendum and collected two cents (\$.02) per one hundred dollars (\$100) of assessed property value. In 2001, the Township increased the farmland preservation tax to five cents (\$.05). The Fund currently generates approximately \$247,000 per year and has a current balance of approximately \$1,200,000. To date, \$603,955 has been spent from the Trust for land acquisition projects. This includes approximately 5% of the Trust that is used for due diligence. Since 1997, the average price of purchasing a development easement in Harmony is \$5,070 per acre.

In addition to its Open Space Trust Fund, Harmony Township also uses bonds as a way to finance farmland preservation. This shows a strong and persistent commitment by the Township to protect farmland from development. To date, the Township has bonded three times to protect farmland:

- In 2005, Harmony Township bonded for \$1,463,700 to purchase development rights on Tjalma Farm.
- In 2007, the Township bonded for \$817,400 to purchase development rights on Denjoe Farm.
- In 2007, the Township bonded for \$1,424,148 to purchase development rights on Sakele Farm.

Cost Projections and Funding Plan Associated with Preservation Goals

The Harmony Open Space Trust Fund currently generates approximately \$247,000 per year and has a current balance of approximately \$1,200,000. Harmony Township has three bonds for farmland preservation. For the first time, the Township in 2007 used monies from the Open Space Trust Fund to pay for debt service in the amount of \$191,070. For future years, the Township will determine whether to pay this debt service out of the Open Space Trust Fund or the Township’s general fund. To assess how this decision may affect the future funds available for farmland preservation, two financial analyses are described below.

Scenario A – Township’s Trust Fund is *not encumbered* by debt service

This 10-year financial analysis is based on the assumption that the Township **does not pay** debt service using the Open Space Trust Fund. Nine assumptions were made regarding the growth of the Township’s Open Space Tax Levy, the rate of increases in land prices and the cost-share between the municipality, Warren County, and the State of New Jersey:

- 1) assume the Trust Fund allocation is \$247,000 in 2007
- 2) assume 5% funding growth for the Trust Fund
- 3) assume the Township spends the annual allocation in the Trust Fund and does not carry a balance
- 4) assume the average price per acre is \$6,000 in 2007
- 5) assume 10% annual increase in the average cost per acre of purchasing an easement
- 6) assume Municipal funding is reduced 5% for due diligence
- 7) assume Municipal funding is not encumbered by prior obligations
- 8) assume Township is purchasing land in partnership with County and State (no direct purchase by Township)
- 9) assume the municipal cost share is on average 15%, but for this analysis a variety of cost shares are calculated, using 15% as the minimum participation.

Using these assumptions, the following analysis was completed to calculate the funding available to Harmony Township for farmland preservation:

Year	Annual Funding Available	Funding for Available Less Due Diligence	Average per Acre Cost
2008	\$247,000.00	\$234,650.00	\$6,000.00
2009	\$259,350.00	\$246,382.50	\$6,600.00
2010	\$272,317.50	\$258,701.63	\$7,260.00
2011	\$285,933.38	\$271,636.71	\$7,986.00
2012	\$300,230.04	\$285,218.54	\$8,784.60
2013	\$315,241.55	\$299,479.47	\$9,663.06
2014	\$331,003.62	\$314,453.44	\$10,629.37
2015	\$347,553.80	\$330,176.11	\$11,692.30
2016	\$364,931.49	\$346,684.92	\$12,861.53
2017	\$383,178.07	\$364,019.17	\$14,147.69

At a 15% cost share with the county and state, the Township could preserve on average between 170 and 261 acres each year, depending upon the cost of the easement. With no funding from the state or county, the ability of Harmony to purchase and preserve farmland would be extremely limited.

Average per Acre Cost	Year	Township Cost						
		Share = 15% (plus 0 ac Township direct) Acres Preserved	Share = 20% (plus 0 ac Township direct) Acres Preserved	Share = 25% (plus 0 ac Township direct) Acres Preserved	Share = 30% (plus 0 ac Township direct) Acres Preserved	Share = 35% (plus 0 ac Township direct) Acres Preserved	Share = 40% (plus 0 ac Township direct) Acres Preserved	Share = 45% (plus 0 ac Township direct) Acres Preserved
\$ 6,000	2008	261	196	156	130	112	98	87
\$ 6,600	2009	249	187	149	124	107	93	83
\$ 7,260	2010	238	178	143	119	102	89	79
\$ 7,986	2011	227	170	136	113	97	85	76
\$ 8,785	2012	216	162	130	108	93	81	72
\$ 9,663	2013	207	155	124	103	89	77	69
\$ 10,629	2014	197	148	118	99	85	74	66
\$ 11,692	2015	188	141	113	94	81	71	63
\$ 12,862	2016	180	135	108	90	77	67	60
\$ 14,148	2017	172	129	103	86	74	64	57
Total acres		2,134	1,600	1,280	1,067	914	800	11

Cost Projections Associated with Preservation Goals for Scenario A

An estimate was also completed to determine the cost share funding from the County and State. Based upon the average easement values and the SADC sliding scale, it is assumed that the cost share for the SADC will be between 15% and 20%. Using this as a basis, and assuming the available funding from the Township is limited as determined above, the following analysis was completed:

Year	15% Township Cost Share: Acres Preserved	15% County Cost Share	70% State Cost Share	Total Project Cost	20% Township Cost Share: Acres Preserved	20% County Cost Share	60% State Cost Share	Total Project Cost
2008	261	\$ 234,650	\$1,095,033	\$ 1,564,333	196	\$ 234,650	\$ 703,950	\$ 1,173,250
2009	249	\$ 246,383	\$ 1,149,785	\$ 1,642,550	187	\$ 246,383	\$ 739,148	\$ 1,231,913
2010	238	\$ 258,702	\$ 1,207,274	\$ 1,724,678	178	\$ 258,702	\$ 776,105	\$ 1,293,508
2011	227	\$ 271,637	\$ 1,267,638	\$ 1,810,911	170	\$ 271,637	\$ 814,910	\$ 1,358,184
2012	216	\$ 285,219	\$ 1,331,020	\$ 1,901,457	162	\$ 285,219	\$ 855,656	\$ 1,426,093
2013	207	\$ 299,479	\$ 1,397,571	\$ 1,996,530	155	\$ 299,479	\$ 898,438	\$ 1,497,397
2014	197	\$ 314,453	\$ 1,467,449	\$ 2,096,356	148	\$ 314,453	\$ 943,360	\$ 1,572,267
2015	188	\$ 330,176	\$ 1,540,822	\$ 2,201,174	141	\$ 330,176	\$ 990,528	\$ 1,650,881
2016	180	\$ 346,685	\$ 1,617,863	\$ 2,311,233	135	\$ 346,685	\$ 1,040,055	\$ 1,733,425
2017	172	\$ 364,019	\$ 1,698,756	\$ 2,426,794	129	\$ 364,019	\$ 1,092,057	\$ 1,820,096
Totals:	2,134				1,600			

Scenario B – A portion of the Township’s Trust Fund is used towards debt service

This 10-year financial analysis is based on the assumption that the Township **does pay** debt service using the Open Space Trust Fund. The annual debt repayment would be \$191,070 annually over the ten years. Nine assumptions were made regarding the growth of the Township’s Open Space Tax Levy, the rate of increases in land prices and the cost-share between the municipality, Warren County, and the State of New Jersey. These are described below:

- 1) assume the Trust Fund allocation is \$247,000 in 2007
- 2) assume 5% funding growth for the Trust Fund
- 3) assume the Township spends the annual allocation in the Trust Fund and does not carry a balance
- 4) assume the average price per acre is \$6,000 in 2007
- 5) assume 10% annual increase in the average cost per acre of purchasing an easement
- 6) assume Municipal funding is reduced 5% for due diligence
- 7) assume Township is purchasing land in partnership with County and State (no direct purchase by Township)
- 8) assume the municipal cost share is on average 15%, but for this analysis a variety of cost shares are calculated, using 15% as the minimum participation.

Using these assumptions, the following analysis was completed to calculate the funding available to Harmony Township for farmland preservation if the Township chooses to pay its debt service through funds from the Open Space Trust Fund:

Year	Annual Funding Available	Funding for Available Less Administrative Costs	Funding Available Less Debt Service	Average per Acre Cost
2008	\$247,000	\$234,650	\$43,580	\$6,000
2009	\$259,350	\$246,383	\$55,313	\$6,600
2010	\$272,318	\$258,702	\$67,632	\$7,260
2011	\$285,933	\$271,637	\$80,567	\$7,986
2012	\$300,230	\$285,219	\$94,149	\$8,785
2013	\$315,242	\$299,479	\$108,409	\$9,663
2014	\$331,004	\$314,453	\$123,383	\$10,629
2015	\$347,554	\$330,176	\$139,106	\$11,692
2016	\$364,931	\$346,685	\$155,615	\$12,862
2017	\$383,178	\$364,019	\$172,949	\$14,148

At a 15% cost share with the county and state, the Township could preserve between 48 and 81 acres each year, depending upon the cost of the easement. With no funding from the state or county, the ability of Harmony to purchase and preserve farmland would be extremely limited.

Average per Acre Cost	Year	Township Cost						
		<u>Share = 15%</u>	<u>Share = 20%</u>	<u>Share = 25%</u>	<u>Share = 30%</u>	<u>Share = 35%</u>	<u>Share = 40%</u>	<u>Share = 45%</u>
		(plus 0 ac Township direct)						
		Acres Preserved						
\$ 6,000	2008	48	36	29	24	21	18	16
\$ 6,600	2009	56	42	34	28	24	21	19
\$ 7,260	2010	62	47	37	31	27	23	21
\$ 7,986	2011	67	50	40	34	29	25	22
\$ 8,785	2012	71	54	43	36	31	27	24
\$ 9,663	2013	75	56	45	37	32	28	25
\$ 10,629	2014	77	58	46	39	33	29	26
\$ 11,692	2015	79	59	48	40	34	30	26
\$ 12,862	2016	81	60	48	40	35	30	27
\$ 14,148	2017	81	61	49	41	35	31	27
Total acres		699	524	419	349	299	262	233

The two analyses above show that, at 15% cost share, the Township could preserve approximately 200 acres annually if debt service is not paid through the Open Space Trust Fund. In comparison, only 50 acres could be preserved annually if debt service is deducted from the Trust Fund. This does not meet the Township’s goals for farmland preservation and a cost projection was not completed for the partnership cost-share (for the County and State) for Scenario B.

These analyses are based on the assumption that Harmony Township spends on the annual allocation of \$247,000 from the Open Space Trust Fund and does not carry a balance. If the annual allocation is reduced by \$191,070 for debt service, the Township is much more limited in their ability to preserve farmland. Harmony Township does, however, carry a current balance of \$1,200,000. If the Township chose to use this balance to preserve additional farmland through fee simple acquisition as it has done in the past, the Township could protect an additional 200 acres at a cost of \$6,000 per acre.

Farmland Preservation Program Administrative Resources

Staff resources

The Township of Harmony has a joint Farmland/Open Space Preservation Committee that meets on a quarterly or monthly basis as needed. Abigail Postma is the chairman for this Committee. The Farmland/Open Space Preservation Committee tracks all farmland preservation projects for the Township, including their applications and status. The Township should consider separating the farmland component from this Committee and creating an independent Agricultural Advisory Committee in the future.

Legal support

Legal support for the County's farmland preservation program is provided by the municipal attorney, Seglinde Rath.

Database Development and Geographic Information System Resources

GIS support for preservation projects in Harmony is provided through the Township's Environmental Committee and Township Engineer, Nevitt Duveneck.

Factors Limiting Farmland Preservation Implementation

Rising Land Values and Limited Funding

Harmony Township has a strong commitment to preserve its agricultural lands, as is evidenced by the passing of multiple bond measures in the past to protect local farms. However, in the face of rising land values, farmland preservation requires an increasing commitment of financial resources. The average cost per acre of preserved farmland in Harmony was \$5,200 in 2007, in comparison to around \$1,600 per acre ten years ago. Recent appraisals have approached close to \$9,000 an acre. To move forward on farmland preservation in the face of rising land values, the Township supports the municipal PIG program. The Township hopes to see the municipal PIG program grow, but funding from the state is critical to this expansion. Due to the uncertainty in state funding for farmland preservation after 2009, Harmony Township faces financial challenges as it moves forward in purchasing and preserving land over the next ten years, especially in light of the rising land prices in the municipality.

Landowner Interest

While Harmony farmers remain interested in farmland preservation, local farmers express concerns over the profitability of farmland preservation in comparison to selling their farms to developers. These concerns may highlight a need for additional landowner education in Harmony to clarify financial realities and to explain other non-financial benefits of farmland preservation to local landowners.

Risk of Development

Harmony's large agricultural parcels make them attractive candidates for development. The soils in the Delaware Valley are capable of supporting septic densities as low as 2.5 acres per system and large lots offer more options to potential developers. Development pressures are expected to intensify in Harmony during the near future. The adjacent Townships of White and Lopatcong have seen significant growth of single-family residential neighborhoods during the past thirty years. Future development north of Phillipsburg would have to occur in Harmony Township. The Township's affordable housing mandate has produced a "developer's remedy" lawsuit that will result in the addition of 186 residential units, and approximately 300 new residents, on prime

agricultural land. The Warren County Planning Department projects that the population of Harmony Township will increase nearly 150% by 2030.

¹ State Agriculture Development Committee, New Jersey Farmland Preservation Program Appraiser Handbook. May 24, 2007. <http://www.state.nj.us/agriculture/sadc/appraiserhandbook.pdf>

CHAPTER 6: ECONOMIC DEVELOPMENT



With 8,306 acres of agricultural land, Harmony has the seventh highest number of acres devoted to agriculture of the twenty-town municipalities in Warren County. Hay, corn, and soybeans form the economic base of the farming industry in Harmony. Building upon this are the ancillary businesses and infrastructure which support the Township's farmers. Throughout the state, the marketing and profitability of the agricultural industry has gained renewed focus. The farmland preservation program is a critical component of the farming industry, and the success of the farmland preservation program in Harmony is not measured only by acres preserved, but also by the programs put in place to support the farmers and their businesses. The Township's agricultural community and its supporting groups and agencies understand that a farmland preservation program constitutes much more than the act of preserving land. In order to be a full partner in a successful farmland preservation program, agriculture as an industry must be vibrant, self sustaining, and innovative.

The State of New Jersey offers Harmony farmers a number of support agencies and programs ranging from technical advice to farm loans. The New Jersey Department of Agriculture (NJDA) *Smart Growth Tool Kit* provides information to support municipal governments, businesses, non-profit groups, and local citizens in their efforts to achieve the goals and objectives outlined in the *NJDA Agricultural Smart Growth Plan for New Jersey, 2006*. (*Agricultural Smart Growth Tool Kit*)¹ (*Agricultural Smart Growth Plan 2006*)² The Tool Kit embraces the five components that have been identified by NJDA as critical for the future of farming: Farmland Preservation, Innovative Conservation Planning, Economic Development, Agriculture Industry Sustainability, and Natural Resource Conservation.

As part of this emphasis on the business of agriculture, the NJDA has issued its 2007 "Economic Development Strategies", which identifies and proposes strategies to expand and strengthen various sectors of the agriculture industry in New Jersey, including produce, horticulture, dairy, livestock and poultry, field crops, organic, equine, wine, and Agritourism. The NJDA observes that "*local access to large affluent markets has long been an advantage for the marketing of (those) products. While our markets are still there, competition for those markets has become tougher. New Jersey's (produce) industry must continually work to rediscover its competitive advantages, improving access to nearby markets and strengthening consumer loyalty.*" (*Economic Development Strategies*)³ Harmony farmers continue to look for ways to explore new markets, promote their products, and increase the profitability of their agricultural operations.

2007 NJDA Economic Development Strategies

One of the major efforts undertaken by the NJDA is to identify products grown in New Jersey through branding, Agritourism, farm direct sales programs, and farm markets. The NJDA *Economic Development Strategies* for 2007 support the promotion of Jersey products through a variety of markets and mechanisms. (*Economic Development Strategies*) NJDA is committed to promoting Agritourism through the New Jersey Office of Travel and Tourism, the Jersey Fresh website, the distribution of printed materials, and other forms of advertisement. Harmony farms benefit from this state-wide effort.

NJDA's Jersey Fresh and Jersey Grown labels program is expanding its efforts to promote locally grown produce. The Department will continue to increase the Jersey Fresh Hospitality Industry Program. This program works closely with industry to market Jersey Fresh produce to the hotel, restaurant, educational, and institutional food services. This will strengthen the appeal of the Jersey Fresh brand to supermarket chains and all other retailers. The goal is to increase the use of the Jersey Fresh brand name and discourage the use of the "Locally Grown" product claim. Also, by recently establishing the Jersey Organic brand, the Department will continue to promote New Jersey grown organic products as distinct from, and of higher value than, competing products. (*Economic Development Strategies*)

The following is a brief discussion of each of the sectors of Harmony's agriculture industry as they relate to the 2007 *Economics Development Strategies* report. For each of the sectors, the 2007 report indicates that farmers should continually seek new local, state, and interstate markets to strengthen market share.

The following information specific to Harmony Township comes from the *New Jersey Farmland Assessment* and the information for Warren County comes from the *Warren County Agricultural Profile*, as provided by the State Agriculture Development Committee. (*New Jersey Farmland Assessment*)⁴ (*Warren County Agricultural Profile*)⁵

Produce which includes vegetables such as cucumbers, squash, and asparagus covered 133 acres in Harmony Township in 2005. (*New Jersey Farmland Assessment*) These acres support the thriving vegetable industry in Warren County which accounted for 2,098 acres, and \$4.4 million in sales, in 2002. (*Warren County Agricultural Profile*) Since they do not require as much land to grow, the Township should consider expansion the produce sector of the agricultural economy as opportunities arise. Some strategies Harmony could follow are:

- Strengthen the *Jersey Fresh Hospitality Program*;
- Promote the *Jersey Fresh* brand;
- Explore "Contract Growing", that is, growing produce for specific customers on a contract basis;
- Promote farm markets and pick-your-own operations; and,
- With the County, explore various additional products and markets for produce, including local restaurants, grocery markets, and institutions.

Nursery, greenhouses, and floriculture which include bedding plants, trees and scrubs, cultivated sod, and Christmas trees covered 70 acres in Harmony in 2005. Harmony expects a greenhouse to be built in the Township in the near future, so expansion of this agriculture sector will continue. These crops provide important agricultural commodities, which accounted for total sales of \$7.6 million, or 41% of total crop sales, in Warren County in 2002. Whereas other crop categories have remained stagnant or fallen in recent years, sales figures for this sector of the crop industry have risen steadily since 1987, when it was at \$1.1 million. One likely and major reason this sector of the crop industry has become so important is due to the continued non-agriculture population growth in the county and region, providing a ready market for these products. Harmony can continue to strengthen and expand this sector of the agriculture economy as opportunities arise. Some strategies to follow are:

- Support efforts by NJDA to ensure plant health and disease-free material;
- Increase local consumer awareness of the *Jersey Grown* brand;
- Help farmers seek contracts with large box store operations;
- Promote “drive up” operations where consumers can buy directly from the nursery or greenhouse.

Dairy has historically been the dominant agricultural sector in Harmony but has substantially declined in the past decades. As of 2005, Harmony had approximately 1,050 head of dairy cattle, in comparison to over 1,700 head of dairy cattle in 1983. This decrease in dairy production reflects the larger trend seen throughout Warren County, which produced only 35 million pounds of milk in 2005, the County’s all time low. A combination of high input costs (land prices and taxes) and low milk prices have driven this trend, which may very well continue if strong steps are not taken to reverse it. To sustain and augment the dairy industry, some strategies Harmony could follow are:

- Promote *Jersey Fresh* dairy products;
- Explore various additional products and markets for dairy, including local restaurants and grocery markets;
- Work with the County and State to ensure the health of the dairy industry, and the quality of raw and processed milk;
- Work with the County to bring a local processing creamery back to the area;
- Help to bring more livestock veterinarians back to the area; and,
- Market value-added dairy products.

Corn covered almost 2,900 acres in Harmony in 2005, or approximately 34 percent of the farmland in the Township, making Harmony the second highest producer of corn in Warren County. In Harmony, corn is grown both for grain and for silage. Corn for grain has historically been the dominant field crop throughout Warren County. In 2002 over 27% of agricultural lands in the county were tilled for corn. Corn requires relatively less labor and costs inputs than produce, nurseries and greenhouses, and livestock, making it more profitable. It is also grown on livestock farms as feed for animals. Harmony can continue

to strengthen and expand this sector of the agriculture economy as opportunities arise. Some strategies to follow are:

- Support efforts by the County and State to produce renewable fuels, thus adding a ready market for corn; and,
- Support the livestock industry which uses corn as feed.

Hay accounts for a large portion of Harmony's agricultural activity. It covered approximately 1,900 acres within the Township in 2005; Harmony is the second highest producer of hay in Warren County. Warren County had the third highest state yield of hay in 2002 and 2005, producing approximately 28,000 tons of hay. However, these totals are by far the lowest ever recorded for the County, with the 2002 drought accounting for at least part that year's low yield. Much of the hay is grown as feed on livestock farms, never making it to market, and is therefore not included in any census sales figures. To continue and expand this strong sector of the agriculture economy, Harmony could employ some of the following strategies:

- Explore new markets, and also ways to expand existing markets; and,
- Support the livestock industry which uses hay as feed.

Soybeans covered over 700 acres in Harmony Township in 2005. The Township is the fourth largest producer of soybeans in Warren County. Warren County had the third highest state yield for soybeans in 2005, producing approximately 236,000 bushels of soybeans. To sustain and enhance soybean production, Harmony Township could consider some of the following strategies:

- Encourage the production of certified organic soybeans to increase the value of these crops
- Support efforts to construct bio-diesel production and soybean crusher facilities in the state to create new markets for soybean growers and potentially elevate the price of locally produced soybeans.

Livestock and poultry operations include non-dairy cattle, sheep, goats, hogs, and poultry. This has historically been a strong agricultural sector in Harmony. Due to the high input costs, many farmers have opted not to engage exclusively in dairy farming but rather are sectoring their farms into various agriculture products, such as other livestock. While the dairy industry still makes up a major agricultural sector in Harmony, it is possible the dairy industry may continue to decline if input costs continue to rise. Harmony farmers can see this as an opportunity to diversify to other agricultural products such as non-dairy cattle, poultry, hogs, and other animals.

Non-dairy cattle is the leader in non-dairy livestock agriculture in Harmony, which had 158 beef cattle in 2005, and contributes to the County's economy in this sector. Sales of non-dairy cattle exceeded \$1.25 million in 1997 in Warren County and, with only slightly lower numbers of non-dairy cattle in 2002, sales of non-dairy cattle and their products are likely comparable for 1997 and 2002.

Poultry, which includes egg production, meat chickens, turkeys and ducks, is a small livestock industry in Harmony. The Township had 70 chickens for egg production and 18 meat chickens in 2005. Farms with ducks also exist on a small scale in Harmony.

Hog, sheep, and goat farms constitute a relatively small sector of the Harmony agriculture landscape. In 2005, farms in the Township had 102 sheep, 20 goats, and a few hogs.

To strengthen and expand its place in the county economy, some non-dairy cattle, sheep, hogs, and poultry strategies Harmony could follow are:

- Help ensure animal health;
- Explore various additional products and markets, including local restaurants and grocery markets;
- Work with the County to bring more livestock veterinarians back to the area;
- Aggressively market value-added dairy products; and,
- Assist farmers with farming techniques, regulatory requirements and the latest research for livestock and poultry.

Equine is a growing segment of the agriculture industry in Harmony. In 2005, there were 41 head of equine in the Township, with eight acres devoted to boarding, one acre to rehabilitation, and three acres to training. To continue and retain the Township's market share in the county and state equine industry, Harmony farmers can:

- Ensure the health of horses;
- Promote the industry at shows and festivals, such as the annual Warren County Farmer's Fair; and,
- Promote the equine industry through boarding and riding lessons.

Agritourism is one link in the long term sustainability of Harmony's agriculture industry. According to the 2007 *Economic Development Strategies*, "Agricultural tourism draws upon two great strengths of the Garden State, a rich agricultural heritage and a large population of affluent consumers", and "... Agritourism is critical to ensuring the future viability of agriculture in the state." (*Economic Development Strategies*) Agritourism can not only draw people from throughout Warren County but can also draw visitors from the neighboring states of New York and Pennsylvania.

Harmony currently supports Agritourism through seasonal farm stands and Christmas tree stands. It also hosts the Warren County Farmer's Fair, which highlights the past and present agricultural heritage of the County. This event, hosted on the County Fairgrounds in Harmony, draws thousands of visitors each year. More information on the Fair can be found at <http://www.warrencountymfarmersfair.org/>.

Agricultural Industry Retention, Expansion and Recruitment

By providing key strategies and techniques, the NJDA 2007 *“Economic Development Strategies”* endorses as critical the expansion and strengthening of all areas of the agriculture industry. (*Economic Development Strategies*) There are many items to the economic expansion, development, and solidification of Harmony’s agricultural industry. Certainly, diversity of agricultural commodities to broaden the agricultural base now dominated by hay, beef cattle, and equine would help to ameliorate any economic downswing in either the general economy or a specific sector of the county’s agriculture industry. Some key items that the Harmony agriculture community can consider for economic development and sustainability are discussed below.

“Sell” agriculture as part of the Harmony “landscape”. The Harmony farmland preservation program has protected 1,273 acres since 1997. As additional farmland is preserved, and support for agriculture is woven into various sectors of the Township’s economy, farming will indeed become a permanent facet of life in Harmony, diminishing any perceived agriculture impermanence the general public may have. A coordinated effort to “sell” agriculture as a way of life that is enduring and significant to the Township and its economy, will ensure area residents are aware of the enduring benefits of farmland, and solidify public economic support for the agriculture industry. One such event in Harmony is the annual Warren County Farmer’s Fair, which brings together residents and visitors to enjoy farm-related activities such as tractor pulls, horse and livestock shows, and traditional craftsmen exhibits. Signage on preserved farms and other outreach mechanisms, such as adult and youth farmer education, farm stands and pick-your-own operations, and Community Supported Agriculture will also work to enhance farming throughout the Township.

Supply products including farming equipment such as tractors and diskers, seeds, fertilizers, herbicides, fungicides, pesticides, etc. Large scale agriculture suppliers, which supply medium to large size agriculture operations, no longer exist near Harmony Township. The only suppliers in the area are several small, local suppliers. Without an adequate amount of suppliers within reasonable driving distances of farms, the business of farming can become so expensive and time consuming, so as to not be profitable. The county agricultural community can pursue options, which may include tax incentives, to entice suppliers to return to the area. As agriculture in Harmony becomes more “permanent” through increased preservation efforts, former suppliers who have left the area may return if they sense that a profitable supply business can be operated in the area.

Equipment and supply stores in the area include:

- Agway in Blairstown
- True Value in Blairstown
- Roy Bischoff in Stillwater
- Tickners in Hackettstown
- John Deere Service Center in North Warren
- Smith Tractor in Washington Borough

- Frank Rymon and Sons in Washington Township
- Tractor Supply Co. in Washington Township
- New Holland Equipment in Washington Township
- H.G. Rydell in Marksboro

Farmers need to be adaptable to farm for, and supply, emerging markets in and out of the Township. Farms in Harmony have decreased in size during the last few decades, due in large part to the decline of large acreage dairy farms. Subsequently, farms are being subdivided to facilitate the increase in beef cattle, equine, nursery and greenhouse, and sheep farms, which require less acreage. As an example of adaptability, the Township's larger farms grow hay and corn for the rising equine and beef cattle industries in the area. In addition, smaller farms mean more opportunity to focus on specialized farm products for designated customers. As agriculture is indeed a business, farmers must continue to be adaptable to change with the needs and wants of its customer base. Support from the Warren County Agriculture Development Board, Board of Agriculture, N.J. Farm Bureau, and Community Supported Agriculture groups is vital to help the agriculture community be adaptable, and stay profitable.

Market Research – Harmony should consider coordinating with Warren County to partner with Rutgers University Food Policy Institute and the Rutgers Cooperative Extension of Warren County to identify and integrate market research on agriculture and economic trends. The Food Policy Institute can be reached at (732) 932-1966.

Promote permanent markets – The agriculture community in Harmony can seek contracts with area schools to supply healthy, fresh farm products for use in their cafeterias. Area hospitals and senior/nursing homes are also possible customers. Since all of these are permanent institutions, once established these markets can be considered as “permanent customers” and revenue sources for the Harmony agriculture community.

Flexible regulatory programs with various agencies – The 2006 *Agricultural Smart Growth Plan for New Jersey*, prepared by the NJDA, identified flexibility in government regulation as an important component relative to farm viability. (*Agricultural Smart Growth Plan 2006*) The Harmony agricultural community can work with the New Jersey Department of Agriculture, and advocacy groups such as the New Jersey Farm Bureau and Warren County Board of Agriculture, to ensure regulatory flexibility to the greatest extent possible. Examples where regulatory flexibility is important are the New Jersey Department of Environmental Protection's Freshwater Wetlands Protection Act Rules (N.J.A.C. 7:7A-et. seq.), which grant exemptions for agricultural activities, and also the Flood Hazard Area Control Act Rules (N.J.A.C. 7:13). The latter was recently readopted, and includes numerous agricultural permits-by rule and general permits, which allow the continuation of agriculture activities in otherwise regulated areas.

Harmony should continue to incorporate agriculture into its economic development plans, municipal master plans, and local zoning. Incorporating agriculture into local planning and zoning documents will help the Township protect its farmlands and rural character in the face of development pressure. As an example of its support of local

agriculture, Harmony passed a Right to Farm ordinance in 1992 to ensure farmers have the ability to practice accepted agricultural operations.

Minimum wage impact on farm businesses – The State minimum wage was raised to \$6.15 per hour in October 2005, followed by a second increase to \$7.15, effective October 2006. A comparison of neighboring states indicates New York with a minimum wage of \$7.15 per hour, and Pennsylvania with a minimum wage of \$6.25 per hour, putting Pennsylvania farmers at a labor price advantage over Warren County farmers.

Generally, the production of vegetables and fruits (produce) requires the highest amount of hired farm labor, mainly at harvest time, to pick and process the vegetables and fruits. Harmony farms do not generally employ farm labor to assist with their operations, with the possible exception of some of the dairy farms and one large vegetable farm that uses seasonal labor. Other products that are prevalent in Harmony such as hay, corn, and soybeans require little or no hired farm labor (most labor is done by farm families). As such, farm labor costs are not as large a problem for Harmony farmers as they are for farmers in other parts of the state that have major produce agriculture industries.

Location and emerging opportunities – County Route 519 runs through Harmony Township providing ready access to Route 57, Route 22 and Route 78. Harmony farmers derive great advantage and access to consumer markets located in New York, Pennsylvania, and northern New Jersey. Maximizing the use and ease of the interstate highway will increase the number and type of consumer markets to be reached by Harmony farmers.

Harmony Township supports the representation of agricultural interests on regional and local industry boards, business organizations, and economic development associations. The Township does not have the resources to initiate local programs and sees its greatest success in supporting and partnering with local and regional organizations (county, state, and national) and to encourage farmers to enroll and actively participate in programs to stimulate and encourage agricultural economic development.

The Rutgers Cooperative Extension (RCE) of Warren County and the Rutgers University Agricultural Experiment Station are vital to the long term economic sustainability of agriculture in Harmony, Warren County, and the State of New Jersey. Farmer education programs keep the Warren County agriculture industry apprised of the most recent farm research and techniques, which helps Warren County farmers to remain competitive. The Future Farmers of America (FFA) organization trains young people in agriculture practices, preparing them to be future Warren County farmers. Both the RCE and FFA are discussed in detail in *Chapter 8*.

Economic Development Programs

Harmony benefits from the economic development program provided by Warren County to help the county's agricultural community stay strong and vibrant. The following is a listing and brief discussion:

Livestock Cooperative Auction – This is a co-op run by the Auction Market Association of North Jersey, comprised mostly of farmers, and has been operating since 1941. Farmers, as well as restaurants and private individuals sell, buy, and trade livestock, eggs and crops. Most of the sheep, lambs, goats, hogs, and cattle are sold to slaughterhouses, which use the animals for use in food products. Dairy cows are bought and sold by farmers. Private individuals and restaurants buy mostly eggs. (*The Daily Record*)⁶ Harmony farmers use the Live Cooperative Auction for the purchase and sale of agricultural livestock and products.

The Auction is located on Stiger Street in Hackettstown, and is open every Tuesday from 11 a.m. to 8 p.m. throughout the year. It is one of only two remaining livestock auctions in the state, and is a staple of the Warren County agriculture industry. (*The Daily Record*)

Farmer's Market – The Washington Borough Weekly Farmers Market is held on Fridays from 3 to 7 p.m., between June and September, and is located on Route 57 in the United Methodist Church parking lot, west of the Route 31 intersection. Now in its fourth year, the Farmer's Market offers for sale various fruits, vegetables, homemade sausage, grains and other products grown or made by local farmers.

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

- A community of individuals who pledge support to a farm operation so that the farmland becomes the community's farm. In such an arrangement, the growers and consumers provide mutual support, and share the risks and benefits of agriculture
- Members or "share-holders" of the farm pledge in advance to cover the anticipated costs of the farm operation and farmer's salary
- Members receive shares in the farm's products throughout the growing season
- Members also receive the satisfaction gained from reconnecting to the land and participating directly in food production
- Members also share in the risks of farming, including poor harvests due to unfavorable weather or pests
- Generally, growers receive better prices for their crops, gain some financial security, and are relieved of much of the burden of marketing
(*National Agricultural Library*)⁷

The Foodshed Alliance is a grass roots group that supports community agriculture in Harmony. It seeks to sustain farmers, agricultural lands, and the rural way of life in the

ridge and valley area of Warren and Sussex counties. The Alliance promotes local efforts by assisting individual farmers with sustainable farming methods, connecting farmers with consumers through farmers markets and buyers clubs, and gathering information about how much land is being farmed in the Ridge and Valley region. (*Foodshed Alliance of the Ridge and Valley and Tara Bowers of Foodshed Alliance of the Ridge and Valley.*)

An extension of the Foodshed Alliance’s work is the Northwest Jersey “Buy Fresh, Buy Local” Campaign. This is an effort by the Foodshed Alliance, local farmers, and community leaders to build connections between farmers and consumers through food guides, food and farming events, and community outreach, and therefore encourage local residents to buy fresh, local produce. As part of the “Buy Fresh, Buy Local” campaign, the FSA sponsored the 2nd annual “Farm and Food Open House” in September 2007. This event featured farm tours, tastings at local farms, and special family oriented events at the farms. The Community Supported Garden at Genesis Farm in Frelinghuysen Township participated in the event. (*Buy Fresh, Buy Local*)⁸

Additional Resources

There are numerous other resources which can be used by the Harmony agriculture industry to assist it in expanding and solidifying its economic base in the county and region. Several are listed below.

The New Jersey Department of Agriculture lists various informational Agriculture Economic Development Services on its website. These include:

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

(*Agricultural Development Services*)⁹

Sustainable Agriculture Research and Education (SARE) is a “United States Department of Agriculture competitive grants program with regional programs and regional leadership. SARE supports research and education that helps build the future economic viability of agriculture in the United States. SARE funding is authorized under Subtitle B of Title XVI of the Food, Agriculture, Conservation and Trade Act (FACTA) of 1990.” (*SARE*)¹⁰
SARE funds are used for:

- *Farmer/Grower Grants*: These grants have the goal of helping farmers shift to practices that are environmentally sound, profitable, and beneficial to the wider farm community.

- *Partnership Grants*: These grants are for RCE and NRCS personnel, non-profits, and agricultural consultants who work directly with farmers. Grants are used for on-farm research and demonstration projects that address sustainability.
- *Professional Development Grants*: These grants fund professional development projects that help RCE educators and other agricultural professionals learn and transmit the knowledge needed to help farmers move toward greater sustainability.
- *Research and Education Grants*: These grants fund research and education projects that lead to farmers adopting sustainable practices. The emphasis is on improved farming practices and an enhanced quality of life for farmers.
(SARE)

As defined in FACTA of 1990, sustainable agriculture is an integrated system of plant and animal production practices having a site-specific application that will, over the long term:

- Satisfy human food and fiber needs;
- Enhance environmental quality and the natural resource base upon which the agricultural economy depends;
- Make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls;
- Sustain the economic viability of farm operations; and,
- Enhance the quality of life for farmers and society as a whole.
(*Northeast Sustainable Agriculture Research and Education*)

The Agricultural Marketing Resource Center (AgMRC) brings together agriculture experts from Iowa State University, Kansas State University and the University of California “... to create and present information about value-added agriculture. The center draws on the abilities, skills and knowledge of leading economists, business strategists and outreach specialists to provide reliability in value-added agriculture”. AgMRC provides information to help farmers “assess value-added market opportunities, investigate processing options and understand business and production issues” for such agricultural commodities and products as Agritourism, renewable energy, livestock, specialty crops, and numerous others. In general, the goals of AgMRC are to:

- “Create an electronic, Web-based library with powerful search capabilities to make value-added market, economic and business information and other resources available to producers”. The library can be accessed at <http://www.agmrc.org>.
- “Provide value-added business and economic analysis tools, including information on business principles, legal, financial and logistical issues”.
- “Conduct research and analysis on economic issues facing producers involved in value-added business ventures”.
- “Link producers with electronically available information and resources”.
(*Agricultural Marketing Resource Center*)¹¹

The AgMRC website offers numerous business development information links, as well as links to other government and non-government sources for business development. This website can be used by the Harmony agricultural community as a resource as they consider the development and implementation of value-added products.

¹ New Jersey Department of Agriculture. Agricultural Smart Growth Tool Kit “Planning for Agriculture”. <http://www.state.nj.us/agriculture/toolkit.htm>. Accessed June 2006.

² New Jersey Department of Agriculture, Agricultural Smart Growth Plan 2006. <http://www.state.nj.us/agriculture/pdf/smartgrowthplan.pdf>. Accessed March 27, 2007.

³ New Jersey Department of Agriculture, 2007 Economic Development Strategies.

⁴ New Jersey Agricultural Development Committee. *New Jersey Farmland Assessment*. Tax Years 1984, 1991, 2001, and 2005. Warren County Summary.

⁵ New Jersey Department of Agriculture, State Agriculture Development Committee, Agriculture Census Data, Warren County Agricultural Profile. April 2007.

⁶ The Daily Record, Hackettstown: A Day in the Life - April 2002. <http://www.dailyrecord.com/news/dayinthelife/hackettstown/bidders.htm>. Accessed July 2007.

⁷ United States Department of Agriculture, National Agricultural Library, Alternative Farming Systems Information Center, Community Supported Agriculture. <http://www.nal.usda.gov/afsic/pubs/csa/csa.shtml>. Accessed June 2007.

⁸ Buy Fresh, Buy Local. <http://www.buyfreshnj.org/WebPages/OurCampaign.htm>. Accessed June 2007.

⁹ New Jersey Department of Agriculture, Agricultural Development Services. <http://www.state.nj.us/agriculture/divisions/md/prog/agriculturaleconomic.html#top>. Accessed July 2007.

¹⁰ New Jersey Department of Agriculture, Sustainable Agriculture Research and Education (SARE). <http://www.state.nj.us/agriculture/grants/sare.html>. Accessed May 2007.

¹¹ Agricultural Marketing Resource Center, Mission and Goals. <http://www.agmrc.org/agmrc/About+mission++goals.htm>. Accessed May 2007.

CHAPTER 7: NATURAL RESOURCE CONSERVATION



Preservation of farmland is the cornerstone of the New Jersey Department of Agriculture’s (NJDA) *Agricultural Smart Growth Plan* and the Farmland Preservation Program. However, there is more to farmland preservation than retirement of development rights or outright purchase of farms. One of the cornerstones to a successful, long term Farmland Preservation Program is the conservation of natural resources on farms, without which the long term sustainability and viability of New Jersey’s preserved farmland would be in doubt.

Natural Resource Protection Agencies

There are numerous entities, both public and private, which administer, fund, and provide technical guidance for Harmony farmers relative to natural resource conservation. These entities are in place to assist farmers with natural resource conservation issues, and should be called upon by farmers for appropriate assistance.

Natural Resource Conservation Service

An important partner in support of natural resource conservation for the agricultural community is the United States Department of Agriculture (USDA)’s Natural Resources Conservation Service (NRCS). The NRCS “*provides assistance to private land owners (including farmers) in the conservation and management of their soil, water, and other natural resources.*” The NRCS provides technical assistance suited to the natural resource issues that are specific to a farmer’s needs, with ample opportunity for cost shares and financial incentives. (*Information For Farmers*)¹

The local NRCS office serving Warren County and its municipalities is located at 101 Bilby Road, Suite 1H in Hackettstown. Harmony farmers may utilize this local NRCS office for assistance. NRCS will also reach out directly to landowners if they know of a farmer who is in need of technical assistance, or could use the guidance of the NRCS staff.

The local NRCS office helps to prepare Conservation Plans for farmers. These Conservation Plans nearly always include strategies to conserve soil and water, but may also include conservation practices for flora, fauna and clean air. If all five elements are

included, they are referred to as Resource Management Plans. (*Kent Hardmeyer and/or Ron Phelps*)² Within one year of selling their development easement, owners of preserved farms are required to enter into a Conservation Plan. The Plans are also required to apply for natural resource conservation program grants such as the Wildlife Habitat Incentive Program (WHIP) and Environmental Quality Incentive Program (EQIP). The local NRCS office administers these conservation program grants, which offer financial incentives to support conservation projects. (*Ken Bingham*)³

Discussions with the local NRCS office indicate the following strategies would strengthen natural resource conservation efforts for farms in Warren County and its Townships, including Harmony:

- The federal government needs to replenish funding for natural resource conservation grant programs via the proposed 2007 Farm Bill. Currently, all funds are depleted.
- As previously stated, owners of preserved farms are required to enter into a Conservation Plan within one year of selling their development easement. However, implementation of this requirement is inconsistent. Providing a mechanism and staff to ensure that Conservation Plans are prepared and implemented will guarantee that the objectives of the program are put in place, and active stewardship practices are underway.
- Owners of preserved farms have an obligation to conserve natural resources on their farms. Implementation of a Conservation Plan is a good first step towards fulfilling this obligation.

(*Kent Hardmeyer and/or Ron Phelps*)

The phone number for the local NRCS office is (908) 852-2576, and the District Conservationist is Ronald Phelps. He can also be reached at ron.phelps@nj.usda.gov. (*New Jersey*)⁴ Mr. Phelps and his staff (listed below) can be contacted by Harmony farmers for assistance or for more information on the availability of NRCS programs in the Township.

- Kent Hardmeyer - Resource Conservationist, Highlands Planning Specialist
- Madeline Dean - Program Assistant
- Jim Kleindienst - Civil Engineering Technician
- Jill Koehler - Natural Resource Specialist, Grazing Lands
- Jim Wick - Resource Conservationist

An additional resource available from NRCS is the “Field Office Technical Guide.” It contains information about the development and implementation of soil, water, air, flora, and fauna resource conservation practices, and is used to develop Conservation Plans. Conservation practices discussed in the Guide that are pertinent for Harmony include:

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

(*Kent Hardmeyer and/or Ron Phelps*)

Warren County Soil Conservation District

Another partner in the conservation of agricultural resources is the New Jersey Department of Agriculture, Division of Agricultural and Natural Resources. Among its responsibilities, the Division implements the natural resource conservation programs, administered by the State Soil Conservation Committee (SSCC). These programs “*provide engineering services and regulatory guidance to soil conservation districts, homeowners, engineers, planners, and virtually all development activities. The Division provides technical standards applicable to construction and mining sites regulated by the Soil Erosion and Sediment Control Act program ...*” (*Agricultural and Natural Resources*)⁵

The SSCC coordinates and supports the work of the state’s 15 local soil conservation districts (SCD), one of which is the Warren County SCD. The Warren County SCD is charged with reviewing and approving natural resource conservation and assistance program grants, implementing agricultural conservation planning assistance, agricultural conservation cost-sharing program grants, application of organic materials on agricultural land, agricultural water supply and management, soil erosion and sediment control, storm water discharge authorization, and soil surveys. (*Agricultural and Natural Resources*)

The Warren County SCD office is located at 224 West Stiger Street in Hackettstown. Harmony farmers may approach this local SCD office with a Request for Assistance (RFA) to apply for funds from natural resource conservation grant programs such as WHIP and EQIP. If approved, the RFA is forwarded to the local NRCS office in Hackettstown for processing. The administration of the RFA includes preparation of a Conservation Plan and grant program contract, as previously described. The Warren County SCD is involved in review of conservation plans and grant program contracts and must give final approval to both. (*Kent Hardmeyer and/or Ron Phelps*)

The phone number for the Warren County SCD office is (908) 852-2579, and the District Manager is Dave Schaaf. He can also be reached at dsscd@verizon.net. Mr. Schaaf and his staff (listed below) can be contacted by Harmony farmers for assistance. (*New Jersey*)

- Mary Baldwin - Erosion and Sediment Control Program Coordinator
- Mike Fee - District Forester
- Cathie LaBar - Inspector
- Helene Timbrooke - Administrative Assistant

Rutgers Cooperative Extension of Warren County

The Rutgers Cooperative Extension (RCE) of Warren County provides both field and technical research focused on best management practices for farmers to ensure the long term viability of both the agricultural economy and the natural resources upon which it is based.

Relative to natural resource conservation, the RCE of Warren County offers the Agriculture and Natural Resource Management program. This education program provides “*non-biased, research-based educational programs and services for both homeowners and commercial producers. Services offered by extension personnel include soil testing, insect identification, plant disease diagnosis, and pest management recommendations for agricultural operations*”, as well as “*educational publications covering a wide range of agricultural topics*”. (*Agricultural Experiment Station*)⁶ An example of this service is helping to prepare animal waste management plans, so as to reduce impacts to watersheds.

The RCE of Warren County is located in the Warren County Administration Building, Suite 102, 165 County Route 519 South in White Township (mailing address of Belvidere). Extension agents include Bill Tietjen, specializing in plant pathology for ornamentals, Christmas trees, fruits, vegetables, and greenhouse nurseries. Extension agent Everett Chamberlain specializes in field crops and livestock. (*Bill Tietjen*)⁷ They may be contacted with any questions or for information on education programs or services. Mr. Tietjen can be contacted via e-mail at tietjen@njaes.rutgers.edu and Mr. Chamberlain at chamberlain@rce.rutgers.edu. Both can be contacted via phone at 908-475-6503.

The SSCC, NRCS, Warren County SCD, and RCE of Warren County, are part of the New Jersey Conservation Partnership. This partnership of agencies strives to further soil and natural resource conservation efforts. (*Agricultural and Natural Resources*)

New Jersey Department of Environmental Protection

The New Jersey Department of Environmental Protection’s (NJDEP), Division of Parks and Forestry, oversees the “Private Lands Management Program”. The aim of this program is to foster wise stewardship and management of the state’s 270,000 acres of private woodlands currently under Farmland Assessment. (*Division of Parks and Forestry*)⁸ Some properties in Harmony that are farmland assessed include extensive woodland tracts. Such tracts were added as “farm products” in the 1970’s. These woodland tracts, which must be utilized by the farmer as a sustainable “product”, require Woodland Management Plans (WMPs) to receive reduced local property taxes accorded properties in the farmland tax assessment program. (*Jim Barresi*)⁹

The NJDEP's Division of Parks and Forestry, Bureau of Forest Management (BFM), reviews applications for WMPs, which are prepared for farmers by private consultants. Once a WMP is in place, a “Woodland Data Form” must be submitted yearly to certify that the WMP is being complied with. However, the NJDEP, BFM, also inspects each site once every three years to verify compliance with WMP conditions. (*Jim Barresi*) Since reduced local property taxes are often critical in keeping active agricultural lands economically viable, the NJDEP is an important partner for Harmony’s farmland preservation efforts.

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

require a WMP. In Harmony in 2005 there were 1,038 acres of non-appurtenant (or unattached) woodland acres in farmland assessment, up from 2001 when there were 899 acres. In 1991 there were 829 non-appurtenant acres in farmland assessment in Harmony. (*New Jersey Farmland Assessment*)¹⁰

Appurtenant woodlands are woodland acreage on a farm, less than or equal to, farmed acreage. So, in the preceding example, 50 of the 125 woodland acres would be appurtenant. Appurtenant woodland acres do not require a WMP. (*Jim Barresi*) In Harmony in 2005 there were 1,014 acres of appurtenant woodland acres in farmland assessment, slightly down from 2001 when there were 1,290 acres. In 1991, there were 1,883 appurtenant acres in farmland assessment in Harmony. (*New Jersey Farmland Assessment*)

The New Jersey Department of Environmental Protection's Nongame and Endangered Species Program also administers the Landowner Incentive Program (LIP). LIP works to improve habitat, habitat management, and habitat protection for threatened and endangered species on private lands, some of which are agricultural lands. Project durations must be for a minimum of five years, and the property owner contributes a minimum 25% cost share. Some grain farmers have expressed concern over the use of LIP. This is because it not only provides habitat for threatened and endangered species, but also for such nuisance wildlife as deer and turkey, which are known to cause severe loss to farm products including corn.

In Harmony, there are a total of 429 acres enrolled in LIP on seven farms. LIP has been in existence for three years, and funding for the program is competitive due to available funds not being equal to funding requests. (*Kim Korth*)¹¹

USDA, Forest Service's Forest Stewardship Program

The United States Forest Service sponsors the Forest Stewardship Program. This program supports landowners whose property has a woodland management plan that recognizes and manages the wetlands, wildlife, aesthetics, soil, and water in addition to the woodlands on the property. This program, when fully funded, offers landowners cost-share initiatives to allow the landowners to fully follow the guidelines in their woodland management plan. In New Jersey, the state farmland tax program and the U.S. Forest Service program have merged to allow one planning document for the landowner where the stewardship plan meets the state tax code and eliminates conflicts between the two. Increasing enrollment of landowners in this merged state-federal program will ensure increased protection of the natural resources for an extended period. The minimum is a ten-year management plan. This does not ensure preservation of the land in perpetuity, but it does allow recognition of the importance of the land value and stewardship of the property for a longer period of time.

In Harmony, there are 267 acres of farmland on 9 different properties enrolled in the Forest Stewardship program. (*Wayne Wharton*)¹²

North Jersey Resource Conservation and Development Council

The North Jersey Resource Conservation and Development (RC&D) Council's main mission is to "facilitate the wise use and protection of the region's human and natural resources (which includes farmland). This is accomplished by working with communities and regional partnerships to address issues related to water quality and water resource protection, sustainable farming and farm communities, building local community capacity, and managing natural hazards that impact community planning". Each RC&D area usually consists of several counties, and has a council composed of local citizens who serve on a voluntary basis, as well as government representatives. (*North Jersey RC&D Council*)¹³

Under the leadership of NRCS, the North Jersey RC&D Council receives technical assistance and may be able to qualify for financial assistance of up to 25% of needed funds, or a maximum of \$50,000, from the U.S. Department of Agriculture. (*North Jersey RC&D Council*)

The North Jersey RC&D Council includes the counties of Hunterdon, Morris, Somerset, Sussex, Union and Warren. The office is located at 54 Old Highway 22, Suite 201, in Clinton, Hunterdon County, and the phone number is (908) 735-0733. Warren County government representatives include David K. Dech, Director, Warren County Planning Department, and David Schaaf, District Manager of the Warren County SCD. (*North Jersey RC&D Council*) Harmony farmers can contact the North Jersey RC&D Council for assistance with issues related to natural resource conservation and sustainable farming.

Private non-profit groups and private citizens

Agriculture needs not only the broad support of state, county, and local governments to help preserve agriculture resources, but also the help of private non-profit groups and citizens. Indeed, without their support, government programs and support for agriculture would fall short of what is needed to protect the natural resource base of the agricultural landscape. These groups and citizens spend countless hours providing and sharing their expertise, as well as raising and contributing money. They are invaluable in assisting with all phases of farmland preservation for Harmony, including natural resource conservation and stewardship.

The Harmony agriculture community has the support of a variety of organizations, including the Warren County Board of Agriculture, New Jersey Farm Bureau, 4-H, Future Farmers of America, and the Warren County Farmer's Fair.

Local and regional non-profit organizations also contribute to the permanent protection of farmland. These groups include Morris Land Conservancy, The Nature Conservancy, New Jersey Audubon Society, New Jersey Conservation Foundation, and the Ridge and Valley Conservancy. The Harmony agriculture community, via the Harmony Farmland/ Open Space Committee, can work with non-profit organizations and private citizens in a coordinated fashion to further the farmland preservation program in the Township.

Resource Protection Programs and Funding

2002 and 2007 Farm Bills

The Farm Security and Rural Investment Act of 2002 (2002 Farm Bill) is landmark legislation, with much of its focus on conservation funding and environmental issues. Conservation provisions are designed to assist farmers in being good stewards of the land through grants and technical assistance. Voluntary programs relevant to New Jersey, and Warren County, include the Conservation Reserve Enhancement Program (CREP), Conservation Innovation Grant Program (CIG), Environmental Quality Incentives Program (EQIP), Farm and Ranch Land Protection Program (FRPP), Grassland Reserve Program (GRP), Wetlands Reserve Program (WRP), and Wildlife Habitat Incentives Program (WHIP). (*Conservation Programs*)¹⁴ These programs, administered by the local NRCS office in Hackettstown and the Warren County Soil Conservation District, are discussed in this section.

The proposed 2007 Farm, Nutrition, and Community Investment Act (Farm Bill) would authorize approximately \$7.8 billion nationally to protect natural resources through conservation programs similar to those mentioned above. As proposed, the Bill may consolidate most or all of these programs into one program, tentatively titled The Environmental Quality Incentives Program. (*Fact Sheet*)¹⁵

The following is a synopsis of the natural resource conservation programs funded by the 2002 Farm Bill. They are implemented by NRCS and the Warren County SCD, and also to a minor degree the Farm Service Agency, which is also part of USDA. These programs are the backbone of natural resource conservation efforts in Warren County and its municipalities, including Harmony.

Conservation Reserve Enhancement Program (CREP) and Conservation Reserve Program (CRP)

Through CREP and CRP, agricultural producers voluntarily retire land to protect environmentally sensitive areas, decrease soil erosion, provide and restore wildlife habitat, and protect ground and surface water. (*NRCS Conservation Programs*)¹⁶ Examples of conservation practices include riparian buffers and filter strips for water quality, and contour buffer strips to reduce soil erosion. With incentive payments for farmers to fully implement a CREP contract, payment for this program may be fully funded by NRCS and NJDA. (*Ken Bingham*) Statewide, CREP was most recently funded with \$100 million for the 2004 to 2007 timeframe, and has been used successfully in Warren County. It is used mostly along streams and rivers, to protect water resources. (*Kent Hardmeyer and/or Ron Phelps*)

Conservation Innovation Grant program (CIG)

The aim of the CIG program is to stimulate the development and adoption of conservation approaches and technologies which are innovative, in conjunction with agricultural production. Funds are awarded as competitive 50-50 match grants to non-governmental organizations, tribes, or individuals. *(NRCS Conservation Programs)* CIG is a component of EQIP, and its grants are generally funded through EQIP (see below). *(Kent Hardmeyer and/or Ron Phelps)*

Environmental Quality Incentive Program (EQIP)

EQIP is a conservation program in which farmers receive financial and technical assistance with structural and management conservation practices that address soil, water, and grazing land concerns. *(NRCS Conservation Programs)* EQIP is the most popular and widely used conservation program in Warren County, and is the most well funded of all the programs, receiving approximately \$4 million statewide on an annual basis. While some farms in Harmony may be assisted through EQIP, the number of farms enrolled is not tracked on a municipal level *(Janice Reid)*¹⁷

Farm and Ranch Land Protection Program (FRPP)

FRPP provides up to 50% matching funds to purchase development rights and conservation easements to keep farm and rangeland in agricultural use. The USDA partners with state, tribal, or local governments, and non-governmental organizations. *(NRCS Conservation Programs)* Farmers accepting funds through this program must adhere to strict impervious surface limitations. In New Jersey, this program receives approximately \$500 thousand to \$1 million annually, most of which goes to the State Agriculture Development Committee or private conservation groups. *(Kent Hardmeyer and/or Ron Phelps)* Nationally, the proposed 2007 Farm Bill would raise authorized FRPP funding to \$300 million. *(Jim Baird)*

Grassland Reserve Program (GRP)

GRP was a program which offered landowners the opportunity to protect, restore, and enhance grasslands on their property, which play a vital role in protecting water quality and providing wildlife habitat. This program was coordinated through several federal agencies *(NRCS Conservation Programs)*, but has recently become inactive in Warren County. *(Kent Hardmeyer and/or Ron Phelps)* The proposed 2007 Farm Bill would provide only minimal funding for GRP. *(Jim Baird)*

Wetlands Reserve Program (WRP)

WRP offers farmers payments for restoring and protecting wetlands on their property that had been previously drained for agricultural use. Wetlands help reduce flooding, filter pollutants from water, provide critical wildlife habitat, and protect open space. *(NRCS Conservation Programs)* Payment by NRCS is based upon appraised agricultural land

value. With appraised values from \$100 to \$2,000 per acre, many farmers are not willing to create wetlands on otherwise productive agricultural lands. As a result, the WRP is not widely used in Warren County. (*Tim Dunne*)¹⁸

Wildlife Habitat Incentives Program (WHIP)

WHIP provides technical and financial assistance for creating, enhancing and maintaining wildlife habitat. The State Technical Committee for WHIP in New Jersey awards project contracts for designated wildlife habitat categories such as for migratory and declining wildlife species, and for pollinators that benefit agriculture. Since its inception in 1998, WHIP has been a popular program for non-federal landowners interested in wildlife habitat management in New Jersey. While some farms in Harmony may be assisted through WHIP, the number of farms enrolled is not tracked on a municipal level (*Janice Reid*)¹⁹

SADC Soil and Water Conservation Grants

The New Jersey Department of Agriculture, State Agriculture Development Committee (SADC) has in the past provided grants to farms that are permanently preserved, or are enrolled in the eight year preservation program, with priority for preserved farms. (*Dave Schaaf*)²⁰ Cost share grant funding for fiscal year 2008 has been approved. The purpose of the grants and program is to provide funding for soil and water conservation practices.

The types of soil and water conservation projects funded by SADC include soil erosion and sediment control systems (terrace systems), control of farmland pollution (stream protection; sediment retention, erosion or water control systems; animal waste control facilities; and agri-chemical handling facilities), the impoundment, storage and management of water for agricultural purposes (diversions; water impoundment reservoirs; irrigation systems; and, drainage systems), and management of land to achieve maximum agricultural productivity (land shaping or grading). (*Soil and Water Conservation Grants*)²¹

These grants fund soil and water conservation projects approved by the Warren County Soil Conservation District (District), with the program administered by both the District and the local NRCS office in Hackettstown. Both the District and the local NRCS office also provide technical assistance for eight year program projects. Once the District deems the conservation project necessary and feasible, applications are forwarded to the N.J. State Soil Conservation Committee, which recommends projects to the SADC for funding approvals. (*Soil and Water Conservation Grants*) Traditionally 50% of the costs of approved soil and water conservation projects are paid with grant funds, but up to 75% has also been approved in the past. (*Dave Schaaf*)

Water Resources

The Importance of the Water Resource

The protection of the water resource as it relates to agriculture and farmland preservation in Harmony cannot be overstated. Quite simply, without a consistent, plentiful, adequate and clean water source, agriculture cannot exist. In addition, farms are critical as open space areas to provide aquifer water recharge. To a certain extent, some aspects of ensuring clean and plentiful water can be controlled at the individual farm level. These include:

- Minimizing the use of synthetic chemicals such as fertilizers, herbicides, pesticides, and fungicides so as to lessen impacts to groundwater;
- Providing riparian buffers along watercourses, so as to protect streams from the aforementioned synthetic chemicals;
- When possible, practicing organic farming methods;
- Practicing appropriate timing of chemical application, so as to minimize its use; and,
- Practicing water conservation techniques, such as drip irrigation and water reuse for certain types of farming where feasible, such as smaller scale vegetable and fruit operations.

The Harmony *Master Plan* recognizes the importance of water resources to the Township. The Plan highlights an objective to “protect groundwater resources, including limestone formation, aquifer recharge zones, and wetland protection” and calls for the Township to “establish ordinances/overlay zones to protect, preserve and maintain...stream corridors and riparian area.” (*Harmony Township Master Plan*)²²

The necessity of clean and plentiful water, and its precariousness, is also clearly stated in the *2005 Warren County Strategic Growth Plan*. The Plan indicates that “Groundwater and surface water quality in Warren County is generally good. Groundwater accounts for all drinking water in the county. While groundwater quality is good, there are some areas identified for actual or potential well contamination.” (*Warren County Planning Department*)²³ Some potential contamination sources are pesticides, which are used in agriculture and at private residences, and underground storage tanks for various substances such as gasoline and diesel fuel. Underground storage tanks are sometimes used on farms as fuel sources for equipment. (*Warren County Planning Department*)

In addition, the *1999 Warren County Open Space Plan* indicates the importance of agriculture to the water resource by stating, “Sixty percent of Warren County is deep, non-stony soil, well suited for farming and community development. These areas also provide scenic vistas and watershed protection. Agricultural landowners should be encouraged to participate in the Farmland Preservation Program, to help ensure the viability of agriculture as a land use and economic activity while preserving them as open or undeveloped land areas.” (*Warren County Open Space Plan*)²⁴

The *State Development and Redevelopment Plan* also discusses the importance of the water resource. The Plan indicates that Harmony's farmland is found in areas mapped as Rural Planning Area, Rural Environmentally Sensitive Planning Area or Environmentally Sensitive Planning Area. The Plan's goals include support for maintenance and improvement of the agricultural industry's economic viability. The goal of the Rural Planning Area for agriculture is to "guide development to ensure the viability of agriculture and the retention of farmland in agricultural areas; encourage farmland retention and minimize conflicts between agricultural practices and the location of Centers; ensure the availability of adequate water resources and large, contiguous tracts of land with minimal land-use conflicts ..." (*New Jersey State Development and Redevelopment Plan*)²⁵

Agricultural goals in Rural Environmentally Sensitive Planning Areas and Environmentally Sensitive Planning Areas include, "... guiding development away from agriculture, minimizing conflict between agriculture and Centers, ensuring adequate water supply, protecting large tracts of land, and promoting more intensive, new-crop agriculture." (*New Jersey State Development and Redevelopment Plan*)

Finally, emphasis is also given to the importance of the water resource, via the New Jersey Department of Agriculture which "... is working with Rutgers Cooperative Extension, the Natural Resources Conservation Services, the United States Geological Survey, the New Jersey Department of Environmental Protection and the farm community to assess the water needs of agriculture and to assist in the development of essential rules, policies and guidelines to ensure an adequate water supply to meet the current and future needs of the agricultural industry." (*2006 Agricultural Smart Growth Plan*)²⁶

Physical Features and Water Aquifer Supply Characteristics

Harmony is situated within both the Appalachian Ridge and Valley physiographic province and the Highlands physiographic provinces. The western portion of the Township is in the Ridge and Valley province, which is characterized by a chain of parallel hills and valleys, with ridges that align approximately northeast-southwest in the Township. As discussed on the Warren County Environmental Commission's website:

"The Valley and Ridge Province occupies the extreme northwestern part of New Jersey and makes up the majority of Warren County. It is composed of the Lower Paleozoic rocks of the Kittatinny Valley and the Middle Paleozoic rocks of Kittatinny Mountain. The Kittatinny Valley is the northeast extension of the Great Valley of the Appalachian Mountains."

"A wide variety of sedimentary rocks occurs in this region, including conglomerate, dolomite, limestone, siltstone, quartz sandstone, graywacke, and claystone slate."

"As with the rocks of the Highlands, geologic structures have a profound influence on ground-water occurrence and movement in the Paleozoic rocks. All of these rocks have been folded and faulted; and the older, Cambrian and Ordovician rocks

were deformed during both the Taconic and Alleghanian mountain-building episodes.”

“The amount of fracturing is greatest in the southeast part of the Great Valley, which was nearest to the intercontinental collisions that caused the faulting and folding characteristic of the province. The northwestern part of the Valley and Ridge is folded but lacks abundant large-scale faulting at the surface. Major faults in the Valley and Ridge generally strike northeast to southwest, dip steeply near the surface, and have offshoot faults.”

“The primary--or intergranular--porosity and permeability of the Paleozoic rocks is minimal, owing to compaction and cementation during formation of the rock units and to other rock-forming processes associated with later mountain building. As a result, the hydrologic properties of these sedimentary rocks are controlled by the number, size, and interconnection of fractures. Fractures that hold ground water in these rocks consist mainly of planar openings (including partings between layers or strata), joints caused by the stress of folding and faulting, and other structural defects. In the carbonate rocks, such as limestones, these fractures are enlarged by the dissolving action, or solutioning, of ground water.” (Aquifers of Warren County)²⁷

The eastern part of Harmony Township lies within the Highlands Province. As discussed on the Warren County Environmental Commission’s website:

“The New Jersey Highlands is part of the southern extension of the New England Uplands Physiographic Province. Its topography is characterized by a series of nearly parallel ridges, trending northeast-southwest, that are separated by broad-to-narrow valleys in which Lower and Middle Paleozoic rocks overlie the Precambrian rocks that characterize the province. The mountains on Warren County's eastern border belong to the Highlands.”

“The New Jersey Highlands is underlain by granitic and metamorphic rocks, known collectively as crystalline rocks. Geologic structures and weathering affect the occurrence of ground water in these Proterozoic rocks. The primary porosity, or intergranular space, of the crystalline bedrock is limited, due to their tight, interlocking texture. Therefore, the hydrogeologic (water-bearing) characteristics of these rocks are controlled by their secondary porosity, that is, openings created by weathering and fracturing.”

“Weathered crystalline bedrock of the Highlands is referred to as saprolite. Saprolite that developed on crystalline rocks of low quartz content generally forms a low-permeability clay and silty clay, whereas saprolite that developed on rock with abundant quartz consists of more permeable sands and silty sands. Weathering of fractures in marble bedrock often creates cavities or solution channels that transmit water freely. Saprolite thicknesses of up to 50 feet are typically found in non-glaciated regions, south of the Wisconsinan terminal moraine.”

“Joints and fractures also strongly affect the movement of ground water in the Middle Proterozoic bedrock aquifers by acting as conduits for flow. Studies of the hydrology of fracture systems have shown that most ground water moves through a few fractures. The number of fractures, their spacing, and the amount of mineral matter within them are important in assessing the hydrogeologic characteristics of crystalline bedrock aquifers.”

“Studies of crystalline rock elsewhere have shown that fracture permeability, width, and abundance diminish with depth below land surface. In the New Jersey Highlands, these studies are partly supported by data on well yields.”

“The occurrence of joints and fractures is influenced by faults and folds. Most faults in the northern and central Highlands trend northeast and dip southeast at moderate-to-high angles. Smaller northwest-southeast and east-west cross faults are also common. In the southwestern Highlands, thrust faults that dip gently to steeply southeast are fairly common. Fracture density increases near fault zones and in the axes of folds. Fractures and joints sometimes are filled with secondary minerals, which can reduce their permeability.”

The physiographic and geologic layout of Harmony dictates water supply, availability and recharge, as well as location of agriculture. As discussed in the Warren County Agriculture Development Board’s 1998 *Long Range Plan*:

“The physical nature of the county consists of valleys and ridges oriented roughly northeast to southwest. The farmlands are located predominantly in the valleys along the streams and rivers, except in the areas of broad ridges, which also support considerable acreage of excellent farmland. Early settlers cleared the broad expanses along the rivers where the soils were rich and loamy and there were ample supplies of water. Unfortunately, river valleys are also the primary corridors used for travel and commerce and almost all of our towns are situated in those areas where the soils will support an agricultural industry. The result has placed many of the “growth” areas within the county next to, or surrounded by, some of the county’s best soils.” (Long Range Plan)

Water Conservation Strategies

An adequate water supply is important to successful agriculture operations in Harmony. Droughts in recent years have highlighted the precarious nature of the agriculture (and general) water supply, and the need for water conservation systems and regimens.

The State Agriculture Development Committee, through its *Agricultural Smart Growth Plan*, encourages farmers to:

“ ... work to accelerate the use of efficient water conservation technologies, such as drip irrigation. Identify and promote new and efficient methods to conduct water

distribution on farms, utilizing farm ponds and water reuse options.” (2006 Agricultural Smart Growth Plan)

The dominant crops in Harmony are hay, corn, and soybeans. These crops rely on rain and some groundwater for water needs, and as such, water conservation strategies per se are difficult to implement. With the more water intensive nursery and greenhouse, and produce farming, it is possible to implement conservation strategies such as drip irrigation, water reuse, or watering crops in the cooler parts of the day. However, since vegetable, fruit, and nursery agriculture are minor (in acreage) in comparison to field crops in Harmony, the positive effects of water conservation efforts for the Township are minimal. However, water intensive agriculture and processes may become more prevalent in the future, especially with the plan for construction of a greenhouse in the Township. Water conservation strategies may become more important, and should be maximized where possible.

Waste Management and Recycling

Management of livestock waste has important implications for the quality of ground and surface waters. Unchecked, or poorly managed, these wastes can cause serious water quality problems by the introduction of unwanted microorganisms into natural systems. Poor management of animal waste can also cause disease among farm animals. Proper animal waste management is not only required, but is environmentally responsible, as is recycling of farm by-products whenever feasible.

Waste Management in Harmony

Discussions with the local NRCS office in Hackettstown and the Warren County Land Preservation Department indicate the following regarding animal and crop waste management in Warren County and its municipalities, including Harmony:

- Many farmers have “Nutrient Management Plans” to manage the manure generated on their farms. (*Kent Hardmeyer and/or Ron Phelps*)
- Horse waste on farms can be a problem. This is due in part to the relatively small land area of horse farms, making the manure more difficult to effectively and safely distribute on fields. This can spread diseases from the horse manure. Since Harmony has only 12 acres in horse farms, this is not as large of a problem in Harmony as in other municipalities in Warren County.
- Relative to disease, cattle manure is not as serious a problem as horse manure. This is due in part to the relatively large land area of dairy farms, making it easier to safely and effectively distribute the manure on fields. This helps to control the spread of disease. (*Kent Hardmeyer and/or Ron Phelps*)
- At present there is no initiative at the county or municipal level to better manage animal waste. The agricultural community of Warren County may attempt to initiate better livestock waste management. (*Bob Resker*)²⁸
- Ag Choice LLC in Green Township, Sussex County is operated by Jay and Jill Fisher. Ag Choice picks up and accepts and then composts horse waste. It is then

available as bulk pickup, is sold to landscapers, garden centers, or is bagged and sold at retail outlets. This type of operation not only helps control the problem of horse waste on farms, but is also a good revenue source for the Fishers. Harmony farmers can review the Ag Choice operation to ascertain if similar operations might be beneficial to them. The Ag Choice website is <http://www.ag-choice.com/>.

Recycling

Recycling should be an important part of natural resource conservation for the agriculture industry. Recycling saves natural resources, and can also save farmers money through creative reuse, such as using leaves and grass clippings to mulch and fertilize farm fields, and saving on solid waste disposal costs. Recycling reduces the amount of refuse finding its way to limited landfill space. Corn and hay, the dominant farm product by acreage in Harmony, use limited products which can be recycled, and as such limit recycling opportunities.

Energy Conservation

Energy conservation makes economic sense for Harmony agriculture businesses. The less energy a farmer uses, the less money spent on energy, and the more money that can be invested elsewhere, or realized as profit. However, energy conservation and the use of alternate technologies also make environmental sense. They help keep the air, water and soil clean, and minimize or eliminate further pollution to these critical agricultural resources. Also, with the impending threat of global warming due to excessive carbon dioxide emissions into the atmosphere, energy conservation and the use of alternate energy sources can help to slow this warming trend.

This goal of reducing greenhouse gases is indicated in the Regional Greenhouse Gas Initiative (RGGI), a compact signed by the Governors of ten states, including New Jersey. As part of RGGI, the potential trading of carbon credits between energy companies and farmers can offer financial incentives for farmers to utilize processes that minimize carbon dioxide production. (*David Dech*)²⁹

In its 2006 “*Agricultural Smart Growth Plan*”, the New Jersey Department of Agriculture emphasizes the importance of energy conservation and alternative energy use. The Plan indicates that it is important to:

“Promote the use of innovative technologies, recycling, energy conservation and renewable energy systems on New Jersey’s farms” and to “Promote, provide technical assistance for and inform the agricultural community about new and existing energy conservation and renewable energy programs by promoting the financial and environmental benefits of implementing these programs.” Also, the NJDA indicates that *“Through (these) numerous efforts coordinated between the state and federal levels, New Jersey’s agricultural community is proving itself to be an important player in protecting our state’s natural resources. Clearly, there is more work to be done, and the agricultural community has shown initiative in pursuing alternative energy sources, such as solar, wind and bio-gas in running*

farm operations, and by being a leader in the pursuit of ethanol and bio-diesel fuel markets.” (2006 Agricultural Smart Growth Plan)

The SADC does not have a formal policy for the use of wind and solar energy on commercial farms. However, discussions with the SADC indicate:

- SADC is supportive of solar and wind energy use on commercial farms as long as the main purpose of the produced energy is for use on the farm. This does not preclude the sale of excess energy production back to the power grid; and,
- Installation of solar panels, wind turbines and other appurtenant equipment must not negatively impact production of the agricultural land, and agricultural land must not be taken out of production.

*(Steve Bruder)*³⁰

The EQIP natural resource conservation program pays for some energy production programs, such as the aforementioned replacement of older, dirty polluting diesel engines, with newer, more efficient, cleaner burning engines. EQIP also pays rebates to farmers for the use of bio-diesel, and is also used to rebate farmers who have installed solar panels. *(Kent Hardmeyer and/or Ron Phelps)*

The Harmony Township *Master Plan* states that a goal of the Township is to “encourage land uses which promote energy efficiency in farms, homes, transportation, and businesses.” *(Harmony Township Master Plan)* Thus, energy conservation and renewable energy is one area that the Harmony agricultural community can further explore to assist farmers in saving money, and subsequently provide ecological benefit.

Solar Energy

Solar energy can be harnessed via the installation of solar panels. This harnessed or stored energy can then be used to create electricity and provide heat. If excess electricity is generated, it can be sold back to the electric grid for a profit. The overall use of solar panels has greatly increased in New Jersey. *(Agriculture and Green Energy)*³¹ Only one equine farmer in Harmony has installed solar panels to date. Other farmers in Harmony that are interested in using this alternate energy source may contact the local NRCS office in Hackettstown for more information.

Other programs available to help agricultural producers take advantage of this technology include U.S. Department of Energy, “Solar Energy Technology Program”, <http://www1.eere.energy.gov/solar/> and the “Solar Energy for New Jersey Agriculture” work and information sheet at <http://www.state.nj.us/agriculture/pdf/solarenergyguide.pdf>. Solar energy is one of the fastest growing sectors in the alternative energy market, and Harmony farmers can take advantage of this money and energy saving technology.

Wind Energy

The power of a strong wind can be captured by turbines or windmills, turning such power into electricity. Expanding and evolving technology is making this option more attractive to farmers as a way to cut energy costs. According to the NJDA, the northwest part of New Jersey, which includes Warren County, has ample and consistent enough wind power to make turbine energy feasible. (*2006 Agricultural Smart Growth Plan*) While no wind turbines are currently constructed in Harmony, the Township passed Ordinance 03-05 in 2003 to regulate windmills, wind generators, and wind energy conversion systems. The Ordinance allows wind turbines to be permitted as a conditional use in non-residential districts and outlines specific criteria related to location, height, and design elements..

Ethanol and Pelletized Switchgrass

Ethanol is a renewable fuel “made by distilling the starch and sugar in a variety of plants.” (*Agriculture and Green Energy*) It can then be blended into gasoline as an “oxygenate”, reducing air pollution. Its use also reduces dependence on foreign oil, and the harmful environmental effects of oil drilling. Also, unlike the gasoline additive MTBE, ethanol will not contaminate groundwater. (*Agriculture and Green Energy*) Corn, a field crop in Harmony, could position the Township’s farmer to financially capitalize on the spreading movement towards ethanol-blended fuels. More study would need to be done on whether this would be profitable for farmers, and how it would affect other local agriculture industries (for instance, how it would affect the dairy industry’s supply of, and price for, feed corn).

In addition, interest has been shown in utilizing switchgrass to make energy producing pellets. This could add an additional market for Harmony farmers, and another source of clean energy.

Bio-diesel

Petroleum diesel is an emitter of sulfur emissions, a major air pollutant. Bio-diesel, made from the oils of soybeans, is an alternative to petroleum diesel. This organic fuel can be blended and used in diesel engines without modification. The result is a significant reduction of the harmful fumes produced by pure petroleum diesel. (*Agriculture and Green Energy*)³² As of 2005, there were 714 acres of soybeans that were farmland assessed in Harmony. Bio-diesel may be a potential viable market for the Township’s soybean farmers.

Renewable Energy Grant Programs

The NJDA provides the following information on renewable energy grant programs, which can help encourage the use of these energy sources:

New Jersey 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/.

Renewable Energy Systems and Energy Efficiency Improvements Program: As part of the 2002 Farm Bill, this program “funds grants and loan guarantees to agricultural producers for assistance with purchasing renewable energy systems and making energy efficiency improvements.” Final rules for loans and grants were adopted by the U.S. Department of Agriculture in July 2005. The proposed 2007 Farm Bill would continue this funding. Additional information can be found at www.rurdev.usda.gov/rbs/farmbill/index.html.

Biomass Research and Development Initiative Grants: The United States Departments of Agriculture and Energy support development of biomass energy. Grants are available for research, development and demonstrations on bio-based products, bio-energy, bio-fuels, bio-power and additional related processes. In the recent past, grants have focused on development and demonstration projects that lead to greater commercialization. Additional information is available at:

<http://www.state.nj.us/agriculture/news/hottopics/topics060222.html>.

(Agriculture and Green Energy)

Outreach and Incentives

The Township’s Farmland/Open Space Committee is committed to working with the Warren CADB and regional agencies to assist in outreach and education to farmers and landowners regarding natural resource conservation and agricultural productivity. Harmony supports and assists farmers with applications for natural resource conservation grants and programs. The Harmony Farmland/Open Space will continue to work with the Warren CADB to implement programs to aid in natural resource conservation on farms in the Township.

CHAPTER 8: AGRICULTURAL INDUSTRY SUSTAINABILITY, RETENTION, AND PROMOTION



Existing Agricultural Industry Support

Right to Farm

To ensure farmers have the ability to practice accepted agricultural operations, the Right to Farm Act (RFA) was enacted by the State Legislature in 1983 and 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.” (*SADC Right to Farm Program*)¹ 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 RFA on the State and local levels. (*New Jersey’s Great Northwest Skylands*)²

The SADC works to maximize protection for commercial farmers under the RFA by developing Agricultural Management Practices, 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 RFA; be operated in conformance with federal and state law; comply with agricultural management practices recommended by the SADC or site specific agricultural management practices; 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. (*Eligibility Criteria for RTF Act Protection*)³

All right to farm complaints or issues that are brought before the Warren CADB are first handled with fact finding and efforts to resolve differences between the parties. The mediation can be informal or, if the parties agree, the SADC will provide mediation or conflict resolution at no cost to the participants through its Agricultural Mediation

Program. If a formal complaint is filed with the Warren CADB, it is sent to the SADC for a determination as to whether the farm falls within the parameters established by the RFA for right to farm protection. Once the complaint is returned to the Warren CADB from the SADC, additional fact finding and technical review occurs and the issue is given a public, quasi-judicial hearing at the county level. After all information has been considered, the Warren CADB will make a determination as to whether the agricultural activity is protected by the RFA or whether changes to the operation will be required. If the issue is not resolved by the Warren CADB determination, either party in the dispute may take the matter for a subsequent appeal and determination to the New Jersey Office of Administrative Law. (*Resolving Agricultural-Related Conflicts*)⁴

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

- Adopting comprehensive right to farm ordinances as outlined by the SADC.
- Making agriculture a permitted use in all appropriate zones.
- Requiring notification of homeowners purchasing a home in a new subdivision that active agriculture occurs on adjacent property.

Harmony is one of fourteen municipalities in Warren County that have established a Right to Farm Ordinance. Right to Farm Ordinances are necessary if a municipality, or property owner, wishes to enter into the farmland preservation program. Harmony established its Right to Farm Ordinance in 1992 and a copy can be found in the *Appendix*.

The Harmony Right to Farm Ordinance recognizes that “farmers must be secure in their ability to earn a livelihood and utilize customary procedures and techniques.” Specifically, the Ordinance recognizes the right of a farmer to:

- use large irrigation pumps and equipment, aerial and ground seeding and spraying, large tractors, the application of chemical fertilizers, insecticides and herbicides, and other customary farm equipment;
- utilize the land for grazing of animals;
- use necessary farm laborers;
- transport large slow-moving equipment over roads in the Township;
- construct fences for animals and livestock;
- conduct agricultural operations on holidays, Sundays, and in the evenings; and
- produce noise, odor, dust, and fumes that are caused by agricultural activities.

The Township of Harmony has had no Right to Farm issues to date.

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.

Basic eligibility requirements include:

- The applicant must own the land;
- The property owner must apply annually for Farmland Assessment on or before August 1 of the year immediately preceding the tax year;
- Land must be devoted to agricultural and/or horticultural uses for at least two years prior to the tax year;
- Land must consist of at least five contiguous farmed and/or woodland management plan acres. Land under or adjoining a farmhouse is not counted towards the minimum five acres;
- Gross sales of products from the land must average at least \$500 per year for the first five acres, plus an average of \$5.00 per acre for each acre over five. In the case of woodland or wetland, the income requirement is \$.50 per acre for any acreage over five. Dependent on the agricultural or horticultural products being produced, the farmer can also offer clear evidence of anticipated yearly gross sales, payments, or fees within a reasonable period of time; and,
- The property owner must represent that the land will continue in agricultural or horticultural use to the end of the tax year.
(*New Jersey's Farmland Assessment Act*)⁵

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 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, are necessary. Maintained buildings are not only critical to the farmer but also add to farm “aesthetics” for the larger community, helping to support Agritourism, an element of agricultural sustainability in Harmony.

Harmony Township is 15,405 acres (24.07 square miles) in size. Of this, 8,306 acres (or 54% of the Township) are under farmland assessment. According to the *New Jersey Farmland Assessment*, general trends indicate:

- An slightly upward trend in overall farmland assessed acreage since 1984, with decreases in the actual farmed acres but increases in woodlands that are part of farmland assessed acres;
- Harvested cropland was 5,298 acres in 1984, which decreased to 5,070 acres in 2001, and has continued to decrease to 4,927 acres in 2005;
- Pastured cropland was at 340 acres in 1984, increasing to 356 acres in 2001, but decreasing to 331 acres in 2005;
- Permanent pasture acreage increased slightly from the 1984 to 2001, from 707 acres to 715 acres, before reaching a low of 525 acres in 2005;
- Equine acreage has had a slight decrease since it was first measured in 2001, from 18 acres to 12 acres in 2005;
- The total municipal acreage (for active agricultural use, woodlands and equine) in farmland assessment has increased from 7,662 acres in 1984 to 7,847 acres in 2005, a nearly 2.5 percent decrease in farmland assessed acreage; and,

- Overall active agricultural acreage in farmland assessment decreased from 6,340 acres in 1984 to 5,783 acres in 2005.
(*New Jersey Farmland Assessment*)⁶

It is important 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 to ensure a steady, permanent source of agricultural lands for the Township’s farmland preservation efforts.

Additional Strategies to Sustain, Retain, and Promote Agriculture in Harmony

Regulatory Flexibility

Municipalities play a key role in the preservation of farming as an industry. In municipalities with a sizable acreage of assessed farmland, zoning powers can be utilized to require buffers between agriculture and other uses to minimize conflict. The Right to Farm Ordinances are an active example of municipalities’ support for agriculture. Such actions create an atmosphere favorable to agriculture, 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 Harmony’s strong agricultural base requires support on many fronts, one of which is flexibility in government regulation. (*Agricultural Smart Growth Plan 2006*)⁷ It is essential that the Harmony Farmland/ Open Space Committee, Warren CADB, Land Preservation Office, Board of Agriculture, County Freeholders, Soil Conservation District, Natural Resource Conservation Service, Rutgers Cooperative Extension of Warren County, private farm preservation groups, and other interested entities and individuals work together to present a united front in issues regarding government regulation and permits as they relate to agriculture. 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 must work to ensure proper advantage for agriculture in Harmony:

- *Positive and supportive public policy:* This includes legal protection (right to farm), priority in decisions on taxation (farmland assessment), regulation exemptions, and financial incentives (planning incentive grants). These need to be strengthened and modified if, and when, necessary;
- *Exemptions:* State, county, and municipal regulations must be responsive to the needs of farmers. Minor changes to, or exemptions from, certain local and state regulations, rules, and ordinances help to buffer agricultural operations from burdensome costs, creating a farmer-friendly environment. Harmony’s strong Right to Farm Ordinance stands as one example of such regulations. At a state level, the Department of Environmental Protection’s “Freshwater Wetlands Protection Act

Rules” (N.J.A.C. 7:7A-et. seq.) and the “Flood Hazard Area Control Act Rules” (N.J.A.C. 7:13) grant exemptions, permits by rule, or general permits for agricultural activities. In addition, for the Department of Environmental Protection’s “Highlands Water Protection and Planning Act Rules” (N.J.A.C. 7:38), exemptions are allowed for activities conducted in accordance with an approved Woodland Management Plan issued pursuant to the Farmland Assessment Act. The Harmony agriculture community must work to ensure that exemptions are adequate and reasonable;

- *Flexibility:* State agencies such as the Department of Environmental Protection, Department of Transportation, Department of Community Affairs, Department of Labor, and New Jersey Commerce Commission, should consider the NJDA Agricultural Smart Growth Plan when making important decisions regarding existing and proposed infrastructure, developing and amending regulations and programs, and protecting environmental and historical resources. These agencies should coordinate with NJDA to ensure that regulations, programs, etc. are attuned to the needs of Harmony farmers;
- *Agriculture-Friendly Zoning:* This refers to a comprehensive land use practice that coordinates zoning and land use policy in a proactive way. The desired result is that it encourages agribusiness, while at the same time reducing the incidence of farmer-homeowner nuisance issues. In other words, it seeks to harmonize potentially conflicting land use policies. This strategy would be done mostly at the local and county levels.

(Agricultural Smart Growth Plan 2006)

Farm Labor

An adequate labor supply is integral to harvesting vegetables, fruits, and berries. Measured in farmed acreage, Harmony has a relatively small industry for these products compared with field crops such as hay and corn, and also beef cattle, goat, sheep, and nursery products. Harvesting of the latter farm products is more mechanized, and/or not as labor intensive as produce, with most work being done by farm family members. (*Kent Hardmeyer*)⁸ As of 2004, 173 acres were devoted to fruits, berries, and vegetables in Harmony, while 4,863 acres were devoted to field crops and nursery products. (*New Jersey Farmland Assessment*) Since the overall acreage devoted to labor intensive farming is minimized in Harmony, farm labor housing, a large issue in counties with high farm labor populations is, for the most part, not of high concern in the Township.

Farmer Education

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, agricultural leadership training, secondary school and college agricultural education.” (*Agricultural Smart Growth Plan 2006*)

One educational link for Harmony agricultural land owners and operators is to collaborate with the Rutgers Cooperative Extension (RCE) of Warren County (associated with the School of Environmental and Biological Sciences [formerly Cook College], Rutgers University). During the growing season, RCE of Warren County provides 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, and also for field crops. Similar farm animal consultation is provided on a year round basis. During the growing season, RCE of Warren County also conducts “twilight meetings” for fruits and vegetables at local farms, to discuss a wide range of issues relative to these agricultural products. In August of every year a twilight meeting is held locally to discuss sustainable horticulture. (*Bill Tietjen*)⁹

RCE of Warren County also provides practical assistance to farmers. Examples are assistance in obtaining pesticide application licenses (necessary to buy and apply pesticides), and also to obtain water certification and registration permits from the New Jersey Department of Environmental Protection, for groundwater and/or surface water allocations. Finally, the RCE of Warren County performs applied research on area farms to further knowledge on a wide range of issues pertaining to agricultural plants and animals. Results of any research are used to advise local farmers on an as-needed basis. (*Bill Tietjen*) All of the aforementioned available programs and assistance offer an individual farm operator the opportunity to gain the latest information on numerous and pertinent agriculture topics, which are important to agricultural sustainability.

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. (*Agricultural Smart Growth Plan 2006*)

Youth Farmer Education Programs

The farmer population in Warren County is getting older, and the same trend holds true in Harmony. Due to the aging farmer population, 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. Educational programs in agriculture offered as an optional and viable opportunity for the youth of Harmony will assist those who are interested in pursuing such careers. Creating new opportunities via secondary and post secondary education programs in Agriculture, Food and Natural Resources will reassure students that opportunities exist for them in Harmony. (*Agricultural Smart Growth Plan 2006*)

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.*” (*National FFA Organization*)¹⁰ The National FFA Organization was founded in 1928, and currently has 7,242 chapters and nearly 500,000

members. (*National FFA Organization*) Through the local FFA and New Jersey Department of Agriculture's Office of Agriculture, Food and Natural Resource Education, Warren County offers youth agriculture education at Belvidere High School for Agriculture Business Management and Horticulture; at Hackettstown Regional High School for Floriculture and Floristry, and Operation and Management of Horticulture; at North Warren Regional High School for Horticulture; at Phillipsburg High School for Agriculture Business Management, Horticulture, and Landscaping & Groundskeeping; and, at Warren Hills Regional High School for Horticulture. (*Office of Agriculture*)¹¹ These same high schools also have local FFA chapters. Robin McLean is the local FFA representative and can be contacted at 1-877-243-3332 for further information.

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. (*Agricultural Smart Growth Plan 2006*)

Public outreach

Over the last 50 years, New Jersey has transformed away 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 Harmony Township. If the Township's remaining agricultural areas are to survive and prosper, the non-farming public needs to be aware of the continuing financial, cultural, scenic and agricultural contributions made by Harmony. Methods to expand public outreach efforts in Harmony are through increased signage, events, and opportunities for "on the ground" solicitation of farming operations including pick-your-own operations and local farm stands.

Management of nuisance and crop damaging wildlife

Management of nuisance and crop damaging wildlife is critical to the short and long term sustainability of Harmony's agriculture industry. Crop damage from wildlife leads to economic loss for the farmer and/or land owner, and is an extremely serious problem throughout Warren County, causing 75% or more crop loss in certain instances. Most damage is caused by a multitude of insects, as well as deer, bear, turkey, and other wildlife. It is important to not only control and manage damage to crops, but to also do it in a manner which causes the least amount of collateral natural resource damage (that is, limit pesticide use to the greatest extent possible, using natural pest control).

One key way for Harmony farmers to control damage from deer, bear, and turkey is through hunting of crop damaging animals. This hunting is allowed 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 crop damage by what is widely considered an excessive deer population in the County.

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. (*Division of Plant Industry*)¹² 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 longhorned 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." (*Division of Plant Industry*) Protection of forest resources is important to Harmony farmers who harvest wood as part of Woodland Management Plans on their farmland assessed properties.

Agriculture vehicle movement

In recent years, as many portions of the rural New Jersey landscape have become developed with residential subdivisions, the sometimes conflicting lifestyles of farmers and residents clash. Harmony farmers need to move heavy, slow moving agricultural equipment over local, county and sometimes state roads to access unconnected fields and barns. Local 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 Harmony's farmers and other residents, while creating unsafe road conditions as residents and farmers "compete" for road space.

Since many farm vehicles travel over local municipal roads, Harmony should continue to support local agricultural business' right to do so. The SADC model Right to Farm ordinance recognizes as a specific right the operation and transportation of large, slow moving farm equipment over roads. Harmony's Right to Farm Ordinance currently includes specific protection of the right to transport tractors and slow moving farm equipment on local roads.

Signage alerting fast moving cars as to the possible movement and road crossing of slow moving farm vehicles is an additional, effective tool to protect farmer (and automobile passenger) safety. Signage also informs the public at large that agriculture is an important, equal and permanent fixture of life in Harmony. Where absent or inadequate, appropriate signage can be posted.

Federal Programs

The federal government is an important partner in supporting Harmony agriculture. There are several federal programs that support, or could support, the agricultural industry in the Township.

USDA Rural Development Program

Known as the Rural Development Program, the United States Department of Agriculture (USDA) has an extensive array of loans and grants to assist residents in rural areas of the country to support essential public facilities and services such as water and sewer systems, housing, health clinics, emergency service facilities, and electric and telephone service. Through the program, the USDA offers technical assistance and information to agricultural cooperatives, as well as to communities for empowerment programs. With a multi-billion dollar portfolio of loans, loan guarantees, and grants, the USDA can be an effective partner to assist with agriculture sustainability. (*Rural Development*)¹³

Grants and loans are available in three key areas: Rural Business-Cooperative Service, Rural Housing Service, and Rural Utilities Service. To qualify for many of the program's loans and grants, municipalities must have less than 10,000 residents. (*Agricultural Smart Growth Plan 2006*) At a population of slightly over 2,800, Harmony would qualify for these loans and grants.

Income Averaging for Farmers

The U.S. Taxpayer Relief Act of 1997, administered by the U.S. Department of Treasury's Internal Revenue Service, is meant to smooth out economic disparities that farmers experience from year to year due to the cyclical nature of agriculture. Known as Farm Income Averaging, qualified farmers can average all or part of their current year farm income over the previous three years. Substantial tax dollars can be saved by income averaging. (*United States Department of the Treasury*)¹⁴

In the New Jersey Legislature, New Jersey Senate Bill 1425 is presently being considered by the Senate Economic Growth Committee, while Assembly Bill 1692 is being considered by the Assembly's Agriculture and Natural Resources, and Appropriations Committees. (*Ben Kurtzman*)¹⁵ These bills would provide income averaging similar to the federal program described above.

USDA Farm Service Agriculture Program

Farming is a business which can be extremely cyclical and unpredictable, with factors, such as weather and market conditions, out of the farmer's control. As such, farmers often need assistance to make ends meet, to stay profitable, and to stay in business. Many times federal government programs are available, and Harmony farmers can take advantage of these loans as a tool in running their farm business.

The United States Department of Agriculture (USDA), Farm Service Agency (FSA) makes “... *guaranteed farm ownership and operating loans to (beginning farmers), family-size farmers and ranchers who cannot obtain commercial credit from a bank, Farm Credit System institution, or other lender*”, often due to financial setbacks from natural disasters, or whose resources are too limited to maintain profitable farming operations. FSA loans can be used for most agriculture necessities such as purchasing land, livestock, equipment,

feed, seed, supplies, and also for construction of buildings, or to make farm improvements. (*Farm Service Agency*)¹⁶

The FSA also makes "Direct" farm loans. These loans include supervision and credit counseling for farmers so they have a better chance for success. Under this program, farm ownership, operating, emergency and youth loans are the main types of loans available, but there are also minority applicant and beginning farmer loans. (*Farm Service Agency*)

The FSA office for Warren County is located at 101 Bilby Road, Suite 1H in Hackettstown, at the same location as the NRCS office discussed in Chapter 7. The County Executive Agent is Ken Bingham, and he may be reached at (908) 852-2576, ext. 109, or at Kenneth.Bingham@nj.usda.gov for assistance. This FSA office also administers the financial aspect of the CREP program, which was discussed in *Chapter 7*.

Township of Harmony's Vision for Farmland Preservation

The Mission Statement of the Harmony Farmland/Open Space Committee:

The mission of the Harmony Township Farmland/Open Space Committee is to preserve the Township's thriving farming community and retain the Township's prime agricultural lands to secure and sustain the livelihood of its farmers. The preservation of productive farmland will ensure the health of the local economy as well as the health of the natural resources that supports the Township's agricultural industry.

Goals of the Harmony Farmland/Open Space Committee:

The Township's Farmland/Open Space Committee aspires to preserve farms in the Township where the farmer is interested in participating in preservation programs and where the land is currently in agricultural production or has a strong potential for sustained agricultural production in the future. Since 1997, over 1,273 acres have been preserved for agricultural uses.

¹ New Jersey Department of Agriculture. New Jersey State Agriculture Development Committee (SADC). “Right to Farm Program.” <http://www.state.nj.us/agriculture/sadc/rtfprogram.htm>. Accessed March 11, 2007.

² New Jersey’s Great Northwest Skylands, Farmland Preservation. <http://www.njskylands.com/fmpres.htm>. Accessed May 28, 2007.

³ New Jersey Department of Agriculture, State Agriculture Development Committee, Right to Farm (RTF) Program: Eligibility Criteria for RTF Act Protection <http://www.state.nj.us/agriculture/sadc/rtfcriteria.htm>. Accessed March 25, 2007.

⁴ New Jersey Department of Agriculture, State Agriculture Development Committee, Right to Farm Program: Resolving Agricultural-Related Conflicts <http://www.state.nj.us/agriculture/sadc/rtfconflictres.htm>. Accessed March 25, 2007.

⁵ New Jersey Department of Agriculture, New Jersey’s Farmland Assessment Act, An Informational Guide on Basic Requirements. July 2006.

⁶ New Jersey Agriculture Development Committee. New Jersey Farmland Assessment. Tax Years 1984, 1991, 2001, and 2005. Warren County Summary.

⁷ New Jersey Department of Agriculture, Agricultural Smart Growth Plan 2006. <http://www.state.nj.us/agriculture/pdf/smartgrowthplan.pdf> Accessed March 27, 2007.

⁸ Personal communication with Kent Hardmeyer, United States Department of Agriculture, Natural Resources Conservation Service. May 15, 2007.

⁹ Personal communication with Bill Tietjen, Rutgers Cooperative Extension of Warren County, May 30, 2007.

¹⁰ National FFA Organization, Agricultural Science Education. <http://www.ffa.org/>. Accessed May 27, 2007.

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Dave Schaaf, District Manager, Warren County Soil Conservation District. June 2007.

Bill Tietjen, Rutgers Cooperative Extension of Warren County. May 2007.

Wayne Wharton, New Jersey Department of Environmental Protection, New Jersey
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MAPS

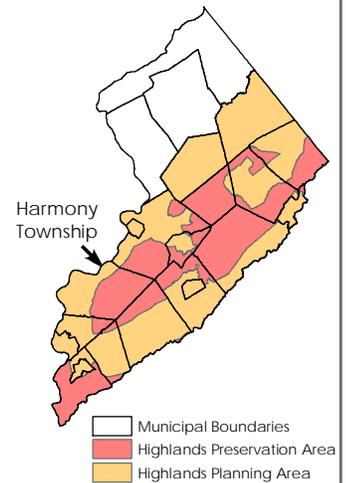
- a. Farmland Map
- b. Agricultural Soil Categories
- c. Project Area map
- d. Farmland that meets the SADC Criteria for Agricultural Soils
- e. Farmland that meets the SADC Criteria for Tillable Land
- f. Farmland that meets SADC Criteria for both Agricultural Soils and Tillable Land

FARMLAND MAP

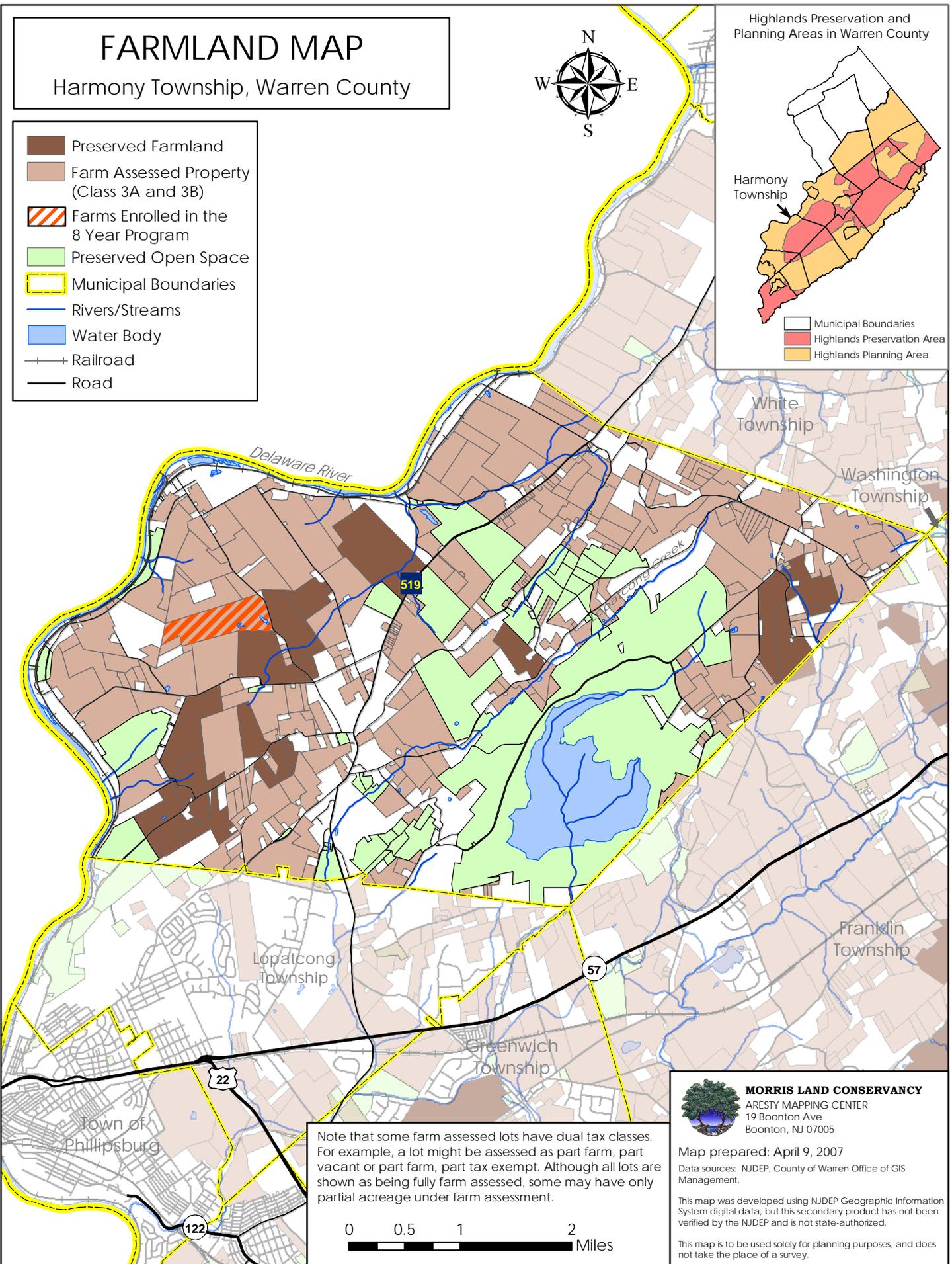
Harmony Township, Warren County



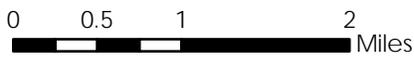
Highlands Preservation and Planning Areas in Warren County



- Preserved Farmland
- Farm Assessed Property (Class 3A and 3B)
- Farms Enrolled in the 8 Year Program
- Preserved Open Space
- Municipal Boundaries
- Rivers/Streams
- Water Body
- Railroad
- Road



Note that some farm assessed lots have dual tax classes. For example, a lot might be assessed as part farm, part vacant or part farm, part tax exempt. Although all lots are shown as being fully farm assessed, some may have only partial acreage under farm assessment.



MORRIS LAND CONSERVANCY
 ARESTY MAPPING CENTER
 19 Boonton Ave
 Boonton, NJ 07005

Map prepared: April 9, 2007
 Data sources: NJDEP, County of Warren Office of GIS Management.

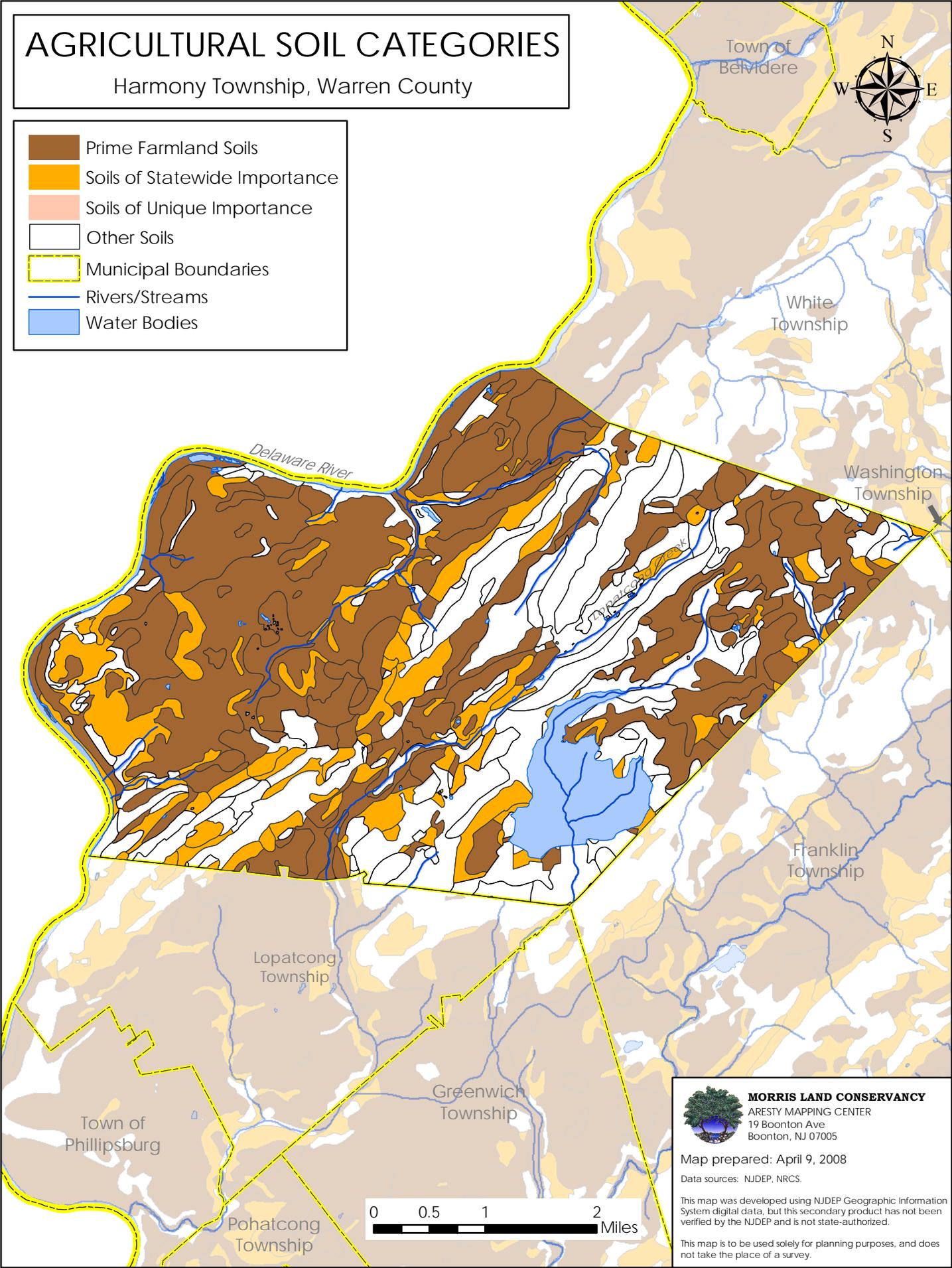
This map was developed using NJDEP Geographic Information System digital data, but this secondary product has not been verified by the NJDEP and is not state-authorized.

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

AGRICULTURAL SOIL CATEGORIES

Harmony Township, Warren County

- Prime Farmland Soils
- Soils of Statewide Importance
- Soils of Unique Importance
- Other Soils
- Municipal Boundaries
- Rivers/Streams
- Water Bodies



MORRIS LAND CONSERVANCY
ARESTY MAPPING CENTER
19 Boonton Ave
Boonton, NJ 07005

Map prepared: April 9, 2008

Data sources: NJDEP, NRCS.

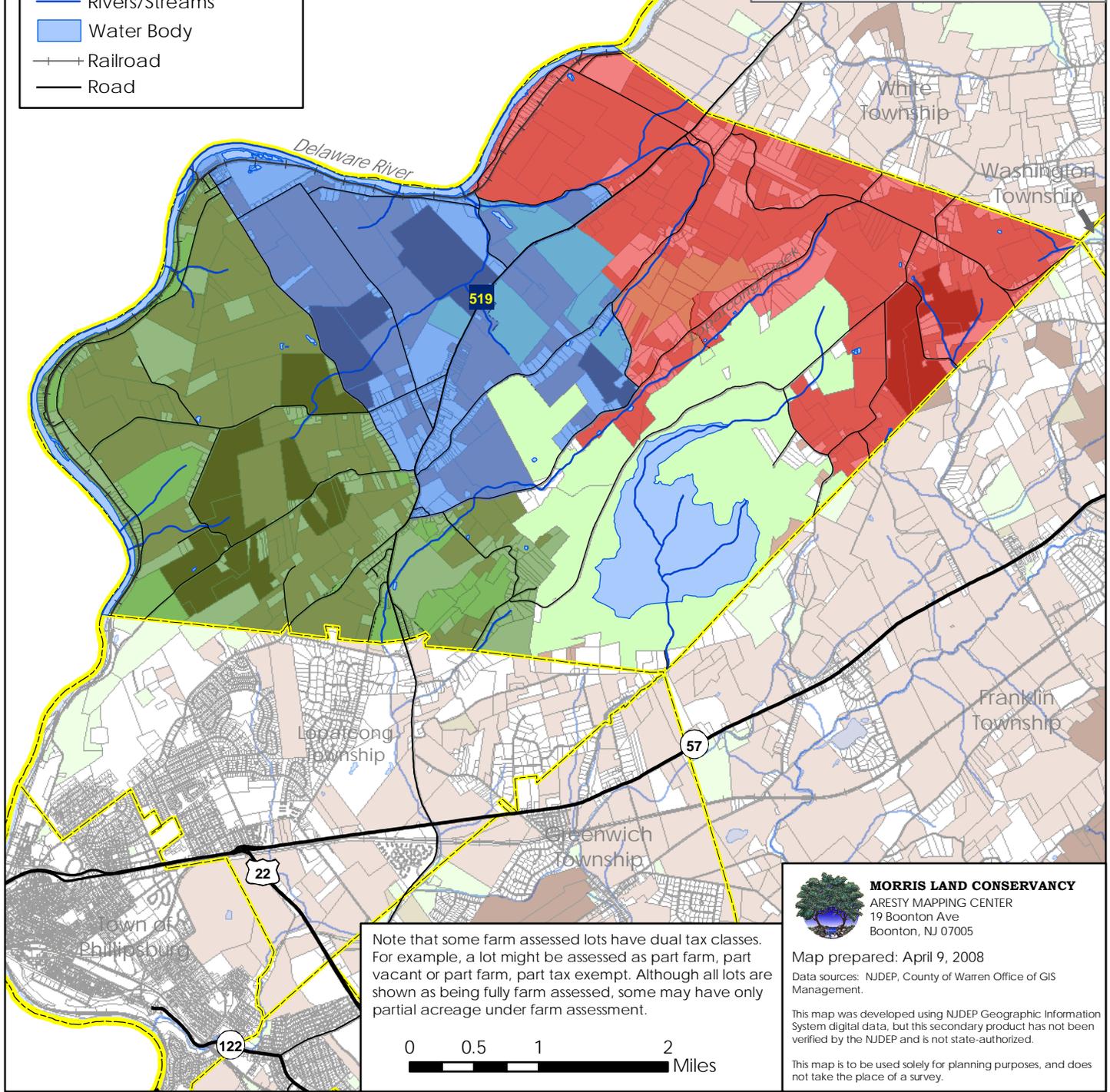
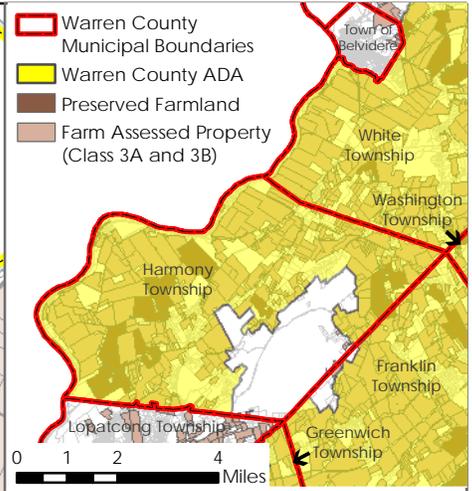
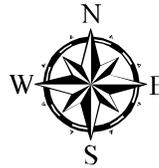
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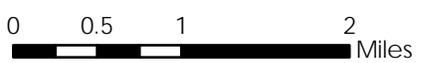
PROJECT AREA MAP

Harmony Township, Warren County

- Project Area 1
- Project Area 2
- Project Area 3
- Preserved Farmland
- Farm Assessed Property (Class 3A and 3B)
- Preserved Open Space
- Municipal Boundaries
- Rivers/Streams
- Water Body
- Railroad
- Road



Note that some farm assessed lots have dual tax classes. For example, a lot might be assessed as part farm, part vacant or part farm, part tax exempt. Although all lots are shown as being fully farm assessed, some may have only partial acreage under farm assessment.



MORRIS LAND CONSERVANCY
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 Boonton, NJ 07005

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Farms Parcels that meet SADC Criteria for Soils

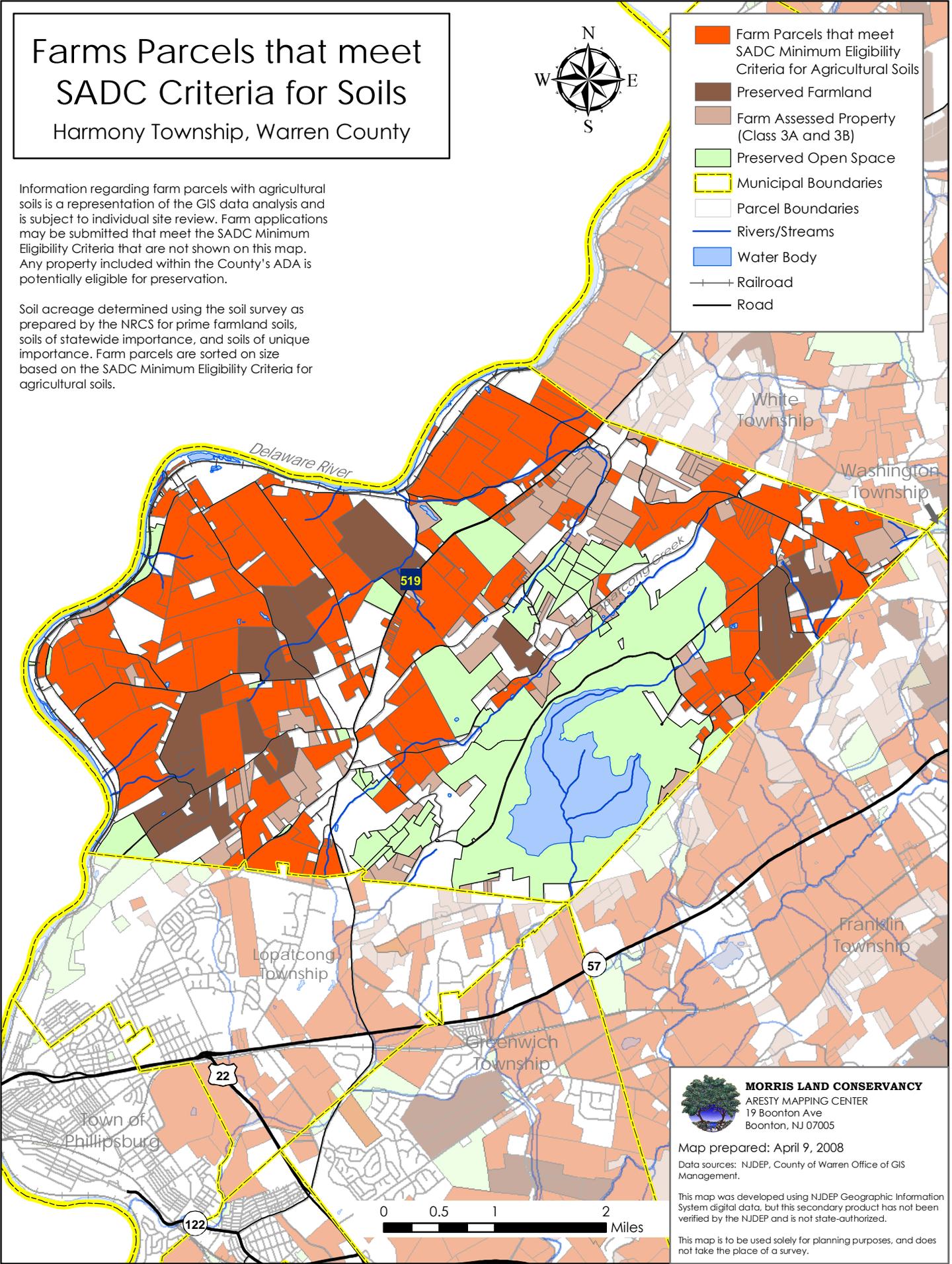
Harmony Township, Warren County

Information regarding farm parcels with agricultural soils is a representation of the GIS data analysis and is subject to individual site review. Farm applications may be submitted that meet the SADC Minimum Eligibility Criteria that are not shown on this map. Any property included within the County's ADA is potentially eligible for preservation.

Soil acreage determined using the soil survey as prepared by the NRCS for prime farmland soils, soils of statewide importance, and soils of unique importance. Farm parcels are sorted on size based on the SADC Minimum Eligibility Criteria for agricultural soils.



- Farm Parcels that meet SADC Minimum Eligibility Criteria for Agricultural Soils
- Preserved Farmland
- Farm Assessed Property (Class 3A and 3B)
- Preserved Open Space
- Municipal Boundaries
- Parcel Boundaries
- Rivers/Streams
- Water Body
- Railroad
- Road

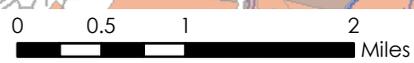


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 Boonton, NJ 07005

Map prepared: April 9, 2008
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Farms Parcels that meet SADC Criteria for Tillable Land

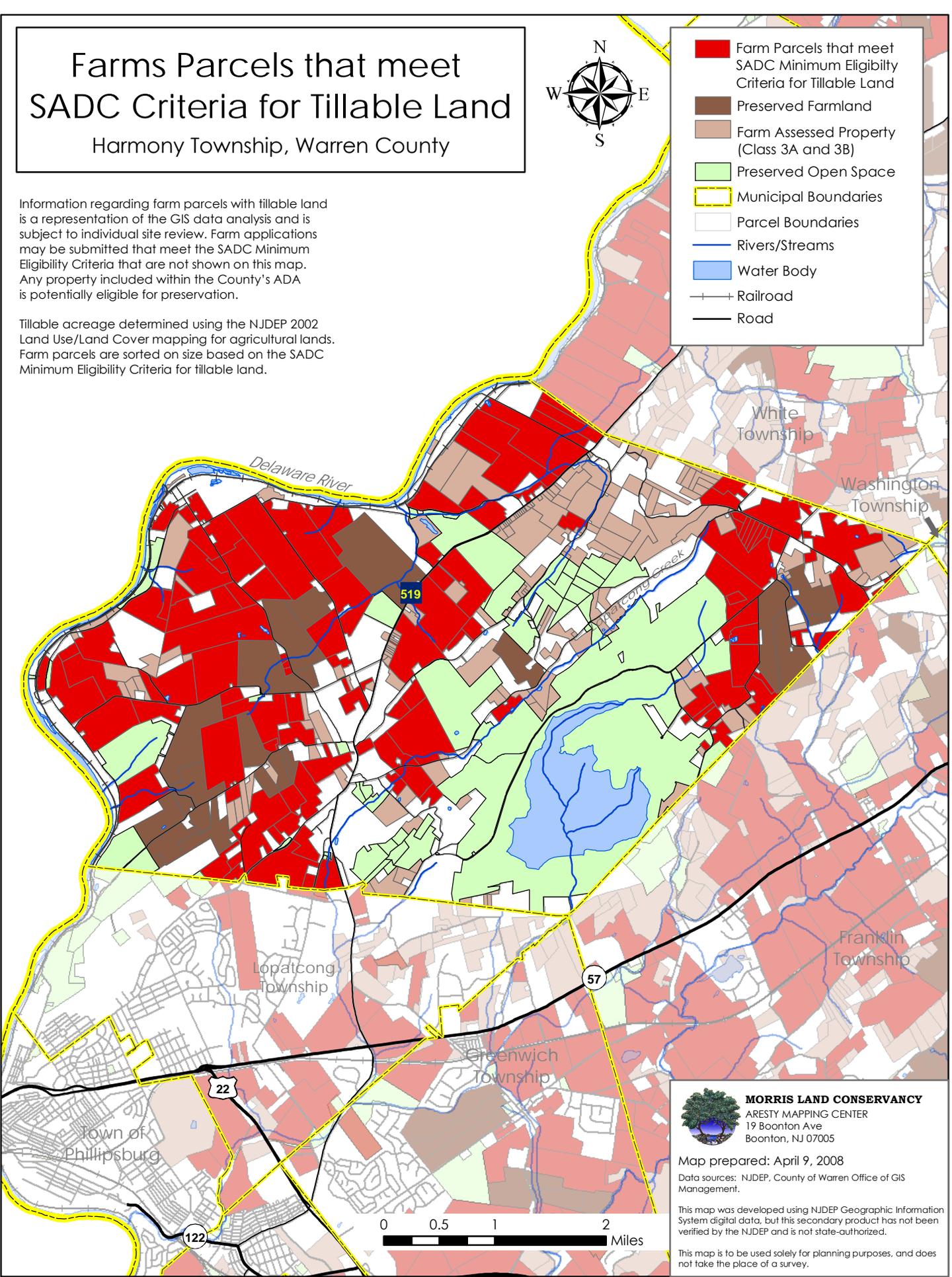
Harmony Township, Warren County



- Farm Parcels that meet SADC Minimum Eligibility Criteria for Tillable Land
- Preserved Farmland
- Farm Assessed Property (Class 3A and 3B)
- Preserved Open Space
- Municipal Boundaries
- Parcel Boundaries
- Rivers/Streams
- Water Body
- +— Railroad
- Road

Information regarding farm parcels with tillable land is a representation of the GIS data analysis and is subject to individual site review. Farm applications may be submitted that meet the SADC Minimum Eligibility Criteria that are not shown on this map. Any property included within the County's ADA is potentially eligible for preservation.

Tillable acreage determined using the NJDEP 2002 Land Use/Land Cover mapping for agricultural lands. Farm parcels are sorted on size based on the SADC Minimum Eligibility Criteria for tillable land.

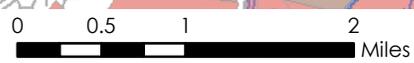


MORRIS LAND CONSERVANCY
 ARESTY MAPPING CENTER
 19 Boonton Ave
 Boonton, NJ 07005

Map prepared: April 9, 2008
 Data sources: NJDEP, County of Warren Office of GIS Management.

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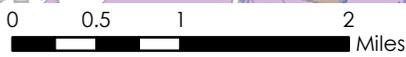
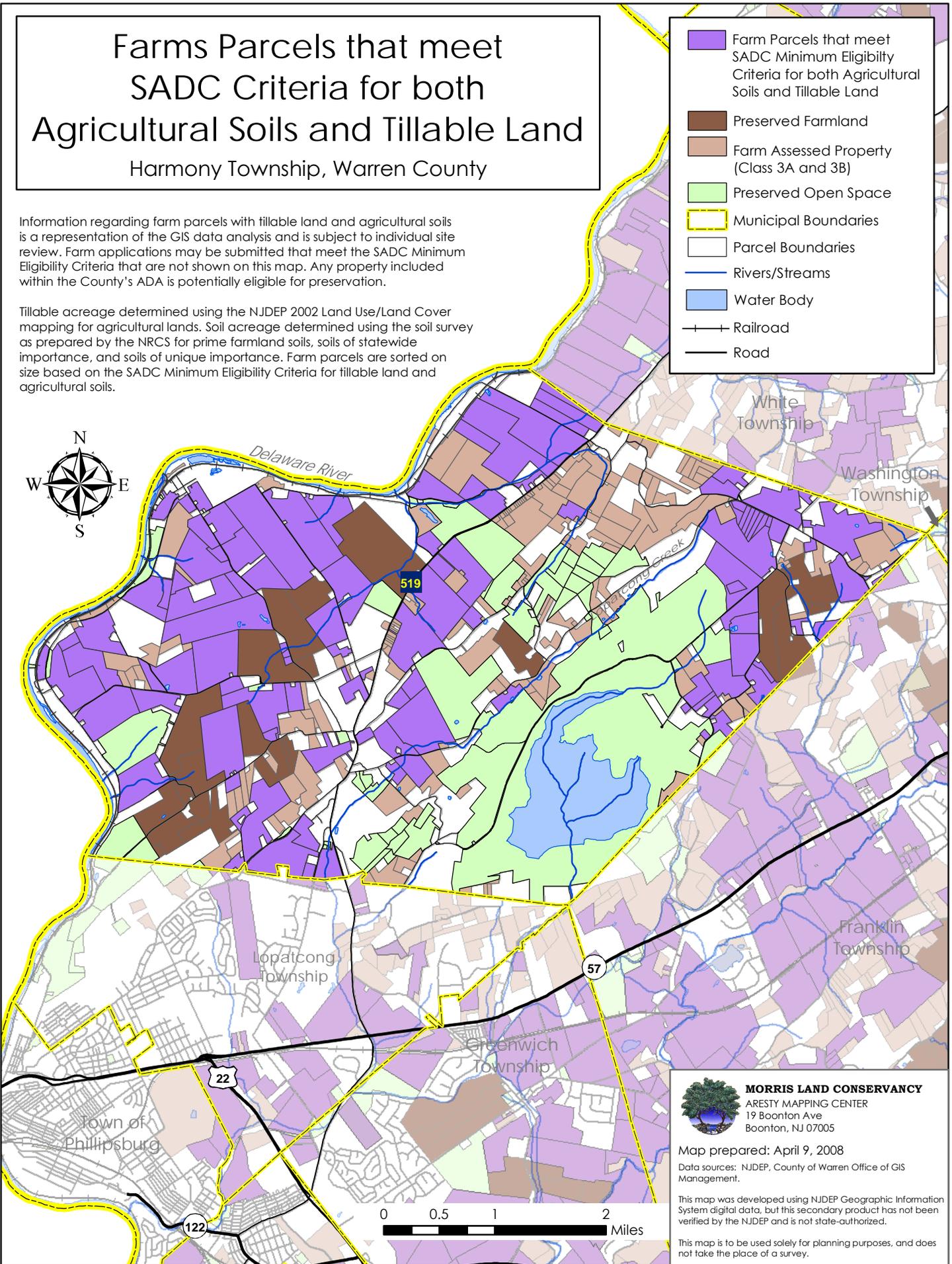
Farms Parcels that meet SADC Criteria for both Agricultural Soils and Tillable Land

Harmony Township, Warren County

Information regarding farm parcels with tillable land and agricultural soils is a representation of the GIS data analysis and is subject to individual site review. Farm applications may be submitted that meet the SADC Minimum Eligibility Criteria that are not shown on this map. Any property included within the County's ADA is potentially eligible for preservation.

Tillable acreage determined using the NJDEP 2002 Land Use/Land Cover mapping for agricultural lands. Soil acreage determined using the soil survey as prepared by the NRCS for prime farmland soils, soils of statewide importance, and soils of unique importance. Farm parcels are sorted on size based on the SADC Minimum Eligibility Criteria for tillable land and agricultural soils.

-  Farm Parcels that meet SADC Minimum Eligibility Criteria for both Agricultural Soils and Tillable Land
-  Preserved Farmland
-  Farm Assessed Property (Class 3A and 3B)
-  Preserved Open Space
-  Municipal Boundaries
-  Parcel Boundaries
-  Rivers/Streams
-  Water Body
-  Railroad
-  Road



MORRIS LAND CONSERVANCY
 ARESTY MAPPING CENTER
 19 Boonton Ave
 Boonton, NJ 07005

Map prepared: April 9, 2008
 Data sources: NJDEP, County of Warren Office of GIS Management.

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APPENDICES

- a. Public Hearing #1 – Notice and Agenda
- b. Public Hearing #2 – Notice
- c. Warren County FY09 Minimum Score Report
- d. Harmony Right-to-Farm Ordinance
- e. SADC Deed of Easement
- f. Farm Parcels Meeting the SADC Minimum Eligibility Criteria for Agricultural Soils and Tillable Land

TOWNSHIP OF HARMONY
SPECIAL MEETING NOTICE

NOTICE is hereby given that the Township Committee of the Township of Harmony will hold a special meeting on Thursday, October 4, 2007 beginning at 7:30 p.m. at the Harmony Township Municipal Building, 3003 Belvidere Road, Phillipsburg, NJ 08865.

The agenda of the meeting, to the extent known, will be as follows:

- Discussion with Harmony Farmland/Open Space Committee
- Any other business that may come before the committee at this time

Formal action may be taken by the Township Committee on any item appearing on the agenda or which may be added to the agenda.

Dated: September 14, 2007

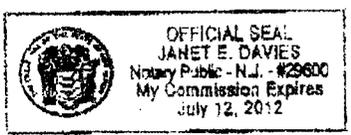
Kelley D. Smith, RMC/CMR
Municipal Clerk/Registrar

.....Joyce Yuzuk.....
 full age, being duly sworn upon her oath, saith: That she is
 connected with Star Gazette, a newspaper published
 in Hackensack, Warren County, New Jersey;
 that a notice of which the annexed is a true copy, was published
 on the 20 day of September A.D., 2007
 in said newspaper and once a week thereafter successively,
 in all 1 week(s), viz.: upon

.....Joyce Yuzuk.....

Sworn and subscribed before me this
24 day of September A.D. 2007

Janet E. Davies
 Notary Public of N.J.



**TOWNSHIP OF HARMONY
 SPECIAL MEETING NOTICE**
 NOTICE is hereby given that the Township
 Committee of the Township of Harmony will hold a special
 meeting on Thursday, October 4, 2007 beginning at
 7:30 p.m. in the Harmony Township Municipal Building,
 3000 Escondido Road, Philadelphia, NJ 08065.
 The agenda of the meeting to the extent known,
 will be as follows:
 - Discussion with Harmony Farmers' Open Space
 Committee
 - Any other business that may come before the
 committee at this time.
 Formal action may be taken by the Township
 Committee on any item appearing on the agenda or
 which may be added to the agenda.
 Kelly D. Smith, FANCY GRAP
 Municipal Clerk/Registrar
 Pex 9725
 20 Sept 10

HARMONY TOWNSHIP COMMITTEE SPECIAL MEETING

October 4, 2007

7:30 P.M.

A G E N D A

CALL TO ORDER:

OPEN PUBLIC MEETINGS

STATEMENT:

PLEDGE OF ALLEGIANCE:

ROLL CALL:

1. OPEN-SPACE/FARMLAND COMMITTEE/TOWNSHIP COMMITTEE
JOINT DISCUSSION

PUBLIC COMMENTS:

EXECUTIVE SESSION: (IF NECESSARY)

ADJOURNMENT:

New Jersey Farmland Preservation Program
Calculated Minimum Rank Score For "Eligible Farm" Status - FY09
Farms Granted Preliminary SADC Approval Through County EP Program in FY06, FY07, FY08

Warren County FY09 Minimum Score for Eligible Farm: 38

Applicant / Owner	Net Acres	Total Score	Round
Allamuchy Twp.			
Warren Co/Van Horn Estate	102	72.41	2006A
Nevins, Iris	53	53.82	2008A
Warren Co/Van Horn Estate	102	70.99	2007A
Blairstown Twp.			
Warren Co./Pehowski, Linda M.	170	65.14	2007A
Petterson, Juanita & Tamara	10	44.62	2008A
DePietro, Ann	90	49.57	2007A
Franklin Twp.			
Bungert, Mary Lou	42	56.08	2006A
Convey, Frank H. & Helen M.	132	53.14	2008A
Sigler, Carl & Barbara #2	84	44.67	2008A
Sigler, Carl & Barbara #1	83	56.92	2008A
Riewerts, Henry	36	45.88	2008A
Petty, Jason	29	65.03	2008A
Miller, John S. & Wendy E.	49	64.12	2008A
Sigler, Earl & Alberta #2	28	58.40	2007A
Owens, Albert H.	55	51.94	2007A
Sigler, Earl & Alberta #1	50	62.37	2007A
Miller, John S. & Wendy E.	49	59.99	2006A
Frelinghuysen Twp.			
Gurba, Stephen Revocable Trust	127	53.77	2006A
Parker, Newton A.	106	41.35	2007A
Kumetz, Divina	74	46.50	2007A
Jensen, Christian J. & Renae	55	52.78	2007A
Peck, Harry B.	44	53.91	2006A
Greenwich Twp.			
Matuch, Walter & Mary Susan	53	55.53	2007A
Hardwick Twp.			
Morris Land Conservancy/Paans	57	34.48	2007A
Harmony Twp.			
Jansen, Peter C.	76	75.37	2007A
Fisher-Bigelow, B. & Schanzlin, R.	84	44.27	2007A
Duckworth, Robert #3	25	67.23	2008A
Duckworth, Robert #2	78	65.31	2008A
Duckworth, Robert #1	70	59.24	2008A
Venner, Estate of Charles	48	66.42	2007A
Hope Twp.			
White Oak Farm Greenhouse & Nursery, LLC	47	61.13	2006A
Grochowicz, Estate of Katherine (T.& L.)	128	67.20	2007A
Hayter, Larry & Mary Anne	77	42.42	2008A

Minimum Score for Eligible Farm is determined at 70% of County Average

March 1, 2007

Page 23 of 25

ADC_FLP score24.rdf

New Jersey Farmland Preservation Program
Calculated Minimum Rank Score For "Eligible Farm" Status - FY09
Farms Granted Preliminary SADC Approval Through County EP Program in FY06, FY07, FY08

Applicant / Owner	Net Acres	Total Score	Round
Hope Twp.			
May, Robert C & Diane L.	37	56.39	2008A
Independence Twp.			
Kasharian, John & Jean	9	44.59	2007A
McCloskey, Anne	46	43.20	2007A
Knowlton Twp.			
Fritz, Estate of Walter & Gladys	13	60.66	2007A
Demers, Doake & Smith Mary J.	77	65.72	2008A
Liberty Twp.			
Pryslak Farms Partnership	60	55.93	2006A
Kurnath, Albert & Jacqueline	74	40.28	2006A
Quick, Alan & Gail	51	34.37	2007A
Topoleski, Robert & Maurine	11	42.04	2007A
Mansfield Twp.			
Sams, Terry L. & Brenda C.	57	54.23	2008A
Terhune Farm Partnership, LP #3	72	66.95	2008A
Terhune Farm Partnership, LP #2	64	52.21	2008A
Terhune Farm Partnership, LP #1	77	60.93	2008A
Warren Co (Smith Estate)	161	61.51	2007A
Getto, Lawrence P.	42	57.46	2007A
Particari, Anthony F. & Mari Ann	65	63.65	2007A
Washington Twp.			
Heath, Joseph J. & Marilyn M.	9	66.55	2007A
McFadden, Thomas & Ruth	14	47.21	2008A
Rigoletti, Martin J. & Jean A.	36	70.00	2007A
White Twp.			
Matthews, Ivan M. & Betty S.	39	54.29	2006A
Bullock, Clarence & Carol	109	50.22	2008A
Steinhardt, Joseph	51	42.09	2008A
White Twp (Crossroads Farm)	109	60.06	2006A
Steinhardt, Therese	77	58.51	2008A
War/Pequest Development LLC	59	71.44	2008A
Matthews, Timothy I. & Lynda K.	88	40.74	2007A
County Total/Averages	59	3,820	55.60

Minimum Score for Eligible Farm is determined at 70% of County Average
 March 1, 2007

- Harmony*
- E. Unlawful uses. No unlawful structure or unlawful use of a building or structure, lot or land existing at the effective date of this chapter shall be deemed to be a nonconforming structure or use.
 - F. Notwithstanding the lot area, lot width and lot coverage requirements, a single-family dwelling may be erected on any lot separately owned and not adjacent to any lot in the same ownership at the effective date of this subsection or acquired subsequent thereto, provided that the aggregate width of the side yard is no less than twenty-five percent (25%) of the lot width and that the narrower side yard is not less than ten percent (10%) of the lot width or fifteen (15) feet, whichever is greater. [Amended 11-6-79 by Ord. No. 0:79-6; 3-3-81 by Ord. No. 0:81-3]

§ 165-20. Preservation of natural features.

- A. Existing natural features such as trees, brooks, drainage channels and view shall be retained. Whenever such features interfere with the proposed use of such property, a retention of the maximum amount of such features consistent with the use of the property shall be required.
- B. Streams and streambeds. No structure shall be built on a lot any side of which fronts on a natural watercourse unless a permit or certificate of exemption has been issued by the New Jersey Department of Environmental Protection or its successor agency as required by the Stream Encroachment Law (N.J.S.A. 58:1-26 et seq.)⁵ and the Floodplain Act (N.J.S.A. 58:16A-50 et seq.).
- C. Topsoil. No person, firm or corporation shall strip, excavate or otherwise remove topsoil for other than reuse on the same lot.

§ 165-20.1. Right to farm. [Added 5-5-1992 by Ord. No. 0:92-6]

- A. There is hereby included in the Zoning Ordinance of the Township of Harmony a section entitled "Right to farm."

⁵ Editor's Note: See now N.J.S.A. 58:16A-50 et seq.

B. Legislative findings.

- (1) The Township Committee of the Township of Harmony finds that farming has existed and been carried on in the township for hundreds of years and long before the residential development that has since been prevalent in the township. The Township Committee of the Township of Harmony further finds that residences have been located in close proximity to existing working farms that engage in spraying, the spreading of animal wastes, fertilizing and irrigation as well as other activities which are indigenous to farming. The Township Committee of the Township of Harmony finds and determines that farmers must be secure in their ability to earn a livelihood and utilize customary procedures and techniques.
- (2) The Township of Harmony further finds that whatever burden may be caused to contiguous property owners is offset by the benefits from farming to the township, county and state as well as the preservation of open space areas within the township.

C. Statement of intent. This section shall not be construed as a zoning ordinance and does not supersede any zoning ordinance and the rights and privileges arising from said ordinances. It is the intent of this section to prohibit farming from being found to be a nuisance when practiced according to customary farming practices.

D. Recognition of right.

- (1) The right to farm lands and properties within the Township of Harmony is hereby recognized to exist as a right of the farmer, his agents or assigns to utilize his land and properties in such a manner as to pursue his livelihood, subject only to the restrictions and regulations set forth in the township, county and state health codes and regulations.
- (2) The right to farm recognize the use of large irrigation pumps and equipment, aerial and ground seeding and

spraying, large tractors, the application of chemical fertilizers, insecticides and herbicides, as well as other customary farm equipment utilized by the farmer for the purpose of producing from the land agricultural products such as vegetables, grains, hay, fruits, fibers, wood, trees, plants, shrubs, aquaculture, flowers and seeds.

- (3) The right to farm shall also include the right to utilize the land for grazing of animals, subject to the restrictions for intensive fowl or livestock farms or such restrictions as may be required by county, state and federal laws.
- (4) The right to farm shall also recognize activities such as the use of necessary farm laborers, the traveling and transportation of large slow-moving equipment over roads within the Township of Harmony and the construction of fences for animals and livestock.

E. Times of operation; ancillary effects. The activities set forth herein incidental to the right to farm and when reasonable and necessary for that particular farming activity and livestock or fowl production and when conducted in accordance with generally accepted agricultural practices may occur on holidays, Sundays and weekdays and at night and during the day. The noise, odors, dust and fumes that are caused by these activities are recognized as ancillary to the permitted activities set forth in this section and the right to farm.

F. Notice of right to farm. For the purpose of giving due notice of nearby uses to proposed residents, the Planning Board of the Township of Harmony shall require an applicant for a major or minor subdivision, as a condition of approval thereof, to include the following notice, both on the subdivision plat itself and in an instrument in recordable form, to provide constructive record notice to buyers of the existence of any proximate, nonresidential uses, such instrument to be approved by the Planning Board of the Township of Harmony prior to the filing of the final subdivision plat or recording of any deed(s), as the case may be. Such notice shall read as

follows: "Grantee is hereby noticed that there is, or may in the future be, farm use near the described premises from which may emanate noise, odors, dust and fumes associated with agricultural practices permitted under § 165-20.1, Right to farm, of the Harmony Township Zoning Ordinance."

§ 165-21. Buffers, screening and landscaping.

A. Buffer strips. Wherever a buffer strip has been specified by this chapter or as may be required by the Board or governing body, such buffer strip shall be of the width so specified or required and shall:

- (1) Be landscaped by the planting of grass and/or ground cover, shrubs and trees. Two (2) shrubs and one (1) tree shall be provided for each five hundred (500) square feet of area or fraction thereof of the buffer strip. If the buffer strip is naturally wooded in its entire width, it shall remain in its natural condition in place of the required shrubs and trees.
- (2) Not contain parking area or driveways, unless specifically permitted elsewhere in this chapter, or other accessory structures or uses except for decorative purposes or passive recreational purposes.

B. Screening. Wherever screening has been specified by this chapter or as may be required by the Board, such screening, unless otherwise required, shall extend to the lesser of the required front yard setbacks of the lots to be screened and shall, as a minimum, consist of dense hedges or deciduous trees and at least fifty percent (50%) evergreen shrubbery, planted at thirty (30) inches on center in a single row or at five (5) feet on center in each of two (2) staggered rows, provided that if all evergreens are used, they may be planted at five (5) feet on center in a single row or at ten (1) feet on center in each of two (2) staggered rows. Plants shall be a minimum of six (6) feet tall at the time of planting or, if the Board so approves:

E3-E

DEED OF EASEMENT

STATE OF NEW JERSEY AGRICULTURE RETENTION AND DEVELOPMENT PROGRAM

This Deed is made _____, 20 _____.

BETWEEN _____, whose address is _____ and is referred to as the Grantor;

AND _____, whose address is _____ and is referred to as the Grantee and/or Board.

The Grantor, Grantor's heirs, executors, administrators, personal or legal representatives, successors and assigns grants and conveys to the Grantee a development easement and all of the nonagricultural development rights and credits on the Premises, located in the Township of _____, County of _____, described in the attached Schedule A, and, for the limited purpose of the restrictions contained in Paragraph 13(b), the tract of land described in the attached Schedule C, which schedules are incorporated by reference in this Deed of Easement, for and in consideration of the sum of _____ Dollars.

Any reference in this Deed of Easement to "Premises" refers to the property described in Schedule A, and, for the limited purpose of the restrictions contained in Paragraph 13(b), to the tract of land described in Schedule C.

The tax map reference for the Premises is:

Township of _____
Block _____, Lot _____

WHEREAS, the legislature of the State of New Jersey has declared that the development of agriculture and the retention of farmlands are important to the present and future economy of the State and the welfare of the citizens of the State; and

WHEREAS, the Grantor is the sole and exclusive owner of the Premises; and

WHEREAS, the Grantee believes that the retention and preservation of agricultural lands is beneficial to the public health, safety and welfare of the citizens of _____ County;

NOW THEREFORE, THE GRANTOR, GRANTOR'S HEIRS, EXECUTORS, ADMINISTRATORS, PERSONAL OR LEGAL REPRESENTATIVES, SUCCESSORS AND ASSIGNS PROMISES that the Premises will be owned, used and conveyed subject to, and not in violation of the following restrictions:

1. Any development of the Premises for nonagricultural purposes is expressly prohibited.
2. The Premises shall be retained for agricultural use and production in compliance with N.J.S.A. 4:1C-11 et seq., P.L. 1983, c.32, and all other rules promulgated by the State Agriculture Development Committee, (hereinafter Committee). Agricultural use shall mean the use of the Premises for common farmsite activities including, but not limited to: production, harvesting, storage, grading, packaging, processing and the wholesale and retail marketing of crops, plants, animals and other related commodities and the use and application of techniques and methods of soil preparation and management, fertilization, weed, disease and pest control, disposal of farm waste, irrigation, drainage and water management and grazing.
3. Grantor certifies that at the time of the application to sell the development easement to the Grantee and at the time of the execution of this Deed of Easement the nonagricultural uses indicated on attached Schedule (B) existed on the Premises. All other nonagricultural uses are prohibited except as expressly provided in this Deed of Easement.

Prepared by: _____

4. All nonagricultural uses, if any, existing on the Premises at the time of the landowner's application to the Grantee as set forth in Section 3 above may be continued and any structure may be restored or repaired in the event of partial destruction thereof, subject to the following:

- i. No new structures or the expansion of pre-existing structures for nonagricultural use are permitted;
- ii. No change in the pre-existing nonagricultural use is permitted;
- iii. No expansion of the pre-existing nonagricultural use is permitted; and
- iv. In the event that the Grantor abandons the pre-existing nonagricultural use, the right of the Grantor to continue the use is extinguished.

5. No sand, gravel, loam, rock, or other minerals shall be deposited on or removed from the Premises excepting only those materials required for the agricultural purpose for which the land is being used.

6. No dumping or placing of trash or waste material shall be permitted on the Premises unless expressly recommended by the Committee as an agricultural management practice.

7. No activity shall be permitted on the Premises which would be detrimental to drainage, flood control, water conservation, erosion control, or soil conservation, nor shall any other activity be permitted which would be detrimental to the continued agricultural use of the Premises.

- i. Grantor shall obtain within one year of the date of this Deed of Easement, a farm conservation plan approved by the local soil conservation district.
- ii. Grantor's long term objectives shall conform with the provisions of the farm conservation plan.

8. Grantee and Committee and their agents shall be permitted access to, and to enter upon, the Premises at all reasonable times, but solely for the purpose of inspection in order to enforce and assure compliance with the terms and conditions of this Deed of Easement. Grantee agrees to give Grantor, at least 24 hours advance notice of its intention to enter the Premises, and further, to limit such times of entry to the daylight hours on regular business days of the week.

9. Grantor may use the Premises to derive income from certain recreational activities such as hunting, fishing, cross country skiing and ecological tours, only if such activities do not interfere with the actual use of the land for agricultural production and that the activities only utilize the Premises in its existing condition. Other recreational activities from which income is derived and which alter the Premises, such as golf courses and athletic fields, are prohibited.

10. Nothing shall be construed to convey a right to the public of access to or use of the Premises except as stated in this Deed of Easement or as otherwise provided by law.

11. Nothing shall impose upon the Grantor any duty to maintain the Premises in any particular state, or condition, except as provided for in this Deed of Easement.

12. Nothing in this Deed of Easement shall be deemed to restrict the right of Grantor, to maintain all roads and trails existing upon the Premises as of the date of this Deed of Easement. Grantor shall be permitted to construct, improve or reconstruct any roadway necessary to service crops, bogs, agricultural buildings, or reservoirs as may be necessary.

13(a). At the time of this conveyance, Grantor has existing single family residential buildings on the Premises and residential buildings used for agricultural labor purposes. Grantor may use, maintain, and improve existing buildings on the Premises subject to the following conditions:

- i. Improvements to agricultural buildings shall be consistent with agricultural uses;
- ii. Improvements to residential buildings shall be consistent with agricultural or single and extended family residential uses. Improvements to residential buildings for the purpose of housing agricultural labor are permitted only if the housed agricultural labor is employed on the Premises; and
- iii. Improvements to recreational buildings shall be consistent with agricultural or recreational uses.

13(b). Grantor, their heirs, executors, administrators, personal or legal representatives, successors and assigns may use and maintain the Exception Area, as described in the attached Schedule C, conditions:

sample conditions:

- a. the Exception Area shall not be severed or subdivided from the Premises
- b. the Exception area may be severed and subdivided from the Premises
- c. the Exception Area shall be limited to one residential unit
- d. (Right to Farm Language if Exception is Non-Severable)

Grantors, grantor’s heirs, executors, administrators, personal or legal representatives, successors and assigns or any person who is occupying or residing on the Exception Area as well as the heirs, executors, administrators, personal or legal representatives, successors and assigns of all such persons are hereby notified and made aware that the Exception Area is adjacent to a parcel (“Premises”) permanently deed restricted under the Agriculture Retention and Development Act, N.J.S.A. 4:1C-11 et seq. Such persons occupying or residing on the Exception Area are notified and made aware that agriculture is the accepted and preferred use of the adjacent Premises and that the adjacent Premises shall continue in agricultural use as defined in Section 2 of the Deed of Easement.

- e. (Right to Farm Language if Exception is Severable)

Grantors, grantor’s heirs, executors, administrators, personal or legal representatives, successors and assigns or any person to whom title to the Exception Area is transferred as well as the heirs, executors, administrators, personal or legal representatives, successors and assigns of all such persons are hereby notified and made aware that the Exception Area is adjacent to a parcel (“Premises”) permanently deed restricted under the Agriculture Retention and Development Act, N.J.S.A. 4:1C-11 et seq. Such persons taking title to the Exception Area are notified and made aware that agriculture is the accepted and preferred use of the adjacent Premises and that the adjacent Premises shall continue in agricultural use as defined in Section 2 of the Deed of Easement.

14. Grantor may construct any new buildings for agricultural purposes. The construction of any new buildings for residential use, regardless of its purpose, shall be prohibited except as follows:

- i. To provide structures for housing of agricultural labor employed on the Premises but only with the approval of the Grantee and the Committee. If Grantee and the Committee grant approval for the construction of agricultural labor housing, such housing shall not be used as a residence for Grantor, Grantor's spouse, Grantor's parents, Grantor's lineal descendants, adopted or natural, Grantor’s spouse’s parents, Grantor’s spouse’s lineal descendants, adopted or natural; and
- ii. To construct a single family residential building anywhere on the Premises in order to replace any single family residential building in existence at the time of conveyance of this Deed of Easement but only with the approval of the Grantee and Committee.
- iii. _____ residual dwelling site opportunity(ies) have been allocated to the Premises pursuant to the provisions of N.J.A.C. 2:76-6.17, "Residual Dwelling Site Opportunity". The Grantor's request to exercise a residual dwelling site opportunity shall comply with the rules promulgated by the Committee in effect at the time the request is initiated.

In the event a division of the Premises occurs in compliance with deed restriction No. 15 below, the Grantor shall prepare or cause to be prepared a Corrective Deed of Easement reflecting the reallocation of the residual dwelling site opportunities to the respective divided lots. The Corrective Deed shall be recorded with the County Clerk. A copy of the recorded Corrective Deed shall be provided to the Grantee and Committee.

In the event a residual dwelling site opportunity has been approved by the Grantee, the Grantor shall prepare or cause to be prepared a Corrective Deed of Easement at the time of Grantee's approval. The Corrective Deed of Easement shall reflect the reduction of residual dwelling site opportunities allocated to the Premises. The Corrective Deed shall be recorded with the

County Clerk. A copy of the recorded Corrective Deed shall be provided to the Grantee and Committee.

(OR)

- iii. No residual dwelling site opportunities have been allocated pursuant to the provisions of N.J.A.C. 2:76-6.17. No residential buildings are permitted on the Premises except as provided in this Deed of Easement.

For the purpose of this Deed of Easement:

"Residual dwelling site opportunity" means the potential to construct a residential unit and other appurtenant structures on the Premises in accordance with N.J.A.C. 2:76-6.17.

"Residual dwelling site" means the location of the residential unit and other appurtenant structures.

"Residential unit" means the residential building to be used for single family residential housing and its appurtenant uses. The construction and use of the residential unit shall be for agricultural purposes.

"Use for agricultural purposes" as related to the exercise of a residual dwelling site opportunity and the continued use of the residential unit constructed thereto, means at least one person residing in the residential unit shall be regularly engaged in common farmsite activities on the Premises including, but not limited to: production, harvesting, storage, grading, packaging, processing and the wholesale and retail marketing of crops, plants, animals and other related commodities and the use and application of techniques and methods of soil preparation and management, fertilization, weed, disease and pest control, disposal of farm waste, irrigation, drainage, water management and grazing.

15. The land and its buildings which are affected may be sold collectively or individually for continued agricultural use as defined in Section 2 of this Deed of Easement. However, no division of the land shall be permitted without the joint approval in writing of the Grantee and the Committee. In order for the Grantor to receive approval, the Grantee and Committee must find that the division shall be for an agricultural purpose and result in agriculturally viable parcels. Division means any division of the Premises, for any purpose, subsequent to the effective date of this Deed of Easement.

- i. For purposes of this Deed of Easement, "Agriculturally viable parcel" means that each parcel is capable of sustaining a variety of agricultural operations that yield a reasonable economic return under normal conditions, solely from each parcel's agricultural output.

16. In the event of any violation of the terms and conditions of this Deed of Easement, Grantee or the Committee may institute, in the name of the State of New Jersey, any proceedings to enforce these terms and conditions including the institution of suit to enjoin such violations and to require restoration of the Premises to its prior condition. Grantee or the Committee do not waive or forfeit the right to take any other legal action necessary to insure compliance with the terms, conditions, and purpose of this Deed of Easement by a prior failure to act.

17. This Deed of Easement imposes no obligation or restriction on the Grantor's use of the Premises except as specifically set forth in this Deed of Easement.

18. This Deed of Easement is binding upon the Grantor, the Grantor's heirs, executors, administrators, personal or legal representatives, successors and assigns and the Grantee; it shall be construed as a restriction running with the land and shall be binding upon any person to whom title to the Premises is transferred as well as upon the heirs, executors, administrators, personal or legal representatives, successors, and assigns of all such persons.

19. Throughout this Deed of Easement, the singular shall include the plural, and the masculine shall include the feminine, unless the text indicates otherwise.

20. The word 'Grantor' shall mean any and all persons who lawfully succeed to the rights and responsibilities of the Grantor, including but not limited to the Grantor's heirs, executors, administrators, personal or legal representatives, successors and assigns.

21. Wherever in this Deed of Easement any party shall be designated or referred to by name or general reference, such designation shall have the same effect as if the words, 'heirs, executors, administrators, personal or legal representatives, successors and assigns' have been inserted after each and every designation.

22. Grantor, Grantor's heirs, executors, administrators, personal or legal representatives, successors and assigns further transfers and conveys to Grantee all of the nonagricultural development rights and development credits appurtenant to the lands and Premises described herein. Nothing contained herein shall preclude the conveyance or retention of said rights by the Grantee as may be permitted by the laws of the State of New Jersey in the future. In the event that the law permits the conveyance of said development rights, Grantee agrees to reimburse the Committee (_____) percent of the value of the development rights as determined at the time of the subsequent conveyance.

23. That portion of the net proceeds, representing the value of the land only (and not the value of the improvements), of a condemnation award or other disposition of the Premises following termination of this Deed of Easement, as permitted pursuant to N.J.S.A. 4:1C-11 et seq., P.L. 1983, c.32, shall be distributed among the Grantor and the Grantee in shares in proportion to the fair market value of their interests in the Premises on the date of execution of this Deed of Easement. For this purpose, the Grantee's allocable share of the proceeds shall be the net proceeds multiplied by a fraction, the numerator of which is the fair market value of the development easement as certified by the Committee at the time of the initial acquisition and the denominator of which is the full fair market value of the unrestricted Premises as certified by the Committee at the time of the initial acquisition, which is identified as (/).

Furthermore, the Grantee's proceeds shall be distributed among the Grantee and the Committee in shares in proportion to their respective cost share grants on the date of execution of this Deed of Easement. The Grantee shall use its share of the proceeds in a manner consistent with the provisions of N.J.S.A. 4:1C-11 et seq., P.L. 1983, c.32.

24. No historic building or structure located on the Premises may be demolished by the grantor or any other person without the prior approval of the State Agriculture Development Committee. Historic building or structure is a building or structure that, as of the date of this Deed of Easement, has been included in the New Jersey Register of Historic Places established pursuant to N.J.S.A. 13:1B-15.128 et seq.

The Grantor signs this Deed of Easement as of the date of the top of the first page. If the Grantor is a corporation, this Deed of Easement is signed and attested to by its proper corporate officers, and its corporate seal, if any, is affixed.

_____(L.S.)

_____(L.S.)

_____(Corporate Seal)

Secretary
(For use by corporations only)

(INDIVIDUAL ACKNOWLEDGMENT)

STATE OF NEW JERSEY, COUNTY OF _____ SS.:

I CERTIFY that on _____, 20 _____,

_____ personally came before me and acknowledged under oath, to my satisfaction, this that person (or if more than one, each person):

- (a) is named in and personally signed this DEED OF EASEMENT;
- (b) signed, sealed and delivered this DEED OF EASEMENT as his or her act and deed;
- (c) made this DEED OF EASEMENT for and in consideration of mutual obligations and benefits to each party; and
- (d) the actual and true consideration paid for this instrument is \$_____.

Print name and title below signature

(CORPORATE ACKNOWLEDGMENT)

STATE OF NEW JERSEY, COUNTY OF _____ SS.:

I CERTIFY that on _____ 20 _____, the subscriber

_____, personally appeared before me, who, being by me duly sworn on his or her oath, deposes and makes proof to my satisfaction, that he or she is the Secretary of _____, the Corporation named in the within Instrument; that _____ is the President of said Corporation; that the execution, as well as the making of this Instrument, has been duly authorized by a proper resolution of the Board of Directors of the said Corporation, that deponent well knows the corporate seal of said Corporation; and that the seal affixed to said Instrument is the proper corporate seal and was thereto affixed and said Instrument signed and delivered by said President as and for the voluntary act and deed of said Corporation, in presence of deponent, who thereupon subscribed his or her name thereto as attesting witness; and that the full and actual consideration paid to purchase a development easement as evidenced by the DEED OF EASEMENT is \$ _____ and the mutual obligations and benefits contained herein.

Sworn to and subscribed before me, the date aforesaid

Print name and title below signature

(COUNTY AGRICULTURE DEVELOPMENT BOARD)

THE UNDERSIGNED, being Chairperson of the _____ County Agriculture Development Board, hereby accepts and approves the foregoing restrictions, benefits and covenants.

ACCEPTED AND APPROVED this _____ day of _____, 20 ____.

Chairperson
_____ County Agriculture Development Board

STATE OF NEW JERSEY, COUNTY OF _____ SS.:

I CERTIFY that on _____, 20 _____,

_____ personally came before me and acknowledged under oath, to my satisfaction that this person: (a) is named in and personally signed this DEED OF EASEMENT, (b) signed, sealed and delivered this DEED OF EASEMENT as the Board's act and deed; and (c) is the Chairperson of the _____ County Agriculture Development Board.

Print name and title below signature

(STATE AGRICULTURE DEVELOPMENT COMMITTEE)

The State Agriculture Development Committee has approved the purchase of the development easement on the Premises pursuant to the Agriculture Retention and Development Act, N.J.S.A. 4:1C-11 et seq., P.L. 1983, c.32, and has authorized a grant of _____% of the purchase price of the development easement to _____ County in the amount of \$ _____.

Gregory Romano, Executive Director
State Agriculture Development Committee

Date

STATE OF NEW JERSEY, COUNTY OF _____ SS.:

I CERTIFY that on _____, 20 _____,

_____ personally came before me and acknowledged under oath, to my satisfaction, that this person:

- (a) is named in and personally signed this DEED OF EASEMENT,
- (b) signed, sealed and delivered this DEED OF EASEMENT as the Committee's act and deed, and
- (c) is the Executive Director of the State Agriculture Development Committee.

Print name and title below signature

Farm Parcels Meeting the SADC Minimum Eligibility Criteria for Agricultural Soils and Tillable Land

Block	Lot	Property Class	Owners Name	Size Farm Parcel (acres)	Agricultural Soils (acres)	Agricultural Soils (percent)	Tillable Land (acres)	Tillable Land (percent)
44	7	3B	PETRILAK, STEPHEN & JOHN	26.38	26.38	100.00	25.67	97.31
17	13	3A	VENNER, CHARLES LEONARD	56.03	48.29	86.18	26.63	47.53
9	51.02	3B	BURKE, DANA R & BARBARA DINSMORE	18.71	15.86	84.72	18.29	97.74
21	34.06	3B	POTTER, DIANA	6.40	6.40	100.00	6.40	100.00
37	4	3A	DOWEL ASSOCIATES	185.94	177.41	95.41	169.17	90.98
45	3	3B	SAKELE BROTHERS CO.	95.40	66.65	69.86	67.00	70.24
21	34.05	3B	HAYDU, STEVEN C	6.28	6.28	100.00	6.28	100.00
26	42	3B	SALTER, JOHN R	39.58	27.27	68.89	34.76	87.82
39	4	3B	PETRILAK, STEPHEN & JOHN	19.45	19.45	100.00	18.82	96.79
36	1.06	3B	GERAGHTY, FRANK T & JOAN M	3.65	3.65	100.00	3.20	87.52
35	2	3A	SWANSON, DAVID B & SUZANNE	3.39	3.39	100.00	2.98	87.98
37	17.02	3B	SMITH, DONALD & RICHARD	48.34	48.34	100.00	46.26	95.69
33	47	3B	FARLEY, ROBERT C/O JAMES SWICK	109.55	26.33	24.04	64.51	58.89
21	34.02	3B	HAYDU, JOSEPH D	2.67	2.67	100.00	2.67	100.00
44	9	3A	DC PARTNERS, L.P.	18.85	18.85	100.00	17.77	94.24
8	10	3A	CROUSE, DARLA	34.45	32.74	95.01	24.96	72.45
26	43	3B	ROSS, LYANDRA	13.69	13.15	96.09	13.30	97.16
44	21	3B	MALLINCKRODT BAKER INC	57.49	49.48	86.05	37.61	65.41
21	34.03	3B	POTTER, DIANA	6.11	6.11	100.00	6.11	100.00
31	8	3B	GEIGER, MARK H	89.32	88.86	99.48	69.48	77.78
7	14.01	3A	MACOMBER, JAMES K.	19.69	18.00	91.37	17.27	87.67
20	8.03	3B	WRIGHT, JAMES J & JOYCE A	26.02	23.25	89.38	18.53	71.24
37	5	3A	DUTT, NATALIE O	59.68	59.68	100.00	56.80	95.16
25	17	3A	YOUNG, ROBERT A & KAREN R	12.55	8.17	65.07	7.80	62.11
16	1	3B	EASTVIEW FARM, LLC	5.73	5.44	95.08	5.14	89.69
21	33	3A	DUCKWORTH, DONALD N & ELSIE	116.71	67.35	57.70	85.87	73.58
4	2	3A	CALAFORE, HENRIETTA M	42.86	42.86	100.00	40.60	94.73
9	57	4A	MERRILL CRK RES C/O PROJ DIRECT	99.23	50.87	51.26	44.92	45.26
21	34.04	3B	HAYDU, JOSEPH D	7.03	7.03	100.00	7.03	100.00
31	8.10	3B	WARREN COUNTY FARMER'S FAIR ASSOC	8.29	8.29	100.00	8.29	100.00
44	5	3B	PETRILAK, STEPHEN & JOHN	10.75	9.01	83.79	10.37	96.40
38	4	3A	MERRILL CRK RES C/O PROJ DIRECT	61.63	51.02	82.78	26.23	42.57

Farm Parcels Meeting the SADC Minimum Eligibility Criteria for Agricultural Soils and Tillable Land

Block	Lot	Property Class	Owners Name	Size Farm Parcel (acres)	Agricultural Soils (acres)	Agricultural Soils (percent)	Tillable Land (acres)	Tillable Land (percent)
33	58	3B	YEAGER, GARY W & CATHY, S	10.66	10.66	100.00	9.97	93.52
35	8	3B	NICOLOSI, DOMINIC AND ROBERT	22.68	22.68	100.00	21.94	96.73
26	43.05	3B	ROSS, ANDREW & LYANDRA	21.04	20.66	98.21	17.37	82.55
9	17.01	3A	O'NEIL JAMES C & JOANN L	18.00	13.13	72.96	10.52	58.43
7	3	3A	LAUBACH, R. GERALD & MICHELLE	10.96	10.04	91.62	8.10	73.88
37	3	3A	PETRILAK, STEPHEN & JOHN	46.20	46.20	100.00	45.04	97.49
21	34.07	3B	HAYDU, JOSEPH D	5.89	5.88	99.83	5.89	100.00
19	2	3B	SCHOENWOOD FARMS, LLC	17.99	14.20	78.96	9.73	54.07
34	16	3A	KINNEY, EDGAR & JOANN	126.97	126.97	100.00	119.36	94.01
18	7.01	3B	KOBER, WILLIAM & BARBARA	6.72	6.72	100.00	5.66	84.35
45	1	3B	SHANDOR, WILLIAM	15.86	15.86	100.00	11.93	75.25
44	23	3B	DC PARTNERS, L.P.	76.70	76.70	100.00	59.00	76.92
9	53	15C	ST OF NJ DEPT OF ENVIRON PROTECTION	118.41	50.65	42.77	48.12	40.64
21	35	3B	HARITON, ANNA GEORGIA	17.58	17.57	99.95	8.79	50.01
45	26	3B	HEERES, HAROLD	65.41	51.41	78.60	48.33	73.89
9	54	3B	STEELE, ELEANOR	13.87	8.92	64.29	7.88	56.80
33	25.05	3A	HNOT, WALTER R.	43.54	23.75	54.55	23.61	54.24
15	1	3B	EASTVIEW FARM, LLC	0.80	0.80	100.00	0.62	77.59
38	2	3A	GARRISON, ROY C & BRENDA	135.44	135.44	100.00	131.56	97.13
12	26	3B	WALL, NORBERT F & DREW A RICCO	23.89	23.81	99.65	19.97	83.57
21	34.08	3B	HAYDU, STEVEN C	5.66	5.66	100.00	5.49	96.95
14	9	3A	SMITH, JOHN H. & JEAN M.	109.34	71.14	65.07	57.23	52.34
45	2	3B	DENJOE INVESTMENT CO	66.16	62.23	94.06	50.97	77.04
34	5.01	3B	KARP, THOMAS & NANCY	22.72	22.31	98.21	20.67	90.95
47	20	3B	PIPERATA, ANTHONY & MURIEL	13.80	13.60	98.52	10.98	79.55
4	3	3A	HARTUNG, RICHARD STUART & IRENE	31.47	31.47	100.00	31.04	98.61
7	14	3A	HARMONY SAND & GRAVEL	159.77	134.72	84.32	85.40	53.45
20	8	3B	WRIGHT, JOYCE A	6.77	6.77	100.00	6.19	91.39
21	43	3B	DALRYMPLE, DANIEL W & STACY L	8.31	5.38	64.73	5.98	71.99
38	25	3A	GARRISON, EDNA	91.94	84.32	91.70	89.24	97.05
44	15	3A	SHANDOR, WILLIAM	70.38	70.08	99.58	63.77	90.61
24	2.02	3B	HOSER, ROBERT	2.85	2.85	100.00	2.85	100.00
20	4.01	3A	SCHANZLIN, THEODORE	27.20	19.71	72.45	22.51	82.75
24	1.10	3B	WRIGHT, JAMES J & JOYCE A	3.01	3.01	100.00	2.87	95.29

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20	4	3B	SCHANZLIN, DONALD	84.28	32.23	38.24	52.54	62.33
43	26	3B	PETRILAK, STEPHEN & JOHN	19.69	19.69	100.00	19.20	97.52
44	8	3B	LUCIANO, ROBERT A & LORRAINE	9.35	9.35	100.00	9.35	100.00
17	17	3A	BENBROOK, KEVIN P & RATH SEGLINDA	17.58	11.36	64.62	8.96	50.98
34	4.02	3A	KENYON, CAMILLE ANN	7.08	6.83	96.42	5.58	78.82
26	34	3B	DIOCESE OF METUCHEN	9.66	9.40	97.25	8.99	93.02
7	13	3B	HARMONY SAND & GRAVEL, INC	30.69	24.96	81.33	18.51	60.33
20	8.02	3A	WOOLVERTON DEWITT	11.50	11.50	100.00	8.53	74.20
4	1	3B	CLINE, LORRAINE	18.98	18.98	100.00	18.85	99.29
13	1.03	3B	JONES, GEORGE D & JANET B	6.07	6.07	100.00	5.34	88.08
7	1	3A	HARTUNG, RICHARD STUART & IRENE	151.46	150.05	99.07	108.80	71.83
33	11	3B	CALVIN, NEIL R.	10.41	8.17	78.46	5.66	54.38
44	10	3A	DC PARTNERS, L.P.	155.99	155.24	99.51	143.69	92.11
13	5	3A	DUCKWORTH, ROBERT R	72.64	69.59	95.80	68.82	94.74
37	7	3A	BREHM, DOUGLAS C & LAUREN M	9.69	9.69	100.00	8.72	89.98
18	7	3B	KOBER,WM,BARBARA,GABRIEL L & MARIAN	36.33	35.95	98.96	24.41	67.19
8	14	3A	HUMMER, RICHARD L JR.	18.31	18.11	98.90	9.96	54.38
37	17	3B	SMITH, DONALD & RICHARD	52.07	50.44	96.87	46.77	89.82
44	25	3A	HASCHAK STEVE	13.61	13.61	100.00	12.00	88.21
12	13	3B	DUCKWORTH, ROBERT R	26.52	25.84	97.46	24.45	92.22
7	11	3B	HARMONY SAND & GRAVEL INC	47.03	40.61	86.34	42.68	90.76
34	4	3B	JANSEN, PETER C & HEATHER A	86.54	85.68	99.00	73.46	84.88
26	28	3A	SALTER, JOHN R	127.80	98.84	77.34	99.53	77.88
46	2	3B	SHANDOR, DOROTHY L & RIDDLE, JUDY A	102.60	93.97	91.59	89.84	87.57
31	7	3B	MCCANN, JOHN J & BRIDGETTE	27.00	25.75	95.37	25.67	95.04
46	3	3B	SHANDOR, WILLIAM	39.53	39.53	100.00	38.23	96.73
25	19	3B	SALTER, JOHN R	34.99	28.31	80.92	24.31	69.48
17	12	3B	KRISTOFFERSEN, DAN V & BONNIE F	6.37	6.20	97.41	5.14	80.73
9	51.01	3B	BURKE, DANA R & BARBARA DINSMORE	78.80	29.80	37.82	26.72	33.91
21	34.01	3B	HAYDU, JOSEPH D	5.40	4.95	91.72	4.74	87.80
44	11.01	3B	VEGH, ERMA L	3.07	3.07	100.00	3.07	100.00
44	11.03	3B	VEGH, JOANNA, S & SOWICZ, EUGENIA	2.89	2.89	100.00	2.89	100.00
44	11.02	3B	VEGH, JOANNA	2.42	2.42	100.00	2.42	100.00
44	21.02	4A	MALLINCKRODT BAKER INC	82.21	82.21	100.00	62.83	76.42

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45	24	3B	SAKELE BROTHERS CO.	10.74	9.92	92.32	6.79	63.21
20	5	3A	HAGGERTY, WILLIAM	55.25	47.82	86.56	34.26	62.01
34	21	3B	NEMETH JOSEPH,IRMA,BRADLEY & MEYER	15.54	15.54	100.00	15.54	100.00
44	22	3B	HASCHAK, STEVE	12.90	12.90	100.00	11.59	89.82
46	4.09	3B	BREESE, MARJORIE & SHARPE, MARLENE	82.21	52.54	63.90	29.39	35.75
21	42	3B	WATERS DARLA MAE	81.30	51.39	63.21	64.10	78.84
21	6	3A	APGAR, ALAN W	18.79	17.62	93.76	11.88	63.24
30	3	3B	WARREN COUNTY FARMERS FAIR	33.75	33.67	99.78	17.31	51.30
44	14	3A	NEMETH JOSEPH, IRMA,BRADLEY & MEYER	108.84	108.84	100.00	95.43	87.68
17	18.02	3B	BUNGERT, KARL F	7.76	6.98	89.91	5.24	67.53