# Chapter 7
# Existing Land Use Inventory

Analyzing existing land use is an important component in the comprehensive planning process. Historic land use patterns help to define community character and the path which future development may follow. This Chapter examines land use patterns within the Township by inventorying land uses, calculating the acreage devoted to each use, and explaining planning issues. The formulation of future land use policy will take into account past land use trends. Proposed land development and building permit data is also presented to further identify trends and development pressures within the Township. This analysis is important for the formulation of the **Land Use Plan in Chapter 16**. Existing land use patterns are displayed on **Map 7-1**.

## PREVIOUS LAND USE INVENTORIES

New Garden Township has experienced considerable development pressure since the early 1980's. By examining the data from the 1981 and 1993 comprehensive plans, it is evident that New Garden was an agricultural community that has evolved into a residential "bedroom community", primarily for commuters to the Wilmington, Delaware metropolitan area. The following information is a summary of the land use inventory sections from past comprehensive plans.

### Land Use Pattern - 1981

The 1981 Comprehensive Plan identified key elements of the land use pattern of New Garden Township. These included:

- The majority of land in New Garden was characterized as crop and pasture lands, mushroom farms, and rural residential. The percentage of all these lands was sixty-six percent (66%) of total Township land.

- Woodland consisted of twenty-five percent (25%) of total Township land, with the largest tracts of woodland located in the southern portion of the Township.

- Medium density residential development, one or more residential units per acre, was concentrated around the villages of Toughkenamon and Landenberg, the Liberty Knoll apartments, and on several other small tracts. Medium density residential development consisted of two percent (2%) of total Township land.

- Low density residential development, less than one unit per acre, was located throughout the Township. This classification included, large estates, farmsteads, and scattered rural residences.

- Red Fox Country Club and the New Garden Flying Field were the dominant public and semi-public lands in the Township.

- Commercial and industrial activities were located throughout the Township, with the largest concentration of uses along Route 41 and Baltimore Pike. The uses were comprised of a wide range of activities from the Hewlett-Packard plant to small machine shops.

**Figure 7-1: Land Use Distribution for New Garden Township, 1981**

| Land Use | Acreage | Percent of Township Acreage |
|---|---|---|
| Agriculture/Open Land/ Rural Residential | 6,664 | 66.0 |
| Woodlands | 2,495 | 25.0 |
| Waterway | 53 | 0.5 |
| Residential (Total) | 398 | 4.0 |
| Low Density | 203 | 2.0 |
| Medium and High Density | 195 | 2.0 |
| Commercial/Industrial | 269 | 3.0 |
| Public/Semi-Public | 297 | 2.0 |
| **Total** | **10,176** | **100.0** |

Source: New Garden Township Comprehensive Plan, 1981.

## Land Use Pattern - 1993

In the 1993 Plan, agriculture continued to dominate the landscape at approximately 39 percent. Residential development pressure from New Castle County, Delaware was identified as an issue primarily in the southern portion of the Township. Woodlands, while not a category recognized on the Land Use Map (Map 16-1) of that plan, were identified as encompassing 2,220 acres of Township land.

Residential land use comprised the largest developed land use category. Farmsteads were counted as residential land uses by adding two acres to the Residential Land Use category for each farmstead identified on large agricultural parcels, with the remaining land classified as agriculture. The Plan identified that residential land uses were becoming more dispersed, and that road frontage residential lots were occupying long stretches of roadways in all parts of the Township. This type of development becomes both a safety and capacity problem along more heavily traveled roadways. High density residential development was identified in the village of Toughkenamon. Residential land uses were expected to increase, particularly in the southern portion of the Township.

The mushroom Industry was the second largest developed land use and was described as concentrated within a few sections of the Township. The acreage actually devoted to the industry was seen as overly high as the actual operations typically occupied only a small portion of an individual property.

Commercial and Industrial land uses were placed in one category and located throughout the Township, with many of them located along Route 41 and Baltimore Pike. The 1993 Plan identified the completion of the Unified Development Zone in the southern portion of the Township along Route 41 and the Business Park Zoning District along Newark Road between Toughkenamon and US Route 1.

Institutional and Recreation land uses were designated as a single land use category and included the Brandywine Polo Field, the Loch Nairn Golf Club, churches, and Township facilities. The description noted the proposed New Garden Township Park as a contributor to increasing land area in this category. Commerce included the Hewlett-Packard site and the New Garden Flying Field that had office and commercial uses.

**Figure 7-2: Land Use Distribution For New Garden Township, 1992**

| Land Use | Acreage | Percent of Township Acreage |
|---|---|---|
| Agriculture/Open Land | 4,190 | 38.9 |
| Woodlands | 2,220 | 20.6 |
| Residential (Total) | 1,900 | 17.6 |
| Low Density (less than 1.0 DU/AC) | 1,250 | 11.6 |
| Medium Density (between 30,000 SF – 1 AC/DU) | 410 | 3.8 |
| High Density (less than 30,000 SF per unit) | 20 | 0.2 |
| Farmstead (2 acre allocation) | 30 | 0.3 |
| Vacant Lots (lots approved for development) | 190 | 1.7 |
| Mushroom Industry | 1,140 | 10.6 |
| Commercial/Industrial | 410 | 3.8 |
| Institutional/Public | 410 | 3.8 |
| Transportation | 290 | 2.7 |
| Commerce | 210 | 2.0 |
| **Total** | **10,770** | **100.0** |

Source: New Garden Township Comprehensive Plan, 1993.

# EXISTING LAND USE PATTERN - 2003

## Methodology

Land use data was compiled in June of 2003 from field surveys, Chester County tax assessment records, an analysis of 2000 aerial photography, revisions by Comprehensive Plan Task Force members, and by members of the public. The resulting land use configuration is displayed on **Map 7-1, Existing Land Use**, which serves as the basis for analysis throughout this chapter. Some land use categories have been changed to provide greater detail than was provided in the 1993 Plan. The additional land use categories recognize specific land use types within the Township and assist in the analysis of their inter-relationship with other land uses.

Land use category subsections contain lists of uses included in each category in order to clarify any possible confusion about whether uses are classified according to function or ownership. The analysis concludes with a description of the character of the Township and how the use will probably be affected by current trends.

**Agriculture** 1,436 Acres - 13.8% of total Township land

The mushroom industry represented the most prevalent agricultural land use in the Township, but several crop and two dairy farming operations remain scattered throughout the municipality. Mushroom uses are listed in a separate category below. Agricultural/Open land no longer dominates the landscape as traditional farmland has continued to be converted into residential subdivisions. Included in the Agriculture category are cropland, pasture land, and dairy farming. Farm dwellings are classified along with the agricultural use, a variation from the 1993 Plan where they were classified as residential rather than agricultural, and two acres from each farm was reassigned to the residential category to adjust the calculations. This difference is minimal and has little effect on planning implications.

Due largely to rising land and operating costs, new farms are not being established. It is increasingly difficult to operate a farm profitably, and as land values rise, farm owners face growing pressure to sell their farms for development. While the 1993 Plan noted that a majority of subdivision development was occurring in the southern portion of the Township, by 2003, it is evident that this pattern has now extended into every portion of the Township.

**Woodlands** 2,379 Acres - 22.8% of total Township land

Woodlands are located predominantly in the southern portion of the Township, predominantly along the White Clay Creek. The 2003 analysis determined woodland acreage by the most recent GIS (geographic information system) data available from the Delaware Valley Regional Planning Commission. This category represents the most significant change in terms of land use analysis from the previous comprehensive plans, in that the acreage of woodlands is provided, but woodlands are not counted as one of the actual land use categories. See Map 4-3 for wooded areas.

**Residential** 3,671 Acres - 35.2% of total Township land

Residential land use comprises the largest land use category within New Garden Township in 2003. Single family residential development is the predominate form of residential land use and continues to be the fastest growing land use within the Township.

Residential uses are broken into four categories: single family, two family, multi-family, and mobile homes. Single family residential units are the most common, with a single home on an individual lot. Two family units are commonly referred to as “twins”. Typically, each side of a twin is separately owned while the structure generally has the appearance of a single family home. Twins have importance because they are generally more affordable, while having many of the same benefits as single family homes. Multi-family units include row houses, townhouses, and apartments. Mobile homes refer to semi-permanent structures that are secured to a base, but the structure has the capacity to be moved to a different location. Mobile homes are located throughout the Township and in many cases are associated with the mushroom industry.

Originally concentrated in villages such as Toughkenamon and Landenberg, residential development has become more dispersed in all parts of the Township. Many lots back onto large tracts of woods or farm land. While this development pattern is satisfactory for local roads which carry limited traffic, it can become both a safety and capacity problem along more heavily traveled roads due to the increased number of access points. The reduction of frontage along large tracts associated with this pattern limits development options.

Since the completion of the Comprehensive Plan in 1993, New Garden has experienced a significant increase in residential subdivisions throughout the Township. These developments involve low density residential development (less than 1 dwelling unit per acre) and medium density residential development (30,000 square feet to 1 acre per dwelling unit).

**Commercial** 509 Acres - 4.9% of total Township land

Commercial activities are located throughout the Township, with many of them located along Route 41 and Baltimore Pike. Commercial operations range from small stores, restaurants, and machine shops to large operations such as the New Garden Shopping Center.

**Office** 18 Acres - 0.2% of total Township land

Office uses include administrative offices for businesses and other non-retail office uses. The 1993 Plan included a commerce category that included the now abandoned Hewlett-Packard site and the New Garden Flying Field. The flying field has been incorporated into the Commercial category because it is considered a business use and the potential exists for further commercial development in and around the flying field.

**Industrial** 255 Acres - 2.4 % of total Township land

Industrial uses were included with commercial uses in the previous comprehensive plans. Due to the potential for more intensive environmental issues with some industrial uses, these uses have been designated as a separate category. Light industry includes less intensive uses such as warehousing, packaging, and auto repair. Many light industrial uses in New Garden are related to the mushroom industry, accounting for the many light industrial uses spread throughout the Township. Heavy industry is indicative of more traditional industrial uses such as mining and manufacturing, and only a fraction of the industrial uses in the Township are heavy industrial in nature.

**Mushroom Industry** 1,528 Acres - 14.7% of total Township land

Land classified as part of the Mushroom Industry category includes all land containing mushroom houses and composting operations. The total acreage in this category may seem to be high because mushroom operations usually occupy only a small portion of an individual property. The mushroom industry is spread throughout the Township with concentrations around the Penn Green, Starr, and Ellicott Road area, the Kaolin area, and lands south of Toughkenamon along Newark Road. The largest mushroom operation is Modern Mushroom, Inc., located south of the Route 1 interchange with Newark Road.

**Institutional** 309 Acres - 3.0% of total Township land

The lands within this category include schools, churches and related facilities, state facilities, and New Garden Township facilities. The Saint Anthony in the Hills property at the intersection of Route 41 and Route 7 in the southern portion of the Township is a large private institutional use.

**Recreation / Open Space** 711 Acres - 6.8% of total Township land

Open Space includes township parks and open space areas, the Loch Nairn golf course, the Brandywine Polo Fields, eased parcels, and lands owned by home owners associations as part of residential conservation subdivisions.

**Transportation** 550 Acres - 5.3% of total Township land

The Transportation land use category encompasses all roads in the Township, including the width of the right-of-way assigned to that road segment as per the Chester County GIS System. In some cases linear distances of all roads were calculated by an average right-of-way width of thirty-three (33) feet. Also included in this category is the Octoraro Railroad which takes an east-west route through the Township, providing limited freight service from Wilmington to the Herrs plant just south of Oxford Borough.

The amount of land designated as Transportation will increase as new residential development occurs and existing roads are upgraded. The Township should periodically review road width standards in the Subdivision and Land Development Ordinance to determine whether standards are appropriate.

**Utilities** 211 Acres - 2.0% of total Township land

Utilities include the township sewage treatment plants and spray fields as well as utility substations.

**Vacant Land** 1,226 Acres - 11.8% of total Township land

Lands classified as vacant land consist of fallow fields that are not being used for agricultural purposes, wooded lots that have no development of any kind, and vacant lots. In some cases, owners of residential lots own an adjacent lot that has not been developed and is not farmed.

**Figure 7-3: Land Use Distribution For New Garden Township, 2003**

| Land Use | Acreage | Percent of Township Acreage |
|---|---|---|
| AGRICULTURE | **1,436** | **13.8** |
| *(Woodlands)** | *2,379** | *22.8** |
| RESIDENTIAL (Total) | **3,671** | **35.2** |
| *Single Family Detached* | *3,251* | *31.2* |
| *Two Family* | *94* | *0.9* |
| *Multi-Family* | *97* | *0.9* |
| *Mobile Home* | *229* | *2.2* |
| COMMERCIAL (Total) | ***509*** | ***4.9*** |
| *Commercial/Service* | *467* | *4.5* |
| *Commercial/Residential* | *32* | *0.3* |
| *Residential/Commercial* | *10* | *0.1* |
| OFFICE | **18** | **0.2** |
| INDUSTRIAL (Total) | **255** | **2.4** |
| *Light* | *216* | *2.1* |
| *Heavy* | *39* | *0.4* |
| MUSHROOM INDUSTRY | **1,528** | **14.7** |
| INSTITUTIONAL | **309** | **3.0** |
| OPEN SPACE (Total) | **711** | **6.8** |
| *Parks and Recreation* | *469* | *4.5* |
| *Home Owners Association/Open Space* | *242* | *2.3* |
| TRANSPORTATION (Total) | **550** | **5.3** |
| *Road Rights-of-Way* | 533 | 5.1 |
| *Railroad* | 17 | 0.2 |
| UTILTITIES | **211** | **2.0** |
| VACANT LAND | **1,226** | **11.8** |
| **TOTAL** | **10,424** | **100.0** |

Source: Acreage total for this Plan were generated by the Chester County GIS system and are slightly different from the totals in the 1981 and 1993 Plans due to changes in technology and methodology. *Woodlands are not calculated as part of total lands, and the data is for display purposes only.

# PROPOSED DEVELOPMENT ACTIVITY

A review of the number and type of subdivision and land development applications helps to assess the level of development speculation in New Garden Township. Since subdivision and land development applications must be approved prior to construction, these applications indicate the potential for construction to take place in the near future. Not all applications are approved, nor do all proceed if approved, however, the Township can gain important insight into development trends by monitoring the submittals. Since land development is market driven, much can be learned from the type and form of subdivision and land development proposed.

The Pennsylvania Municipalities Planning Code, Act 247, requires that municipal subdivision and land development applications be reviewed by the county planning entity, in this case the Chester County Planning Commission. All applications submitted are tracked by municipality in order to discern county-wide development trends. The requests for review of proposals located in New Garden Township from 1993 through 2002 are illustrated in **Figure 7-4**.

**Figure 7-4: Proposed Subdivision and Land Development Activity, 1993 – 2002**

| Year | Total Acreage | Single Family Residential | Multi-Family Residential | Mobile Home | Commer-cial | Indus-trial | Institutional | Total |
|---|---|---|---|---|---|---|---|---|
| 1993 | 1,646 | 248 | 24 | 0 | 6 | 1 | 1 | 280 |
| 1994 | 461 | 191 | 0 | 0 | 2 | 0 | 0 | 193 |
| 1995 | 386 | 386 | 0 | 4 | 4 | 0 | 0 | 394 |
| 1996 | 489 | 123 | 0 | 0 | 7 | 0 | 0 | 130 |
| 1997 | 214 | 40 | 0 | 0 | 3 | 1 | 0 | 44 |
| 1998 | 432 | 115 | 0 | 0 | 4 | 3 | 3 | 125 |
| 1999 | 271 | 50 | 0 | 1 | 5 | 0 | 2 | 58 |
| 2000 | 450 | 249 | 0 | 12 | 9 | 0 | 0 | 270 |
| 2001 | 241 | 215 | 77 | 0 | 4 | 1 | 1 | 298 |
| 2002 | 293 | 96 | 0 | 0 | 4 | 2 | 0 | 102 |
| **Total** | **4,883** | **1,713** | **101** | **17** | **48** | **8** | **7** | **1,894** |

Source: Chester County Act 247 Referrals Subdivisions, Land Development, and Zoning (1993-2002)

The information in **Figure 7-4** indicates that 4,883 acres of New Garden Township were proposed for some type of development between 1993 and 2002. The proposals requested the construction of 1,713 single family units and/or agricultural lots, 101 multi-family units, 17 mobile homes, and 63 non-residential lots. The strong economy and the availability of low-cost financing in the 1990's was likely a factor in the number of development proposals submitted. These figures should be viewed only as general indicators of development activity, since some proposals submitted never reach the final approval stage. Further skewing the analysis is the fact that one application may be submitted for review on multiple occasions. It is not uncommon for a proposal to linger in the review stage for several years as the developer refines the ultimate design. Since the Pennsylvania Municipalities Planning Code determines that land development proposals that have not been initiated within five years of preliminary plan approval are subject to zoning revisions

that have occurred within that time frame, it is possible that the construction proposed in earlier applications will not be built.

## Construction Activity

Though a review of proposed development activity is useful, the applications do not reflect actual construction levels. Actual construction activity is better determined through building permit data. The number of building permits issued by type from 1993 through 2002 is indicated in **Figure 7-5**.

**Figure 7-5: Residential Building Permits By Unit Type, 1993-2002**

| Year | Single Family | Apartments | Townhouses | Mobile Homes | Total |
|---|---|---|---|---|---|
| 1993 | 93 | 0 | 0 | 7 | 100 |
| 1994 | 111 | 0 | 0 | 5 | 116 |
| 1995 | 165 | 0 | 0 | 6 | 171 |
| 1996 | 133 | 0 | 0 | 5 | 138 |
| 1997 | 85 | 0 | 12 | 4 | 101 |
| 1998 | 122 | 0 | 16 | 3 | 141 |
| 1999 | 92 | 0 | 0 | 4 | 96 |
| 2000 | 94 | 0 | - | 7 | 101 |
| 2001 | 108 | 0 | - | 13 | 121 |
| 2002 | 111 | 0 | - | 5 | 116 |
| **Total** | **1,142** | **0** | **28** | **59** | **1,201** |

Source: Chester County Planning Commission, Residential Building Permits Planning Data Sheets #50 (1996), #51 (1997), #56 (1999), #1-00 (2000), #1-02 (2002), #1-03 (2003). Due to changes in accounting methods, after 2000 all townhouse permits were counted in the single family category.

The numbers of residential building permits issued from 1993 through 2002 were almost exclusively for single-family detached units. These figures generally correlate with **Figure 7-4**, considering the number of proposals that were never finalized or developed. The greatest number of permits was submitted in 1995 at 171, but the average has remained just above 100 permits per year. The highest number of permits issued for mobile homes (13) were in 2001 and overall the number of such permits issued each year has ranged between three and seven.

A lower number of building permits were granted during the 1990's in comparison to the number of units in development reviews. There are many reasons that a developer may not pursue actual construction (often related to financing), and even in cases where a building permit is granted, construction may not occur. Certificates of occupancy can help gauge occupancy, however, they do not always distinguish between a new and a renovated unit.

# CURRENT LAND USE REGULATIONS

One of the most effective means of implementation occurs at the municipal level is through the Zoning Ordinance and the Subdivision and Land Development Ordinance. By outlining the regulations under which all development occurs, these two ordinances provide the development framework. Discussion of land use regulations is a necessary part of this Chapter since these regulations are partly responsible for the existing patterns. The following discussion is an overview of land use regulations:

## Zoning Ordinance

New Garden first adopted a zoning ordinance in 1988. It was amended on various occasions and was completely updated and readopted in 1997. The ultimate purpose of the Zoning Ordinance is to designate the type, form, and location of various land uses in the Township. The New Garden Zoning Ordinance contains eight base districts: three Residential districts, a Highway Commercial district, two Commercial-Industrial districts, a Business Park district, and a Unified Development district. There are two overlay districts: Flood Hazard and Airport Hazard. The Zoning Ordinance provides for both lot averaging and cluster residential development in certain cases. This analysis is of the Zoning Ordinance with amendments through July 2003.

Residential Districts: The R-1, R-2, and R-3 Residential districts are intended to provide for development that offers a variety of housing types in varying densities, yet is sensitive to environmental features and the semi-rural nature of the Township. The R-1 District stipulates a one acre minimum lot size with cluster development offered as a use by-right, when public facilities are available, and lot averaging as a conditional use. The R-2 District allows residential development at two units per acre with both cluster development and planned residential developments offered as a use by-right. The R-2 district offers differing densities depending on whether public water and sewer service are provided, including townhouses and apartments. The R-3 District provides a variety of uses within Toughkenamon. Single family units on lots as small as 15,000 square feet, if served by public water and sewer, are the primary by-right use. A variety of commercial and institutional uses are available as conditional use in the R-3 district. A Town Development Option in the R-3 district provides for infill development to create smaller lots within Toughkenamon to encourage redevelopment and infill development in a traditional grid pattern.

Commercial-Industrial Districts: There are five commercial-industrial districts contained in the Zoning Ordinance intended to provide a variety of retail, service, and industrial uses throughout the Township. Each district emphasizes a different approach, with the Unified Development and Business Park districts incorporating a planned approach with integrated uses.

The Highway Commercial (H/C) district provides for smaller individual office and retail uses with a minimum lot size of one acre, primarily located along the western portion of Baltimore Pike with additional smaller sections along Baltimore Pike and Route 41. The Commercial-Industrial (C/I) district is located primarily along the south side of Baltimore Pike, with additional areas at the intersection of both Route 1 and Newark Road and Route 41 and Newark Road. The C/I district allows for smaller commercial uses using public water and sewer facilities with a minimum lot size of 20,000 square feet. A wide variety of office, retail, service, and institutional use are allowed by-right with additional industrial uses allowed by conditional use. The Limited Commercial/Industrial (C/I-2) district is located south of the Borough of Avondale and provides for office and industrial uses such as the assembly and fabricating of products and warehousing with a minimum lot size of two acres. Manufacturing and automobile sales and services are allowed by conditional use.

The Business Park District (BP) is located directly north of the Borough of Avondale and provides for

campus-like business centers and corporate headquarters sites developed through master plans. Uses such as professional and administrative offices, research and development uses, light industrial uses, and service and support uses for commercial uses are allowed by-right, provided there are no retail functions to such uses. All uses must be developed under a master development plan with a minimum tract size of ten acres. A number of special regulations concerning setbacks, access, buffers, lighting, and other issues are incorporated to manage the effects of these larger uses.

The Unified Development District (UD) is located along the south side of Route 41 in the southern section of the Township. The UD was created to establish an access management program for the Limestone Road and Route 41 corridors by limiting the number of direct access points onto these arterial roads. The uses that are allocated in this district include planned office development, light industrial parks, retail centers, hotel/resort and corporate headquarters. The district intends to provide an alternative to single use, parcel-by-parcel development by integrating design between developments while encouraging the retention and coordination of open space. A number of qualifying conditions, including items such as traffic impact and environmental impact studies are required to evaluate sites and determine the best location for development. A variety of uses such as office, light industrial, retail, hotel, conference facility, golf course, and residential uses are allowed and encouraged to be incorporated into a well planned and organized development on tracts of at least 100 contiguous acres in size.

Overlay Districts: Overlay districts serve to supplement the provisions of the underlying districts through provisions that seek to protect specific resources or features. There are two overlay districts contained in the Zoning Ordinance. The Flood Hazard district regulates land use and development in flood prone areas indicated on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) within the 100 year flood plain. Land uses within the floodplain are extremely limited to prevent further flooding and to reduce insurance burdens on the Township and its residents. The Airport Hazard district regulates the height of buildings and structures within certain zones surrounding the airport located northeast of Avondale Borough.

### Subdivision and Land Development Ordinance

New Garden's current Subdivision and Land Development Ordinance was adopted in 1999. The intent of this Ordinance is to define how development may occur. It contains the procedures, processes, and development standards that all applicants must meet in order to obtain the necessary development approvals. Basic elements include the application procedures, review process, and minimum plan information standards. It contains development and design standards for the physical development of a site and the specifications for public improvements. Together, the Zoning Ordinance and Subdivision and Land Development Ordinance provide the foundation for regulating land use and development in New Garden Township.

## LAND DEVELOPMENT TRENDS

The analysis of development trends from 1981 to 2003 helps to explain existing land use patterns and assists in gauging future demand for different land uses. This part of the comprehensive plan helps to ensure that new development is appropriately located and integrates with existing uses in terms of use, infrastructure, and circulation. The following discussion compares existing land uses with the land use inventory and analysis contained in the 1981 and 1993 Comprehensive Plans.

## Agriculture

A considerable percentage of the Township was actively farmed according to the "Existing Land Use Map" contained in the 1981 Plan, as well as a smaller, but still significant percentage in the 1993 Plan. In comparison, the 2003 land use inventory shows a significant decline in agricultural lands, with only 14 percent of the Township remaining as agricultural use. The trend displayed by development proposals and building permit data discussed above, appears to be consistent and that agricultural lands within New Garden will continue to convert to residential housing, unless a progressive effort is made to protect agriculture.

## Woodlands

Woodlands are not a land use per se, but are included here for reference to prior comprehensive plans. Data indicates that the Township is not losing woodlands, although the data is partially subjective and may not be directly comparable between planning documents. In many cases, woodlands exist in the floodplain areas and on steep slopes that are not suitable for development. Large residential lots throughout the Township have significant wooded areas that, together, equate to larger wooded areas. Large agricultural and mushroom properties have wooded areas or wooded borders that contribute to visual buffers throughout the Township.

## Residential

The 2003 land use inventory indicates that residential development is increasing, and the land associated with housing has almost doubled in the past decade, with single family residential subdivisions as the largest single land use within the Township. Along with new subdivisions, single family units on private roads and along rural roads continue to be constructed. This type of construction is slowly consuming a larger percentage of the Township, as illustrated by the existing land use map. Small "farmettes," often for the purpose of maintaining a recreational horse stable, are prevalent in the central and western regions. Although this is considered a residential use, the potential for subdivision exists. Some infill development appears to be occurring both in conventional subdivisions, as well as in the villages.

Attached units, typically considered to be medium-density, are found mainly in the villages and in the northern part of the Township. Little multi-family construction has occurred in recent years. Mobile homes are scattered throughout the Township. Several larger mobile home parks exist, along with single mobile homes on larger parcels. In some cases there are mobile homes along with lands classified in the Mushroom category that are not included in this total.

The continuation of residential developments is reflective of current zoning practices which require one dwelling unit per acre for lands located in the R-1 and R-2 Residential Districts. These districts encompass a majority of the Township. Those lands located in the R-2 district are allowed a density of two units per acre based on public sewer and water service for single family units and up to 6 units per acre for attached units, such as apartment houses. The R-2 district is located in the northeast portion of the Township north of Baltimore Pike, east of Newark Road between Baltimore Pike and Route 41, and in an area south of Route 41. Other lands located in the R-2 district are located south of Toughkenamon and in the vicinity of the Somerset Lake development. High density residential development can be found in the Toughkenamon where lot sizes are smaller than 30,000 square feet and zoning allows a minimum lot size of 5,000 square feet.

The Zoning Ordinance provides for residential development throughout the Township and cluster/open space development is an option. Further modifications to the land use regulations could help curb the sprawl development pattern.

## Commercial

Although some new commercial land uses have developed in the Township in the past decade, there is little change in the pattern since the 1981 and 1993 Plans. The commercial pattern appears to have been established for two to three decades. Several outlying commercial uses may be associated with the mushroom industry and appeared as such in previous inventories. Commercial land uses continue to be concentrated along Baltimore Pike and Route 41, with additional concentrations along Limestone Road and in the village of Toughkenamon. Village commercial uses appear to be legal non-conforming uses. The Zoning Ordinance serves to contain commercial uses to the specific areas indicated, but could be modified in order to allow for appropriately scaled commercial development in the villages and along major road corridors. The Township seeks to increase commercial uses to increase tax rateables. However, uses should be appropriate to the character of New Garden Township, with additional focus on Toughkenamon as a center. The New Garden Airfield provides the Township with a unique opportunity to develop additional adjacent commercial uses that may be attracted by the access advantages the airfield provides.

## Industrial

Little industrial development has occurred in the previous decade. Most of the land used for industrial purposes at the time of the 1981 and 1993 land use inventories continues to be used for that purpose. Classification of some of these industries appears to differ between the two inventories that could account for some discrepancies. Some light industrial uses (particularly those related to auto service and repair) are sometimes classified as commercial and some are associated with the mushroom industry.

The potential for major changes in the amount of industry in the Township is possible due to the large amount of industrially zoned land. Although providing industrial development opportunities in the Township is important, the location of the areas for industrial development should perhaps be reconsidered.

## Mushroom Industry

The 1993 plan expected that the conversion of mushroom uses to residential uses would be a factor to the increase of residential housing. It is evident that this has not been a factor and the mushroom industry continues to thrive. In fact, mushroom uses increased by approximately 16 percent between 1993 and 2003.

## Institutional

Institutional land uses are found throughout the Township. Because schools and churches were historically focal points in agricultural regions, they are found throughout the Township and consist of larger parcels.

## Recreation / Open Space

There are a few public recreational opportunities in the Township, with the primary public uses being the Township park and school properties. The previous existing land use inventories did not specifically identify recreational land uses, however, the *Open Space, Recreation and Land Use Plan* (1992) lists the parks and recreational facilities and it appears as though little change has occurred since that time. The Township is actively working on open space and recreational planning to increase the number of recreational opportunities for Township residents.

## Transportation

The transportation network in New Garden has expanded significantly in the past decade, primarily due to development that has occurred. Continued residential development will increase the number and length of roadways that the Township must monitor and maintain.

# PLANNING IMPLICATIONS

The existing land use analysis indicates the following planning implications for New Garden:

- **Preservation of Rural and Scenic Qualities -** New Garden's rural-suburban character and scenic qualities, along with its proximity to the regional highway system and Wilmington, Delaware, makes it a highly desirable place to live. Development pressure has diminished this character and its qualities. The Township needs to revise existing land use regulations to increase preservation of the remaining rural character and natural resources in light of new development.

- **Subdivision Design -** Most new construction in the Township has occurred in the south and eastern regions. The rural character that remains in these areas is converting to one that is suburban in nature. The Township needs to ensure that natural and historic features on sites are integrated and that the overall development plan protects the natural and historic character of the Township.

- **Sprawl Development Pattern -** Most new construction is in the form of single family homes built in conventional subdivisions and on single lots along roadways. These development scenarios, as well as excessive commercial construction, result in sprawl patterns. Greater emphasis needs to be placed on containing future development, if the character of the Township and quality of life is to be conserved.

- **Agricultural Preservation -** As farms continue to be subdivided and converted to residential uses, there is a need to revisit measures to protect the remaining farms and develop additional strategies.

- **Mushroom Industry -** This industry has a long history in the Township and is the single largest nonresidential activity. Because of the transportation and environmental issues that are innate to the functioning of the industry, there is a need to develop a strategy to manage the impacts of mushroom uses while protecting environmental features, transportation flow, and residents quality of life.

- **Industrial Uses -** A majority of the industrial uses within the Township are associated with the mushroom industry. The Township needs to evaluate the appropriateness of locations for these facilities and of regulations to ensure compatibility with residential uses, protection of groundwater, and additional environmental factors.

- **Village Preservation -** The villages in New Garden historically served as community, cultural, and commercial centers, however, development continues to occur primarily in rural areas. In order to preserve these unique communities, the Township needs to develop a strategy to increase the viability of the villages and progressive methods of promoting village preservation.

- **Commercial, Office, and Industrial Development -** A wide variety of commercial uses exist throughout the Township, along with office and industrial uses. These uses are important to increase tax ratables to reduce the tax burden on Township residents. The Township needs to evaluate the type and location of each of these uses and formulate a strategy for the development of each uses as appropriate for particular sections of the Township.

- **Accommodation of Future Population -** The build-out analysis indicates that the Township can/cannot accommodate its projected population and that it meets/does not meet its fair share obligations for multi-family housing under current zoning. The Future Land Use Plan needs to ensure that future population and alternative housing forms can be accommodated in designated growth areas, while protecting those areas targeted for low growth.