Town of Middletown

Comprehensive Plan

Institute for Public Administration

College of Human Resources, Education, and Public Policy • University of Delaware
The Institute for Public Administration Institute links the research and resources of the University of Delaware with the management and information needs of local, state, and regional governments in the Delaware Valley. The Institute provides assistance to agencies and local governments through direct staff assistance and research projects as well as training programs and policy forums. The Institute for Public Administration is located on the University’s Newark Campus in 180 Graham Hall. Jerome Lewis is the director of the Institute, he can be contacted at (302) 831-8971.
Adoption Resolution

The Mayor and Council of Middletown
216 N. Broad Street
Middletown, Delaware 19709

Resolution

WHEREAS, Title 22 of the Delaware Code empowers municipalities to make a comprehensive plan for the development of the town; AND

WHEREAS, the Town applied for and was awarded a grant from the Limited Pool of the Infrastructure Planning Account by the Cabinet Committee on State Planning Issues; AND

WHEREAS, The Mayor and Council of Middletown have recently completed an update and revision of their 1974 Comprehensive Plan;

NOW THEREFORE, BE IT RESOLVED by The Mayor and Council of Middletown hereby adopts this Comprehensive Plan, a copy of which is attached to and made a part of this resolution.

Adopted this 6th day of April, 1998
The Mayor and Council of Middletown
Town of Middletown
New Castle County, Delaware

__________________________
Mayor Kenneth Branner, Jr.
Contents

Town, County and State Officials ................................................................. 2
Institute for Public Administration ............................................................ 4
Summary of the Planning Process ............................................................... 5
Community Involvement ............................................................................. 6
Intergovernmental Coordination ............................................................... 7
Charts, Maps and Tables ........................................................................... 8
Executive Summary .................................................................................. 10
Introduction ............................................................................................. 13
Location ..................................................................................................... 19
Community Profile ................................................................................... 20
Government and Community Services ....................................................... 27
Utilities ........................................................................................................ 34
Natural Features ....................................................................................... 44
Recreation and Open Space ..................................................................... 59
Historic Preservation ............................................................................... 66
Transportation ........................................................................................... 74
Economic Development ............................................................................ 89
Growth Management and Land-Use Plan ............................................... 98
Town, County & State Officials

Town of Middletown

Mayor and Council
Kenneth L. Branner, Jr., Mayor
C. Alan Douglas, Council Member
Catherine J. Kelly, Council Member
James L. Reynolds, Council Member
Austin E. Waters, Council Member

Planning and Zoning Committee
Franklin Bailey, Commission Member
Trent A. Camp, Commission Member
Donald Dilbert, Commission Member
Jason Faulkner, Commission Member
Robert Hutchinson, Commission Member
Lynda Lambert, Commission Member
Charles Roberts, Commission Member
George Schreppler, Jr., Commission Member
John Sparks, III, Commission Member
Loyre Thomas, Commission Member

Board of Adjustments
Robert McDowell, Chair
Harvey Carney, Board Member
Robert Pierce, Board Member
Charles Schreppler, Board Member
Donald Wilson, Board Member

Subdivision Review Committee
Franklin Bailey, Committee Member
Morris Deputy, Committee Member
C. Alan Douglas, Committee Member
Joseph Enrico, Committee Member
Jason Faulkner, Committee Member
Ed Mortenson, Committee Member

Town Attorney
Robert Daily

Town Staff
Joseph Enrico, Town Manager
Nancy R. Hitch, Town Clerk
New Castle County

County Council
Stephanie L. Hansen, President
Robert S. Weiner, Council Member
Richard C. Cecil, Council Member
Joseph E. Miro, Council Member
Penrose Hollins, Council Member
Karen Venezky, Council Member
J. Christopher Roberts, Council Member

County Executive
Thomas P. Gordon

Department of Planning
Edward J. O'Donnell, AICP, Manager, Land Use Department

State of Delaware

Senate
James T. Vaughn

House of Representatives
Oakley M. Banning Jr. (deceased)

Cabinet Committee on State Planning Issues
Jeffrey Bullock, Chair
Anne P. Canby, Secretary, Department of Transportation
John C. Carney, Jr., Secretary, Department of Finance
Robert W. Coy, Jr, Director, Delaware Economic Development Office
Susan A. Frank, Director, Delaware State Housing Authority
Karen L. Johnson, Secretary, Department of Public Safety
Dr. Iris Metts, Secretary, Department of Education
Carmen R. Nazario, Secretary, Department of Health and Social Services
Peter M. Ross, Director, Office of the Budget
John F. Tarburton, Secretary, Department of Agriculture
Christophe A.G. Tulou, Secretary, Department Natural Resources and Environmental Control

State Planning Coordinator
David S. Hugg III, AICP
Institute for Public Administration, College of Human Resources, Education, and Public Policy

This plan was prepared by the Institute for Public Administration of the College of Human Resources, Education, and Public Policy at the University of Delaware. The Institute links the research and resources of the University of Delaware with the management and information needs of local, state, and regional governments in the Delaware Valley. The Institute provides assistance to agencies and local governments through direct staff assistance and research projects as well as training programs and policy forums.

Jerome R. Lewis is the director of the Institute. Alexander M. Settles served as project planner, developed the maps in the plan, and coordinated the efforts of the staff and was the Institute liaison with officials and staff from the Town of Middletown. Linda Raab, AICP, a consultant to the Institute, served as an advisor. Graduate Research Assistants who worked on the plan were Julie Darsie, Lisa McKenzie and Deborah Norman. David Racca, assistant policy scientist with the Center for Applied Demography and Survey Research at the College, provided technical advice, data resources, and maintained the system for the development of the maps on the Center for Applied Demography and Survey Research Geographic Information System. Stephanie Gropp and Pamela Belmont assisted the layout, design, and production of the plan document.

Institute Director

Jerome R. Lewis, Ph.D.

Middletown Comprehensive Plan Team

Alexander M. Settles, Project Planner and Project Coordinator

Linda P. Raab, AICP, Principal Planner
Julie Darsie, Research Assistant
Lisa M. McKenzie, Research Assistant
Deborah L. Norman, Research Assistant

David P. Racca, Associate Policy Scientist, Center for Applied Demography and Survey Research, Geographic Information Systems Administration

Stephanie S. Gropp, Research Associate
Pamela Belmont, Student Assistant
Summary of the Planning Process

The process for the development of an updated comprehensive plan for the Town of Middletown is described below:

**Draft** - This document will be formally presented to the Planning Commission and Mayor and Council at public hearing. The preliminary draft will consist of the background study contained, recommendations for future land use and annexation proposals, and an intergovernmental coordination policy for land use, infrastructure and development. The preliminary draft will be available for review by the public and will be submitted to the State of Delaware for review through the Land Use Planning Act procedures.

**Adopted and Approved Comprehensive Plan** - Once the comprehensive plan has been adopted by the Mayor and Council an Adopted and Approved Comprehensive Plan shall be issued. This document shall serve as a guide for making land use, development, and infrastructure decisions by the Planning Commission and the Mayor and Town Council.
Community Involvement

Public Workshop

A public workshop was held on June 5, 1997 to inform the residents of Middletown about the process of updating the comprehensive plan for Middletown. The public workshop was conducted by staff from the Institute for Public Administration in conjunction with the Mayor and Town Council. The workshop was held to provide a process to update the residents of the town on the planning process and serve as a forum in which residents of Middletown can voice their opinions about shaping the future of their town.

Public Hearing

An update on the planning process was provided at the August 4, 1997 regular meeting of the Mayor and Town Council. An opportunity for public input was provided at the meeting. Copies of the Draft Plan were provided for the public prior to the September 8, 1997 regular meeting of the Mayor and Council.

A final public hearing was held at the October 6, 1997 meeting of the Mayor and Town Council. The Adopted and Approved Comprehensive Plan includes a record of the adoption and approval of the plan and the resolution which approves the Plan.
Intergovernmental Coordination

The town of Middletown has recognized that intergovernmental coordination is essential to its planning process. The coordination of town, county and state plans and actions in the southern New Castle County region will have a direct impact on the well being and quality of life for all Middletown residents. Therefore an aggressive intergovernmental coordination process has been undertaken by the Institute under the direction of the Mayor and Council of the town of Middletown.

Intergovernmental coordination has been incorporated into all facets of the planning process. Background information and information concerning current projects has been collected from county and state agencies. Town officials and Institute staff have met with state, county, and regional governments to ensure intergovernmental coordination during the planning process. Town officials have met within the past year with a wide range of state and county agency staff both independently and under the auspices of the Delaware Office of State Planning Coordination.

The completion of the plan update will require additional intergovernmental coordination. Copies of the draft of the comprehensive plan update were distributed to New Castle County, surrounding municipalities, the Wilmington Area Metropolitan Planning Council, and to state agencies through the Land Use Planning Act process.
Charts, Maps and Tables

List of Charts

Chart 1. Town of Middletown Population 20
Chart 2. Middletown-Odessa CCD Population Growth Estimates 21
Chart 3. Estimated Water Supply in Southern New Castle County 37
Chart 4. Annual Average Day Water Demand 38

List of Tables

Table 1. Middletown Households 21
Table 2. Middletown-Odessa CCD Population and Household Projections 22
Table 3. Middletown Racial Composition 23
Table 4. Middletown Age and Sex Composition 23
Table 5. Ownership and Age of Middletown’s Housing Stock 24
Table 6. Middletown Housing Types and Ownership in 1990 25
Table 7. New Castle County Housing Types and Ownership in 1990 26
Table 8. Appoquinimink School District Enrollment 30
Table 9. Appoquinimink School District Enrollment Breakdown 31
Table 10. Appoquinimink School District Projections 31
Table 11. Middletown Well System 35
Table 12. Soil Limitations 56
Table 13. Employment Change for New Castle County, DE 1995-2020 90
Table 14. Employment Projections for New Castle County, DE 1995-2020 by Planning District 93
Table 15. Selected 1989 Income Data 94
Table 16. Proposed Industrial Park Expansion 96

List of Maps

Map C-1. Location of Middletown in New Castle County 19
Map NF-1. Topography in the Middletown Area 49
Map NF-2. Soil Survey for the town of Middletown and Surrounding Areas 57
Map OP-1. Proposed Greenway Network 63
Map T-1. Functional Classification Map 77
Map T-2. Future Transportation Network 91
Map EC-1. Proposed Expansion of the Industrial Park 99
Map LU-1. Existing Land Use 105
List of Figures

Figure 1. Change in Corporate Boundaries in Middletown 18
Figure 2.. Riparian Strips Serving as Wildlife Corridors 61
Figure 3. Usable Open Space Serves as a Neighborhood Focal Point 62
Figure 4. Alternative Desired Development Pattern 85
Figure 5. Preferred Collector Street Designs 86
Figure 6. Traffic Calming Examples 87
Figure 7. Preferred Commercial Center Design 120
Figure 8. Preferred Building and Parking Layout 121
Executive Summary

The Draft of the 1997 Comprehensive Development Plan Update for the town of Middletown provides vision for the future for Middletown and serves as a guide for growth and development within Middletown and surrounding areas. The plan update delineates the recognition by Middletown of the regional context of growth and development decisions in southern New Castle County. This plan serves as an update of the New Castle County prepared 1974 Middletown Comprehensive Development Plan. Portions of the 1974 plan have been incorporated into the update. Middletown has reached a crucial point in its history and the plan describes the current conditions and recommends a series of measures that will aid in guiding development and providing for long run sustainable development while maintaining a superior quality of life for the residents of Middletown.

New Castle County, in the 1996 Comprehensive Development Plan Update, recognized the intense development pressure and proposed a series of implementation tools to guide development, especially in southern New Castle County. Middletown has delineated an area of concern surrounding the existing municipal limits within which the town will want to coordinate land use decisions with New Castle County.

The Middletown Plan specifies a series of strategies and tools to manage the timing, location, and character of growth while providing for adequate public facilities to support that development. These strategies and tools will allow Middletown to maintain a high quality of life through the provision of adequate public facilities and a mix of residential, commercial, and employment opportunities to its residents.

The major strategies and tools are the following:

**Adoption of a Future Growth and Annexation Policy.** Annexation is a crucial component of growth and development of Middletown. The plan recommends that Middletown be the focus for growth in southern New Castle County, therefore an important part of implementing the plan will be adoption of a clear policy on how to handle that growth. The provision of employment centers for residents of Middletown and southern New Castle County will become increasingly important as residential development occurs. Annexation will provide opportunities for high density and compact residential development patterns and the development of manufacturing, fabrication, and office park campuses. Through negotiation with the county, this policy will decrease the uncertainty of the development and provide for the concentration of development within a municipality with public water and wastewater infrastructure and other public services.
Adoption of a Future Land Use Policy.
There are over 1400 acres of undeveloped land within the 1997 Middletown corporate limits. Middletown already has the tools of sunset zoning and sunset subdivision and therefore the existing zoning and subdivision plans must be acted upon within a specified limit or the rezoning or subdivision expires. Under these regulations Middletown can change the zoning classification or subdivision plans to meet the recommendations of the updated Middletown Plan and specifically the Future Land Use Policy element. The plan recommends, where appropriate, to sunset the existing development plans and revise the character of development in accordance with the plan recommendations concerning open space provision, mix of uses and improved architectural and mobility friendly design standards.

Adoption of an Intergovernmental Coordination Policy.
The coordination of land use decisions between the town and county and the coordination of infrastructure investments between the town, school district, county, and state are vitally important to the long term quality of life and financial health of Middletown. As part of the growth and annexation policy and recommended future land uses, an important element will be the designation of an intergovernmental planning and development area. Through negotiations with the county and state, the town will adopt an area for intergovernmental coordination and plan for future land uses and infrastructure to meet the needs of development.

Revision of the Zoning Code and Subdivision Ordinances.
The achievement of many of the goals outlined in the plan, including flexibility, mobility, mix of land uses, and development of employment centers, will require a revision of the Zoning Code and Subdivision Ordinances. The addition of zoning districts and changes in the standards in the subdivision code will be needed to affect the type and character of development within Middletown.

Adoption of an Economic Development Policy.
The diversification of the economic base for Middletown will become increasingly important as development occurs. Appropriate economic development in the town will provide for an enhanced property tax and user fee base for the town of Middletown and the Appoquinimink School District to be used for the provision of public facilities. The expansion of the existing industrial park and the provision for office campus sites within the corporate limits of Middletown will provide the opportunity to site new businesses in Middletown.

Adoption of an Adequate Public Facilities Policy.
Middletown will ensure the provision of adequate public facilities through the rededication to a formal policy which regulates the review and approval of specific development proposals. Middletown will evaluate development approvals based on existing or planned infrastructure to determine the ability of the town to meet the public facilities demand. Major employment centers would be able to receive pre-approval to provide for flexibility to ensure opportunities for economic development.
Development and Implementation of a Mutli-Modal Long Range Transportation Plan for the State Route 299 Corridor.
The town of Middletown recognizes the importance of the SR 299 corridor due to investment in SR 1 and potential investment in the realignment of US 301. The character and capacity of the SR 299 corridor will directly effect the future development of Middletown. Middletown will work with the WILMAPCO, New Castle County and the Delaware Department of Transportation to develop a long range plan linked to land use that will preserve SR 299 and provide additional alternatives for regional traffic.
Introduction

The town of Middletown has reached a crossroads in its history. The traditional small town structure of Middletown, which has been the basis for the community for decades, has been and will continue to be affected by the rapid growth in southern New Castle County. The suburbanization of southern New Castle County has placed increasing demands on Middletown for services and infrastructure as people move south of the Chesapeake and Delaware Canal.

Statement of Purpose

The 1997 Comprehensive Development Plan Update for Middletown is a statement of the principles and criteria that will be used to evaluate both public and private proposals for development and growth, including land use decisions and public facilities investments. The comprehensive planning project forms the guide for land use regulation decision, annexations and public investments in infrastructure and services. The plan has been developed to provide a general framework for the decision making process of the town of Middletown. The plan is intended to be used and modified as conditions and demands change.

The purpose of the plan is to provide the following:

- a comprehensive view of development throughout Middletown and adjoining areas;
- a long range view of development and infrastructure issues due to the 25 year time frame;
- a basis for making annexation, zoning, and subdivision decisions;
- a guide for planning capital improvements and public services;
- a tool to coordinate decisions involving public, private, county, regional, and state interests.

Statement of Need

The increasing growth and development activity in New Castle County south of the Chesapeake and Delaware Canal presents the town of Middletown with many concerns. The conversion of land from agriculture uses to low density residential has increasingly occurred throughout southern New Castle County during the past decade. The expansion of Public Water Service Areas in southern New Castle County during that time period has allowed for low density residential development in the Summit Bridge and Boyd’s Corner regions. The development that has occurred within Middletown, in contrast, has been at higher densities due to the availability of public utilities, such as central sewer and public water provided by the town.
The town faces two major long term development issues in the coming years. The first concern involves the development of large parcels over 30 acres, within the town limits. These parcels have been annexed as recently as 1996 and as long ago as the early 1970s. The public facility limitations and lack of development demand has limited the conversion of these parcels until recent times. The most recent development, Greenlawn, involves a parcel that was annexed in 1967 and had only been developed in minor portions prior to recent years. The development of parcels within Middletown has occurred at sporadic intervals and involves the greater regional marketplace.

The second concern involves the county and state wide issue of where development will be directed in southern New Castle County. The plan recommends that Middletown be the primary focus of growth in southern New Castle County. Coordination of state, county and town decisions will be necessary to reach the goal of concentration development in the town. The state has recently invested substantially in transportation infrastructure through construction of SR 1 in this region and allowed investor owned water utilities to expand services areas substantially thereby opening up new areas for development. The State has also worked with the County to develop a plan for possible wastewater treatment in the region which would further reinforce the current pattern of scattered development.

Middletown has recognized the need to develop sound public policies and investment decisions are needed to prepare the town for the next twenty five years. The size, character, and fiscal viability of the town will depend the decisions made concerning when and how to stage development within the town. In addition, Middletown faces the end of the rural setting that has dominated its history through the development of southern New Castle County.

**Planning Principles**

The following planning principles form the basis for the 1997 Comprehensive Plan Update for the town of Middletown. The principles have been included to provide a guide for land use and infrastructure investment decisions.

Comprehensive planning should take place for all large parcels of vacant land currently within the corporate limits or proposed for annexation. The evaluation of plans or proposals for vacant land should include an analysis of how these parcels will be incorporated into the community fabric of the town of Middletown. These plans should ensure that adequate public facilities and services be available and that natural features are protected and incorporated into existing natural lands, parks and greenways.
The protection and maintenance of the internal transportation system will become crucial as development and growth occurs. The existing grid network provides a variety of road, pedestrian, and bike routes that interconnect the various parts of Middletown internally and to the major transportation corridors. As properties are developed road, pedestrian, bikeway, and transit connections should be developed. Alternative routes will relieve the expected pressure at the intersection of Broad and Main Streets.

A mix of residential development similar to the current diversity of housing types within Middletown should be preserved when proposals for new development are submitted. While individual projects may not be able to meet the current mix of residential types, on the whole, a range of housing opportunities will be crucial to maintaining a viable community. A mix of affordable, moderate, and high end housing should be developed to provide housing opportunities to a wide range of income levels.

The preservation of a mix of commercial uses which are distributed throughout the town should be maintained. A key component of maintaining a strong community will be the preservation of the downtown commercial district and the establishment of neighborhood commercial uses within major new developments.

The town of Middletown continues to be concerned about the timing and quantity of growth in southern New Castle County. Substantial residential development has already occurred and an initiative to bring a major employment center to southern New Castle County has been started. The pattern of development due to the increases in population, housing units, and employment will have a dramatic effect on southern New Castle County and especially on Middletown, its largest municipality. Therefore the town will strive to work with other municipalities, the county and state agencies to maintain compatible development in areas near or adjacent to the town and to serve as a center for compact and fully served growth.

Open space, park land, active recreation areas, and greenways are important components of the quality of life for Middletown residents. The town will strive to balance the need for active recreation areas and the preservation of natural lands. The preservation of natural resources will provide open space and serve as management areas for storm water run off.

The provision of adequate public facilities, such as wastewater management, drinking water, electricity, police services, and other public services maintains the high quality of life of Middletown residents. The town will continue to provide public facilities in a cost effective and equitable manner.
The Authority to Plan

The preparation of a comprehensive development plan is the legal responsibility of the town of Middletown planning commission under Delaware enabling legislation. Title 22 of the Delaware Code Chapter 7 Section 702 specifies that "[a] planning commission established in any incorporated city or town under this chapter shall make a comprehensive development plan for the development of the entire area of such city or town or of such part or parts thereof as said commission may deem advisable."

Section 702 also establishes the contents of such a comprehensive development plan as the following:

"Such comprehensive development plan shall show, among other things, existing proposed public ways streets bridges, tunnels, viaducts, parks, parkways, playgrounds, sites for public buildings and structures, pierhead and bulkhead lines, waterways, routes of railroads and buses, locations of sewers, water mains and other public utilities, and other appurtenances of such a plan including certain private ways."

Section 703 provides additional legal authority for the planning commission as stated:

"The planning commission shall have the full power and authority to make such investigations, maps and reports of the resources, possibilities and needs of the city or town as it deems desirable..."

In February of 1996, the Mayor and Council of the town of Middletown received a Limited Funding Pool of the Infrastructure Planning Assistance Fund grant from the Governors' Cabinet Committee on State Planning Issues. The following excerpts from the grant application define the requirements for the grant:

"The grant recipient, as part of its scope of work, will be expected to recognize and comment on the State's "Shaping Delaware's Future" goals and describe the implications of those goals on local growth policies and the municipal development strategy. The comprehensive plan or municipal development strategy needs to relate the Shaping Delaware's Future goals to the vision developed by the municipality in the planning process.

"The preparation of a municipal development strategy, the updating of an existing comprehensive plan, or the preparation of a comprehensive plan must demonstrate inter-governmental and intra-governmental coordination, including the involvement of public works, police, fire and other public service entities whether public or private. This requirement can be satisfied with the submission of a letter from the respective agency which includes a statement concerning the involvement and consultation of the agency or government in the planning process."
This requirement is meant to demonstrate a coordinated process and is not intended to impeded the planning process. The municipal development strategy or comprehensive plan must be developed in a coordinated fashion while representing the wishes of the residents of the municipality.

**Recent Annexation and Development**

The pattern of development experienced in Middletown during the past thirty years reflects the increasing suburbanization of New Castle County south of Route 40. New Castle County has on a whole experienced increasingly suburban growth since the 1940s. The development began in the Brandywine Hundred area of northern New Castle County and spread to the south and west of Wilmington. Since the 1970s development has move towards southern New Castle County. The 1988 New Castle County Comprehensive Development Plan indicated that the largest magnitude of housing unit growth between 1985 and 1995 and between 1985 and 2010 would occur in the Central Pencader area. The land use maps contained in the 1988 plan indicate low density residential development, 1 to 3 dwelling units per acre, for the area just north of the canal.

The 1996 New Castle County Comprehensive Development Plan Update Draft reinforced the southern movement of development through the identification of growth areas in the Central Pencader and Churchman’s Crossing areas. The draft plan indicated a development area in the northwest portion of the study area where development has already taken place. The present boundaries of Middletown are included within the county’s generalized development zone.

The town of Middletown has developed in three basic stages. Up until the 1960s Middletown served as an agricultural center were the agricultural industry was the primary commerce in the town. After the 1960s Middletown experienced a wave of growth based on the development and expansion of industry in Middletown and the trend toward ex-urban housing construction. The current phase of development, which Middletown has entered, depends on a county wide housing market trend toward low density housing development.

Development in southern New Castle County, during the previous decade, has tended to be low density residential with either well water and septic systems or public water and septic systems. Investor owned public water suppliers have, during the period from 1990 to 1996, substantially expanded the operation of public water systems and the acquisition of Certificates of Public Need and Convenience for public water in southern New Castle County.

Middletown has grown through annexation in the previous twenty years. The pattern of this growth indicates the expansion of the town toward the east, north and west. Figure 1. Growth in Middletown
documents the expansion of the town over time. The set of annexations that occurred between 1966 and 1974 involved properties in the south of the town which have become detached single family homes and properties to the north and west of town which have become sites for commercial and industrial uses. This set of annexations include properties which have recently been developed.

The pattern of annexation also demonstrates the infrequent nature of annexation by the town of Middletown. The period June 1966 to August 1971 resulted in the annexation of nine properties which consisted of 971 acres of land. The majority of this annexed land has remained vacant until the last five years. Notable expectations included the industrial park just west of the railroad line and south of Route 299 and the property that includes the Silver Lake Elementary School and nearby residential development south of Berkman Street.

The completion of the New Castle County Wastewater Treatment Plant at Odessa has expanded the capacity for Middletown to grow and develop. Middletown has grown by approximately 1400 acres since 1987 through annexation. During that same period nearly 570 acres of land either within the town or recently annexed has been rezoned to meet the changing market demand for potential uses. This annexation, rezoning, and subdivision has produced a potential for approximately 4,000 housing units that can be built in Middletown.

The development activity in southern New Castle County has been the focus of state wide concern. The future completion of the State Route 1 will be the largest state investment in highway capacity in the State for years to come. The possible investment through US Route 301 will provide additional highway capacity which will increase the direct connection between Middletown and the eastern shore of Maryland. These two transportation routes reduce the time-distance to employment centers which will allow households to move to Middletown and surrounding areas.
Location

Middletown is located in southern New Castle County, Delaware. US Route 301 bisects the town east and west and State Route 299 bisects it north and south. The Appoquinimink Creek forms the southern boundary. Middletown is the largest town south of the Chesapeake and Delaware Canal in New Castle County. The areas to the west and south are primarily in agricultural uses. The areas to the north and east are still primarily in agricultural uses but are increasing under development pressure as suburbanization has crossed the Chesapeake and Delaware Canal. Map C-1: Location of Middletown places Middletown in New Castle County.
Community Profile

The Middletown community profile was developed using data from a number of sources. The Delaware Health Statistics Center in the Delaware Department of Health and Social Services provided the 1990 census profile for the town of Middletown. Additional information was obtained from the 1980 US Census, Middletown’s 1974 Comprehensive Development Plan, and the 1988 Comprehensive Development Plan and 1996 Comprehensive Development Plan Update for New Castle County.

Population and Households

Chart 1 tracks the population of Middletown from 1950 to 1990 with estimates from 1991 to 1994. Middletown grew the fastest from 1980 to 1990 by adding 888 new residents, a gain of 23 percent. The size of Middletown grew at a rate of approximately 20 percent during the 1950 to 1960 post-World War II years.

The Middletown-Odessa Census County Division (CCD), which Middletown is located within, is projected to grow from the 1990 level of 18,578 residents and 6,210 dwelling units to 43,232 residents and 15,874 dwelling units by the year 2020. The projected growth of approximately 133 percent translates into a 5.3 percent yearly population growth rate during the 25 year time period. From the period 1990 to 1995 an estimated 3,656 persons moved into the Middletown-Odessa Census County Division.

Chart 2 describes the projected growth in population in the Middletown - Odessa CCD over the next 25 years. The projections were developed by the Delaware Population Consortium. The counties are required to
use these projection as part of the development of the county updates to their respective comprehensive plans. The 1997 projections for the Middletown - Odessa CCD are greater than the 1996 projections which reflect the shift in projected population growth in New Castle County from the Central Pencader area to southern New Castle County due to market forces and projected public facility investment to support more growth north of the C & D Canal.

![Chart 2. Middletown - Odessa CCD Population Growth Estimates](chart)

The increase in the number of residents in the town of Middletown and in the Middletown-Odessa Census County Division will have a more dramatic impact on public facilities than previous growth of the period from 1950 to 1990 due to the projected decrease in household size.

Table 1 tracks the trend in the number of households and average household size in Middletown from 1970 to 1990.

**Table 1. Middletown Households**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Households</th>
<th>Percent Change</th>
<th>Household Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>833</td>
<td></td>
<td>3.17</td>
</tr>
<tr>
<td>1980</td>
<td>1083</td>
<td>30%</td>
<td>2.72</td>
</tr>
<tr>
<td>1990</td>
<td>1475</td>
<td>36%</td>
<td>2.59</td>
</tr>
</tbody>
</table>

Source: 1990 US Census
Table 1 indicates that household growth increased at a greater rate of change than population growth over the period from 1970 to 1990. Middletown experienced a declining household size over that period. The pattern of declining household size has been record nationally, in the state of Delaware and throughout New Castle County.

Table 2 delineates the projected household growth for the Middletown - Odessa Census County Division from 1990 to 2020. The 1997 Delaware Population Consortium household projections have been increased over 1996 due to increased interest in residential development in southern New Castle County. An increase in 8,566 household has been projected for the Middletown - Odessa CCD for the period from 1995 to 2020. Nearly half of that growth, approximately 4,158 households, has been projected to occur in the next 10 year period.

Table 2. Middletown - Odessa CCD Population and Household Projections

<table>
<thead>
<tr>
<th>Year</th>
<th>Households</th>
<th>Population</th>
<th>Household Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>5,903</td>
<td>18,578</td>
<td>3.14</td>
</tr>
<tr>
<td>1995</td>
<td>7,308</td>
<td>22,234</td>
<td>3.04</td>
</tr>
<tr>
<td>2000</td>
<td>9,493</td>
<td>28,163</td>
<td>2.97</td>
</tr>
<tr>
<td>2005</td>
<td>11,466</td>
<td>33,303</td>
<td>2.9</td>
</tr>
<tr>
<td>2010</td>
<td>13,221</td>
<td>37,556</td>
<td>2.84</td>
</tr>
<tr>
<td>2015</td>
<td>14,715</td>
<td>40,889</td>
<td>2.78</td>
</tr>
<tr>
<td>2020</td>
<td>15,874</td>
<td>43,232</td>
<td>2.72</td>
</tr>
</tbody>
</table>

Source: Delaware Population Consortium, 1997

The projections made for southern New Castle County and the trends in the projections over time reflect an increasing demand for residential development south of the C & D Canal. The Middletown plan has incorporated these projections in the development of recommendation for the management of growth and development of the town and the surrounding areas. Middletown has the existing capacity to absorb a major portion of the projected population growth in compact town center development that provides a wide range of public facilities. The important question for Middletown, New Castle County, and the State of Delaware will be the timing, location, and quality of development in southern New Castle County.
Racial Composition

The 1990 population of Middletown was reported as 3,834 residents. The population consists of 75.7 percent white, 22.7 percent black, and 1.7 percent listed other as their race. The total number of residents of any race that reported to be of Hispanic origin in Middletown was 71 in 1990. The racial composition of Middletown is represented in Table 3.

<table>
<thead>
<tr>
<th>Race</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>2,901</td>
<td>76%</td>
</tr>
<tr>
<td>Black</td>
<td>869</td>
<td>23%</td>
</tr>
<tr>
<td>Other Race</td>
<td>64</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: 1990 US Census

Age and Sex Composition

Table 4 depicts the Middletown age and sex profile. The median age for Middletown reported in 1990 was 31.0 years of age. There were reported to be 2,701 residents, 70.4 percent, age 18 and over of which 420 (11.0 percent) were 65 and older. In comparison, 11.4 percent of New Castle County’s population and 12.1 percent of Delaware's total population were over the age of 65. The population of Middletown residents younger than age 18 was reported as 1,133 persons or 29.6 percent of the total population. For New Castle County and Delaware 24.0 percent and 24.5 percent of the population respectively were younger than 18 years of age.

<table>
<thead>
<tr>
<th>Age</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>183</td>
<td>177</td>
<td>360</td>
</tr>
<tr>
<td>5-17</td>
<td>397</td>
<td>376</td>
<td>773</td>
</tr>
<tr>
<td>18-24</td>
<td>157</td>
<td>194</td>
<td>351</td>
</tr>
<tr>
<td>25-44</td>
<td>607</td>
<td>653</td>
<td>1,260</td>
</tr>
<tr>
<td>45-64</td>
<td>316</td>
<td>354</td>
<td>670</td>
</tr>
<tr>
<td>65+</td>
<td>170</td>
<td>250</td>
<td>420</td>
</tr>
<tr>
<td>Total</td>
<td>1,830</td>
<td>2,004</td>
<td>3,834</td>
</tr>
</tbody>
</table>

Source: 1990 US Census
Residence

The effects of growth and migration are apparent in Middletown as indicated in the number of residents that lived in the same home in 1990 as they did in 1985, only 51 percent. Although 35.9 percent more lived in New Castle County in 1985, only 13.1 percent of the 1990 Middletown residents lived in either another county, another state, or abroad in 1985. The tenure of residents follows the pattern of migration below the Chesapeake and Delaware Canal as indicated in studies by New Castle County.

Education

The 1990 census reported that 69.4 percent of Middletown residents over the age of 25 were either high school or college graduates. Those with at least a bachelor’s degree accounted for 6.6 percent of Middletown residents over the age of 25. Also, approximately 18 percent of Middletown residents were of school age and attending either a private or public primary or secondary school. In 1990 there were 0.51 children attending school per household in Middletown.

Housing

There were reported to be 1,475 housing units in Middletown by the 1990 US Census. A tabulation of the housing in Middletown and the age and ownership characteristics of the housing have been included in Table 5. Of the 1,417 occupied units at the time of the 1990 Census, 1,009 (71.2 percent) were owner occupied and 408 (28.8 percent) were renter occupied.

Table 5: Ownership and Age of Middletown’s Housing Stock

<table>
<thead>
<tr>
<th>Year Built</th>
<th>Total Units</th>
<th>Percent of Total</th>
<th>Owner Occupied</th>
<th>Renter Occupied</th>
<th>Vacant Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989 to March 1990</td>
<td>19</td>
<td>1.3%</td>
<td>19</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1985 to 1988</td>
<td>303</td>
<td>20.5%</td>
<td>281</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td>1980 to 1984</td>
<td>185</td>
<td>12.5%</td>
<td>29</td>
<td>156</td>
<td>0</td>
</tr>
<tr>
<td>1970 to 1979</td>
<td>239</td>
<td>16.2%</td>
<td>199</td>
<td>40</td>
<td>0</td>
</tr>
<tr>
<td>1960 to 1969</td>
<td>117</td>
<td>7.9%</td>
<td>115</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>1950 to 1959</td>
<td>160</td>
<td>10.8%</td>
<td>101</td>
<td>42</td>
<td>17</td>
</tr>
<tr>
<td>1940 to 1949</td>
<td>109</td>
<td>7.4%</td>
<td>38</td>
<td>49</td>
<td>22</td>
</tr>
<tr>
<td>Before 1940</td>
<td>343</td>
<td>23.3%</td>
<td>227</td>
<td>97</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>1,475</td>
<td>100.0%</td>
<td>1,009</td>
<td>408</td>
<td>58</td>
</tr>
</tbody>
</table>

Source: 1990 US Census
The 1990 US Census reported that 49.4 percent of Middletown’s housing stock was built prior to 1970. In comparison 63.5 percent of all housing units in New Castle County were built prior to 1970. Although Middletown has a historic downtown it has an above county average of new housing stock. The housing built in Middletown since 1970 has primarily been owner occupied with 71 percent owner occupied and 29 percent renter occupied. This was slightly higher than the construction in the whole county where 62.5 percent of housing units built since 1970 were owner occupied units. The length of tenure for a householder in 1990 was shorter in Middletown than in the county. In 1990 54.5 percent of Middletown householders had been in their current housing unit for five years or less compared to 49.0 percent of all county householders.

Table 6 depicts the types of housing reported in Middletown.

<table>
<thead>
<tr>
<th>Units in Structure</th>
<th>Total Units</th>
<th>Percent of Total</th>
<th>Vacant Units</th>
<th>Total Occupied Units</th>
<th>Owner Occupied Units</th>
<th>Renter Occupied Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, Detached</td>
<td>643</td>
<td>43.6%</td>
<td>2</td>
<td>641</td>
<td>536</td>
<td>105</td>
</tr>
<tr>
<td>1, Attached</td>
<td>198</td>
<td>13.4%</td>
<td>0</td>
<td>198</td>
<td>68</td>
<td>130</td>
</tr>
<tr>
<td>2</td>
<td>54</td>
<td>3.7%</td>
<td>17</td>
<td>37</td>
<td>0</td>
<td>37</td>
</tr>
<tr>
<td>3 or 4</td>
<td>58</td>
<td>3.9%</td>
<td>0</td>
<td>58</td>
<td>0</td>
<td>58</td>
</tr>
<tr>
<td>5 to 9</td>
<td>21</td>
<td>3.5%</td>
<td>22</td>
<td>29</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>10 to 19</td>
<td>41</td>
<td>2.8%</td>
<td>0</td>
<td>41</td>
<td>0</td>
<td>41</td>
</tr>
<tr>
<td>20 to 49</td>
<td>2</td>
<td>1.6%</td>
<td>17</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>50 or more</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mobile home or</td>
<td>398</td>
<td>27.0%</td>
<td>0</td>
<td>398</td>
<td>398</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>0.6%</td>
<td>0</td>
<td>9</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>1,475</td>
<td>100.0%</td>
<td>58</td>
<td>1,417</td>
<td>1,009</td>
<td>408</td>
</tr>
</tbody>
</table>

Source: 1990 US Census

Single family detached homes accounted for the largest portion of the housing stock of Middletown at 43.6 percent. Nearly 84 percent of all single family detached homes were owner occupied while duplexes were predominately renter occupied. The future character of Middletown will depend upon the types of housing approved by the town through the land development process. Approximately 3,600 units are approved but unbuilt.
Table 7 depicts the types of housing reported in New Castle County.

Table 7: New Castle County Housing Types and Ownership in 1990

<table>
<thead>
<tr>
<th>Units in Structure</th>
<th>Total Units</th>
<th>Percent of Total</th>
<th>Vacant Units</th>
<th>Total Occupied Units</th>
<th>Owner Occupied Units</th>
<th>Renter Occupied Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, Detached</td>
<td>89,277</td>
<td>51%</td>
<td>2,180</td>
<td>87,098</td>
<td>81,649</td>
<td>5,448</td>
</tr>
<tr>
<td>1, Attached</td>
<td>34,208</td>
<td>20%</td>
<td>2,565</td>
<td>31,643</td>
<td>22,331</td>
<td>9,312</td>
</tr>
<tr>
<td>2</td>
<td>3,926</td>
<td>2%</td>
<td>265</td>
<td>3,661</td>
<td>590</td>
<td>3,071</td>
</tr>
<tr>
<td>3 or 4</td>
<td>5,760</td>
<td>3%</td>
<td>543</td>
<td>5,217</td>
<td>234</td>
<td>4,983</td>
</tr>
<tr>
<td>5 to 9</td>
<td>7,033</td>
<td>4%</td>
<td>789</td>
<td>6,244</td>
<td>299</td>
<td>5,945</td>
</tr>
<tr>
<td>10 to 19</td>
<td>16,645</td>
<td>10%</td>
<td>1,745</td>
<td>14,900</td>
<td>505</td>
<td>14,395</td>
</tr>
<tr>
<td>20 to 49</td>
<td>5,028</td>
<td>3%</td>
<td>701</td>
<td>4,327</td>
<td>949</td>
<td>3,378</td>
</tr>
<tr>
<td>50 or more</td>
<td>5,449</td>
<td>3%</td>
<td>382</td>
<td>5,067</td>
<td>527</td>
<td>4,540</td>
</tr>
<tr>
<td>Mobile home or</td>
<td>4,844</td>
<td>3%</td>
<td>146</td>
<td>4,698</td>
<td>44,431</td>
<td>267</td>
</tr>
<tr>
<td>Other</td>
<td>1,390</td>
<td>0%</td>
<td>83</td>
<td>1,307</td>
<td>525</td>
<td>782</td>
</tr>
<tr>
<td>Total</td>
<td>173,560</td>
<td>100%</td>
<td>9,399</td>
<td>164,161</td>
<td>112,040</td>
<td>52,121</td>
</tr>
</tbody>
</table>

Source: 1990 US Census

The predominate housing unit in New Castle County is the single family detached home. In the county 51.4 percent of housing units are single family detached housing units which is substantially higher than that of Middletown’s 43.6 percent. The New Castle County housing stock indicates the typical suburban characteristics compared to the small town characteristic which existed in Middletown in 1990. The future mix of housing units will determine the viability of Middletown as either a small town or as a suburban bedroom community. In comparison to the county, Middletown had a disproportionate amount of mobile home or trailer units in 1990. Mobile homes accounted for 27.0 percent of the total housing units in Middletown compared to only 2.8 percent of total housing units for New Castle County. Though Middletown had less than 1 percent of the total county housing units, it had 8.2 percent of the total mobile home or trailer units within the county.

The median value of owner occupied housing units in Middletown was reported as $83,400 in 1990 or 2.8 times median income for households in Middletown. Owner occupied housing unit values clustered around the $60,000 to $124,999 range or between 2 to 4 times median household income in Middletown. In comparison the median value of housing units in New Castle County was reported at $110,100 or 2.85 times median income for households in the county. Owner occupied housing in New Castle County clustered from $75,000 to $149,999 in value or 2 to 3.9 times median household income for the county.

Renters

The median gross rent for renter specified occupied households in Middletown as reported in the 1990 US Census was $324 per month. In comparison the median gross rent for renter specified occupied households in New Castle County in 1990 was reported as $524 per month.
Governmental & Community Services

Town Government

The Middletown governing body consists of a mayor and four council members. The council members are elected in staggered two-year terms. The mayor and two council members are elected for two-year terms in odd-numbered years. In even-numbered years two council members are elected. The elections for town officials are held in March of each year. The Town Council meets the first Monday evening of every month at 8:00 p.m. in the town offices at 216 North Broad Street. The mayor serves as the president of the town council.

The town of Middletown has created a set of organizations which assists the mayor and council in governing the town. The Planning Commission has been established in accordance with Chapter 3, Title 22 of the Delaware Code to review the zoning ordinance and to create the Comprehensive Development Plan for the town. The Planning Commission also has the responsibility to review changes in the zoning ordinance and zoning changes and make recommendations to the council for revision. The Planning Commission members are appointed by the mayor with consent of the council. The Planning Commission meets on the third Thursday of every month. There are nine members of the Planning Commission.

The Board of Adjustments has been set under Chapter 3, Title 22 of the Delaware Code for the task of granting or denying variances, special exceptions, and zoning appeals. The Board of Adjustments meets on the first Monday of each month and is appointed by the mayor with consent of the council. There are five members of the Board of Adjustment.

A Subdivision Review Committee has been established to review plans to subdivide parcels already zoned for a certain land use. The Subdivision Review Committee meets whenever necessary. There are seven members of the Subdivision Review Committee which includes the Town Manager.

The town employs a town manager, a town clerk, and three foremen for administration and operations of town services. There are approximately 29 employees of the town of Middletown. The direct employees of the town are responsible for administration, the electricity system, public works, the sewer system, street repair, street lighting, and snow removal, parks and recreation, and the water system. The town contracts with outside providers for police protection and trash collection.
The Middletown Town Hall is located at 216 North Broad Street. This building currently houses the Town Manager’s office and the office of the Town Clerk.

**Solid Waste Disposal**

The town of Middletown provides trash collection service to residences and commercial operations. The town contracts with Home Waste, Inc., a private collection company, for this service. The contractor picks up trash on Tuesday and Friday of each week. Residential collection services provides for pick up of all residential refuse, appliances, and furniture. Commercial collection provides each designated commercial or non-residential user with the collection of two forty gallon containers per pickup. Waste materials generated by contractors or from home alteration, oil or lead based paints, toxic chemicals, tires, batteries, and large tree limbs over 4 feet in length are not included in the service. The town picks up leaves and brush on special request.

**Storm Water Management**

The town of Middletown and the New Castle County Conservation District has jurisdiction over storm water management in Middletown. The storm water management system was constructed as a separate system from the sanitary sewer system. The system consist of a series of drains, transmission lines and catch basins which direct storm water into natural storm water management areas.

Storm drainage on new construction shall be constructed to meet the New Castle County Drainage Code, the New Castle County Specification for Sediment and Erosion Control and the New Castle County Stormwater Management Code. The town of Middletown also specifies that new development should utilize natural storm water recharge points within or in proximity to low points such as swales so as to collect storm water and return it to the natural water table.

**Public Safety**

**Fire Protection**

Fire protection is provided by the Volunteer Hose of Middletown located at 14 South Broad Street. The service area for the fire company includes the town of Middletown and the surrounding areas. The service area is bounded on the north by Howell School - Maryland Line road, on the east by a line dividing the County into eastern and western halves, on the south by the northern boundary of the Townsend Fire District, and on the west by the Maryland State Line. The Middletown Fire District covers approximately 57 square miles. This area includes the rapidly developing areas of Summit Bridge and the area around the Summit Air Park.
The Volunteer Hose Company of Middletown participates in the mutual aid agreement with surrounding fire companies. Fire equipment is dispatched through the New Castle County 9-1-1 Emergency Communications Center operated by New Castle County.

**Police and Emergency Medical Services**

Police protection for the town of Middletown is provided through a contract with the New Castle County Police. The County police force provides 24-hour-a-day protection for the town in addition to county responsibilities. The New Castle County Police southern patrol unit headquarters was completed in 1996 in Middletown to provide a base for the approximately 20 public safety personnel assigned to southern New Castle County.

The mission of the New Castle County Department of Public Safety is to improve the quality of life throughout New Castle County by striving to provide a secure community environment which protects citizens’ lives, health and property through the efficient delivery of quality law enforcement and emergency services. The Department of Public Safety has set as the goals for the department to improve public safety through community policing; to respond to community public safety needs through the establishment of police community substations; and to consider the national standard of one police officer per 1,000 New Castle County residents.

The town of Middletown has developed an important intergovernmental relationship with the New Castle County Department of Public Safety through the police service contract. The relationship provides the town police services without necessitating the formation and operation of a town police department. The town of Middletown plans to continue to strengthen the relationship as growth and development occur in Middletown through supporting the efforts of the Department of Public Safety to provide a secure community environment.

In addition to contracting police service the town of Middletown currently contracts for 9-1-1 emergency communications and basic life support (BLS) emergency services through the New Castle County Department of Public Safety.

**Education Facilities**

Middletown is in the Appoquinimink School District. This school district serves the majority of southern New Castle County. Appoquinimink has been one of the fastest growing districts averaging 8 percent increases per year in student enrollment. The total projected enrollment for the 1996/97 school year will approach 3,500 students.
The district currently operates three elementary schools, one middle school, and one high school. Silver Lake Elementary School, Redding Middle School, and Middletown High School are located within Middletown.

A new Middletown High School was completed in 1996. The new school is located on 35 acres of Delaware Route 299 on the eastern edge of Middletown. The capacity of the school is 1,200 students. The new Middletown High School opened in the winter of 1997. In addition to the high school, a clinic with participants from the Division of Public Health, the Department of Health and Social Services, and the Department of Services for Children, Youth and Their Families is located at the facility. The old high school will be converted into a middle school.

The Appoquinimink District expects that over the next 5 to 10 years there will be a need for a new elementary school in the northern area of the district near the canal if current development patterns hold. The projected population growth of 94 percent and household growth of 117 percent in the Middletown - Odessa Census County District will have a substantial effect on the generation of new students for the Appoquinimink District. The Appoquinimink District includes, in addition to a majority of Middletown Odessa CCD, the rapidly growing area immediately north of the C & D Canal and on the west side of the county.

Table 8 lists the current enrollment as of September 1995 by grade levels in the Appoquinimink School District.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number Enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindergarten</td>
<td>269</td>
</tr>
<tr>
<td>Grades 1-3</td>
<td>882</td>
</tr>
<tr>
<td>Grades 4-6</td>
<td>887</td>
</tr>
<tr>
<td>Grades 7-12</td>
<td>1,292</td>
</tr>
<tr>
<td>Total Special</td>
<td>260</td>
</tr>
<tr>
<td>Total</td>
<td>3,590</td>
</tr>
</tbody>
</table>

Source: Department of Public Instruction September 30, 1995 Student Enrollment and Unit Allotment Report
The Appoquinimink School District enrollment as of September 1995 is further described in table 9. This table provides separate counts for each school by grade level.

### Table 9: Appoquinimink School District Enrollment Breakdown

<table>
<thead>
<tr>
<th>School</th>
<th>Kindergarten</th>
<th>Grades 1-3</th>
<th>Grades 4-6</th>
<th>Grades PK-6 Special</th>
<th>Grades 7-12 Special</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver Lake</td>
<td>87</td>
<td>311</td>
<td>192</td>
<td>36</td>
<td>0</td>
<td>626</td>
</tr>
<tr>
<td>Townsend</td>
<td>99</td>
<td>262</td>
<td>187</td>
<td>29</td>
<td>0</td>
<td>577</td>
</tr>
<tr>
<td>Cedar Lane</td>
<td>83</td>
<td>309</td>
<td>310</td>
<td>23</td>
<td>0</td>
<td>725</td>
</tr>
<tr>
<td>Appoquinimink</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>51</td>
<td>0</td>
<td>70</td>
</tr>
<tr>
<td>Redding Middle</td>
<td>0</td>
<td>0</td>
<td>198</td>
<td>23</td>
<td>513</td>
<td>770</td>
</tr>
<tr>
<td>Middletown</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>779</td>
<td>822</td>
</tr>
<tr>
<td>District Total</td>
<td>269</td>
<td>882</td>
<td>887</td>
<td>162</td>
<td>1,292</td>
<td>3,590</td>
</tr>
</tbody>
</table>

Source: Department of Public Instruction
September 30, 1995 Student Enrollment and Unit Allotment Report

Table 10 lists the actual enrollment numbers for the period of 1991 to 1995 of the Appoquinimink School District recorded by the Delaware Department of Public Instruction (DPI). The table also lists the DPI adjusted projections through 2000. The school enrollment numbers indicate that from 1991 to 2000 the number of students enrolled will have increased 62 percent. The impact on all grades levels have required the construction or renovation of schools to meet the current needs of the district. These numbers are based on the existing cohorts of students and assumptions made about retention in the school district. The increased residential development throughout the Appoquinimink district will affect the rate of growth of enrollments.

### Table 10: Appoquinimink School District Projections

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>K-4</td>
<td>1,153</td>
<td>1,267</td>
<td>1,380</td>
<td>1,460</td>
<td>1,538</td>
<td>1,585</td>
<td>1,655</td>
<td>1,640</td>
<td>1,621</td>
<td>1,681</td>
</tr>
<tr>
<td>5-8</td>
<td>890</td>
<td>943</td>
<td>1,005</td>
<td>1,110</td>
<td>1,195</td>
<td>1,365</td>
<td>1,490</td>
<td>1,507</td>
<td>1,626</td>
<td>1,653</td>
</tr>
<tr>
<td>9-12</td>
<td>583</td>
<td>630</td>
<td>682</td>
<td>774</td>
<td>930</td>
<td>874</td>
<td>977</td>
<td>1,115</td>
<td>1,161</td>
<td>1,329</td>
</tr>
<tr>
<td>Total</td>
<td>2,816</td>
<td>2,840</td>
<td>3,067</td>
<td>3,344</td>
<td>3,583</td>
<td>3,825</td>
<td>4,081</td>
<td>4,283</td>
<td>4,407</td>
<td>4,562</td>
</tr>
</tbody>
</table>

Source: Department of Public Instruction, Appoquinimink Retention Enrollment Projection and Adjustment for Overestimation, 1996
The town of Middletown recognizes the importance of maintaining a high quality of public education facilities. A connection exists between the land use decisions of a local jurisdiction and the ability of the public school facilities to handle the number of students attracted to the district through expanded residential uses. An appropriate mix of land uses that includes agricultural, residential, commercial, office, and industrial land uses will provide the adequate tax base for the school district to meet the financial needs of the future.

The town of Middletown also recognizes the need for additional school sites and plans to work with the school district to develop potential school sites as part of the development process. The majority of schools within the district, including the new Middletown High School, are located within the corporate limits of Middletown. The continuation of siting schools within the town of Middletown in close proximity to residential development will reduce the school transportation costs and assist the town in meeting its goal to integrate civic land use with residential and other land uses. The historic pattern of placing schools within the town of Middletown has contributed to the creation of community character. The plan recommends the continuation of siting new schools within Middletown’s corporate limits.

**Post Secondary Education**

The University of Delaware has expanded its continuing education program to Middletown in the fall of 1997 and will offer evening courses at the new Middletown High School. The new offerings will provide additional convenience for Delawareans living and working in the growing community of southern New Castle County. Courses that will be featured are useful to individuals hoping to complete a bachelor’s degree and for those seeking professional development opportunities.

**Libraries**

The former small community library, the Appoquinimink Public Library, was located in the same building that housed the police and other town services. In the fall of 1996, with the completion of the new Middletown High School, a 20,000 square foot community library was opened to replace the 1,500 square foot Appoquinimink Library. The new library is named the Middletown-Odessa-Townsend Library and is open six days a week. The regional library facilities located in northern New Castle County are also available to Middletown residents if the community library in Middletown is not sufficient.

The New Castle County Department of Libraries provides library services in accordance with an adopted master plan to all residents of New Castle County. The mission of the New Castle County Department of Libraries is to provide convenient and accessible information and education resources to every citizen within a three mile radius or 15 minute drive. The Department of Libraries has adopted the goal to
encourage public access to a diversity of informational, educational and leisure time materials through a public library system. The location decision for the Middletown-Odessa-Townsend library at the new Middletown High School met the goal of the department to locate libraries with other civic uses adjacent to retail centers.

Postal Service

The town of Middletown is served by the United States Postal Service. The Post Office building is located at 30 West Main Street.

The need for a large site for the increased mail demand south of the C&D Canal has prompted the development of plans to move to a larger site. Preliminary discussions have been reported to site the Post Office within the town. The future location of the post office building should incorporate the town goal of maintaining civic uses within walking distance of residential development and should form a focus of activity.

Senior Services

The Middletown-Odessa-Townsend Senior Citizens Center, Inc. is a private non-profit senior center located at 300 South Scott Street. The senior center provides recreation, nutrition, and outreach services to seniors throughout southern New Castle County.

Health Care

Middletown residents are served by the Middletown Health Center run by the Division of Public Health, Department of Health and Social Services, State of Delaware. The Center is located at 216 North Broad Street. The Middletown Health Center provides the following medical services; dental care for Medicaid eligible children, cancer screening, prenatal clinic, post-partum and family planning clinics, mental health, hygiene, nurse pediatric clinic, physician pediatric clinic, and geriatric screening.

The Medical Center of Delaware operates a Primary and Specialty Care Center in Middletown located at The Medical Center of Delaware, Middletown Center, Suite 300, 200 Cleaver Farm Road. The Alfred I. duPont Institute runs a Children’s Clinic at 404 Foxhunt Drive in Bear, Delaware north of the Chesapeake and Delaware Canal.

The regional hospital in closest proximity to Middletown is the Medical Center of Delaware, Christina Hospital located at 4755 Ogletown- Stanton Road, Stanton, Delaware.
Utilities

Utilities include such services as public water, sewer, storm water management, electricity, natural gas, telecommunications, cable television, and solid waste disposal. These services are a vital contribution to the health and welfare of community and can be provided by either public, private or mixed public-private partnerships.

The availability and capacity of utilities both encourages and constrains growth. The town of Middletown recognizes the need to stage balanced growth to allow for fiscally responsibility expansion of utilities such as public water, sanitary sewer, and electricity.

Public Water

The Water System

The water system in Middletown serves all of Middletown and is owned and operated by the municipal government. The water system is operated under regulations determined by the Office of Safe Drinking Water, Division of Public Health, Department of Health and Social Services and the Division of Water Resources, Department of Natural Resources and Environmental Control.

The Middletown water system is dependent on water from a set of municipal wells for the supply of water for the town. The system taps into Potomac, Magothy, and Mt. Laurel aquifers for the water used by its customers. The system does not collect water from surface sources.

Middletown operates a plant for the treatment of the well water used by the town. The increase in the size of Middletown has increased the need for water. The town will need to examine the condition of its existing wells and determine the future well needs and evaluate options for expansion.

The water system includes two water reservoir tanks and one standpipe. The standpipe has a capacity of 47,000 gallons and was built in 1883. The standpipe is located on Lake Street near the intersection with Cox Street. The reservoir tank located on Green Street has a capacity of 150,000 gallons. The other reservoir, a water tower, is located on Industrial Road and has a capacity of 500,000 gallons. This water tank was built in 1968. A new water tower, completed in 1996, that has a capacity of 1,500,000 gallons and is located near the new New Castle County police building on North Broad Street. An additional 142,000 gallons of ground level raw water reservoir exists. The water distribution system consists of approximately 104,000 linear feet of 6 inch through 12 inch diameter water mains.
Current Conditions

The town of Middletown recently completed a water study in 1997 that evaluated the system and made recommendations concerning the conditions of the water system and possible improvements to the system.

Middletown has replaced approximately 5.5 miles of water lines as part of a refitting and updating program to increase the quality of the water system. The original 4 inch lines have been replaced with 6 inch and 10 inch lines to increase the capacity of the water system. The town plans to continue replacement and upgrading on a continuous basis to ensure capacity and quality of the water distribution system.

The Town of Middletown has five wells currently producing water for needs of the municipality’s customers. The following table 11 details the productivity of each well and the depth from which the well pumps.

Table 11: Middletown Well System

<table>
<thead>
<tr>
<th>Well Number</th>
<th>Permit Number</th>
<th>Gallons Per Minute (gpm)</th>
<th>Average Depth in 1994</th>
<th>Total Annual Pumpage (in gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>10453</td>
<td>210</td>
<td>161'</td>
<td>17,433,200</td>
</tr>
<tr>
<td>5</td>
<td>10455</td>
<td>68</td>
<td>NA</td>
<td>9,294,100</td>
</tr>
<tr>
<td>6</td>
<td>10454</td>
<td>277</td>
<td>160'</td>
<td>37,880,000</td>
</tr>
<tr>
<td>8</td>
<td>39676</td>
<td>350</td>
<td>124'</td>
<td>48,997,400</td>
</tr>
<tr>
<td>9</td>
<td>39685</td>
<td>320</td>
<td>156'</td>
<td>65,395,300</td>
</tr>
</tbody>
</table>

Source: 1994 Middletown Submission to the Water Supply Branch, DNREC

Middletown had a 0.5 million gallons per day (mgd) average demand for water in 1994 and peak demand in May, 1994 of 1.3 mgd. The current water demand for the town of Middletown averages 325 gallons per minute based on pumpage records from September 1995 to August 1996.

The town treats the water from wells No. 4, No. 8, and No. 9 at the water treatment plant located on East Lake Avenue. Water from well No. 5 is chlorinated and pumped directly into the 150,000 gallon storage tank. Water from well No. 6 is chlorinated and pumped directly into the water distribution system.

The town’s water distribution system consists of 6 inch through 12 inch water mains. The older piping system went from Lake Street to Park Place along Broad Street and was constructed in approximately 1941. The system was expanded in 1970 thus extending water service to the 1970 town limits. In 1991-1992 a major renovation of the water main
system was undertaken due to concerns over age and condition of the lines. In 1990 1,461 out of 1,475 housing units had public water supply. There were 14 housing units in the town that were served by individual drilled wells.

The policy of Middletown states that all future development will be required to be connected to the municipal water system.

**Future Water Availability**

The availability of water from underground sources will become increasingly important as Middletown grows and develops. The question of water availability is compounded due to extensive potential development within the watersheds Middletown shares with areas in southern New Castle County. The Delaware Geological Survey (DGS) evaluated the availability of groundwater in Southern New Castle County for the New Castle County Department of Public Works and Water Resource Agency for New Castle County. The DGS evaluation indicates that there will be about 20 million gallons per day (mgd) available from wells in Southern New Castle County.

The DGS evaluation further divided the water availability by watersheds and aquifers. The Town of Middletown straddles the Drawyer Creek and Appoquinimink River watersheds. The water availability from the Drawyer Creek Watershed was estimated at 2.36 mgd from all aquifers. The aquifer within the watershed with the greatest estimated water availability was the Englishtown/Mt. Laurel with an expected 0.99 mgd available. Middletown shares the Drawyers Creek Watershed with the southeastern part of the rapidly developing Boyd’s Corner area. The Appoquinimink River Watershed, which is south and west of currently developed Middletown, was estimated to have 3.37 mgd of water available. The water in this watershed was primarily available in the Potomac Aquifer with an estimated 1.61 mgd of water available.

The DGS evaluation indicates that the largest portion of the estimated water availability is located in the Blackbird Creek Watershed south of Middletown and in the area the draft New Castle County Comprehensive Development Plan Update has designated as either a Resource Protection Area or Agriculture District where development will be limited. Investor owned utilities, as of July 1996, had not acquired the right to provide public water in any large measure within the Blackbird Creek Watershed.

The estimated water availability was compared by DGS to the estimated Maximum Daily Demand that had been estimated in a previous study completed by Metcalf and Eddy in 1991. This information is listed in chart 3.
DGS concluded that the water availability will meet the estimated needs for Southern New Castle County as a whole. The issue for Middletown will be whether or not the water will be available to support the projected growth in Middletown. The development within the Drawyer Creek and Appoquinimink Creek Watersheds outside of Middletown can not be controlled by Middletown but will have a significant impact on the municipality’s capacity to meet the needs for residential, commercial, and industrial water users within Middletown. If the water capacity is assigned to residential users outside of Middletown by land use decisions of New Castle County and the water franchise decisions of the Delaware Department of Natural Resources and Environmental Control, then the long run capacity of Middletown to provide water to residential, commercial and industrial users could be compromised.

Metcalf and Eddy completed a Water Supply Plan for New Castle County, Delaware in 1991 which estimated the potential water supply needs and developed supply to meet those needs. The estimations were completed using projections for population and development made in 1990 and therefore recent development activity has had a substantial effect on demands for water in Middletown and across Southern New Castle County. The surplus - deficit projections made by Metcalf and Eddy are based on a 21.6 million gallon (mg) total for developed water supply in Middletown. The projections indicate that Middletown will be in surplus until August of 2010 and again in the summer of 2020, 2030, and 2040 under the development expectations made in the study. The surplus of 94.95 mg in 1990 was projected to dwindle to 55.34 mg in 2010 and become a net deficit in 2040 to 12.86 mg in 2040.
The KCI Technologies Middletown Water Study of March 1997 estimated the future water usage for the town of Middletown based upon the proposed future development and a uniform growth rate. Chart 4 depicts the estimated future water usage.

Water usage as estimated in the Middletown Water Study would increase from the current level of approximately 0.47 million gallons per day to 1.56 million gallons per day by 2017. The total rated capacity of 920 gpm that the current municipal wells could generate will be sufficient to meet the assumed uniform pattern of growth through 2004. The existing storage system was also examined in the Water Study. The current need for water storage to fire protection, peak demands, and emergency storage in case of water plant shutdown was computed to be 722,500 gallons. The current storage capacity, with the addition of the Greenlawn water storage facility, is 2,292,000 gallons.

**Recommendations for Investment in New Water Infrastructure**

The Metcalf and Eddy 1991 study and operational data from the town of Middletown indicates that Middletown has water supplies to meet its current needs and has room for limited expansion. The completion of the 1.5 million gallon storage tank provides the storage capacity that will be used to meet current and near future needs. The rate of development of unbuilt areas in Middletown will dictate the rate of construction of expanded water infrastructure.
The Middletown Water Study 1997 recommended that existing water sources and treatment facilities be upgraded and renovated to maintain the existing water supply and to provide water resources to meet the needs for the next five to ten years. An additional recommendation was to contact the Department of Natural Resources and Environmental Control, Division of Water Resources to discuss increasing the Middletown's allocation. The allocation of water resources will become crucial over the next five to ten years as investor-owned water utilities continue to expand into southern New Castle County and facilitate development. The availability of water will effect the ability of Middletown to become an economic and residential center and significantly impact the natural resource sustainability of the region.

In addition to the availability of water resources the plan recommends that the town continue and expand the practice of requiring development to finance the expansion of the system. The plan further recommends the investigation of public-private partnerships to undertake the provision of water and maintenance of the water system. The long run goal of developing a self sufficient water utility will be based on adequate financing and recovery of long run costs of the system. Public-private partnerships can be one way of bringing private sector financing into the provision of public facilities and providing the necessary capital to meet major economic development opportunities. The facilities developed under these relationships shall be owned by the town and the customers will remain customers of the town of Middletown.

The availability of water resources will be an important component in the development of Middletown as an residential, commercial, and employment center in southern New Castle County. Water supply will be crucial for the attraction of major employment centers and therefore Middletown will explore the availability of industrial water supply to serve areas suitable within or to be annexed into Middletown for industrial development.

### Wastewater System

**Current Conditions**

Sanitary sewer service exists throughout the town of Middletown. According to the 1990 US Census of the 1,475 housing units in the town of Middletown 1,434 were connected to the public sewer system. In 1990 41 housing units used either a septic system or cesspool to dispose of the household sewage. The town policy is to have all housing units connected to sanitary sewer service.

The provision of sanitary sewer is managed by the town of Middletown. Collection and pumping to the MOT Interceptor line is completed by the town. Sewage treatment is performed by New Castle County Department of Public Works at the Middletown-Odessa-Townsend
Regional Treatment Plant at the New Castle County Water Farm. This is a spray irrigation treatment facility near the town of Odessa. The majority of the sewer system is based on a gravity flow system. There is a pumping station on North Broad Street near Ashland Street. This pumps sewage from the north into the 8 inch line that flows eastward on Lockwood Street. A pump station is located at the north end of New Street which pumps sewage from the east side of town.

The town of Middletown and New Castle County completed an agreement in 1996 that will provide Middletown with 0.75 million gallons per day of treatment capacity. The 1996 agreement updated a 1986 agreement and expanded the overall flow limits for Middletown. The agreement specifies a peak flow limit of 2.5 million gallons per day. Any exceeding of the peak flow limit will result in the town assuming the liability for any illegal water discharges and sanctions that may be imposed by the Department of Natural Resources and Environmental Control. The town is responsible to ensure that the quality of the sanitary and industrial waste discharge into the sewer system meets the requirement for wastewater discharge regulation of the county.

Middletown currently has excess sanitary sewer capacity and the Middletown-Odessa-Townsend Regional Treatment has been operating at less than capacity in recent years. Middletown estimates that the town’s current average daily flow ranges between 400,000 to 430,000 gallons per day. The daily average flow for the year of 1995 was approximately 419,500 gallons per day. The annexation and potential development within the town of Middletown will increase the use on both the collection and treatment portions of the system.

The town has begun the process of upgrading the collection system within the town. In 1995 the preliminary plans for the development of a bypass transmission line system were completed. The plans call for the construction of a West Trunk Line and East Trunk Line to serve the newly developed and potential developed areas to the north and west of central Middletown and areas to the east along State Route 299. The trunk lines will converge at the New Castle County metering station near Silver Lake.

The West Trunk Line that will serve the new development along US Route 301 and the industrial areas on the west side of town will be under construction during 1996. The West Trunk Line begins on Peterson Road and heads south to Hayed Road. The trunk line then follows Industrial Road to Arcadia Parkway where it turns east to run into the New Castle County Metering Station. The West Trunk Line is a 10 inch line for the majority of its length until it crosses South Broad where it feeds into a 15 inch line. Part of the project includes a new lift station to allow for the pumping of sewage to the south side of town.

The East Trunk Line will serve development on New Street, Cleaver Farm Road and areas along Delaware Route 299 east to the new high school. The line begins on New Street just south of East Lake Street and