

MASTER PLAN



MILLVILLE, NEW JERSEY

MAY 9, 2005



MASTER PLAN MILLVILLE, NEW JERSEY

Master Plan

Planning Board of the City of Millville
County of Cumberland

May 9, 2005

Master Plan

City of Millville
County of Cumberland

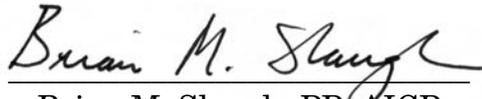
Adopted by the Planning Board pursuant to
N.J.S.A. 40:55D-28

May 9, 2005

Prepared By:

Kimberly Warker, Ph.D., PP
New Jersey Professional Planner License No. 4302
Director of Planning, City of Millville

Stuart Portney, PP
New Jersey Professional Planner License No. 2619
The Metro Company, LLC
347 Varick Street, Suite 117A
Jersey City, New Jersey 07302



Brian M. Slaugh, PP, AICP
New Jersey Professional Planner License No. 3743
CLARKE ♦ CATON ♦ HINTZ
400 Sullivan Way
Trenton, New Jersey 08628

**Members of the Planning Board
2004-2005**

Stanley Shewlakow, Chairman

Jack Myers, Vice-Chairman

James Quinn, Mayor

Joseph Derella, Commissioner

Chris Barlas

Raymond Burkey

William McLaughlin, III

Vicki Marshall

George Mitchell

Jodi Richter

Milton Truxton

Henry Wyble

□ □ □

Betty Anderson, Planning Board Secretary

Richard Daniels, Esq., Planning Board Solicitor

Kimberly Warker, PhD, PP, AICP, Planning Director

John Knoop, PE, Planning Board Engineer

Thomas Ayres, Zoning Officer

TABLE OF CONTENTS

<u>SUBJECT</u>	<u>PAGE</u>
I. EXECUTIVE SUMMARY	I-1
Introduction	I-1
Goals of the Master Plan	I-1
Master Plan Elements	I-2
MASTER PLAN ELEMENTS	
II. INTRODUCTION	II-1
Master Plan Reexamination.....	II-1
The Context of the Master Plan Reexamination	II-2
Reexamination Recommendations-2003.....	II-3
The Master Plan 2005 and Smart Growth	II-3
The Organization of the Master Plan	II-5
III. GOALS AND OBJECTIVES.....	III-1
Community Facilities	III-1
Utility Services	III-1
Circulation	III-2
Historic Preservation.....	III-2
Recreation	III-3
Conservation	III-3
Economic Development	III-3
Land Use	III-4
Future Development and Smart Growth.....	III-4
IV. COMMUNITY FACILITIES PLAN ELEMENT	IV-1
Educational Facilities.....	IV-1
<i>Table IV-1. Millville School Enrollments</i>	
<i>by Grade, 2000 to 2004</i>	<i>IV-2</i>
<i>Table IV-2. Millville School Capacities, 2003</i>	<i>IV-2</i>
<i>Map – Millville School Locations.....</i>	<i>IV-3</i>
Student Performance.....	IV-4
<i>Table IV-3. Public Student Test Scores, 2003</i>	<i>IV-5</i>
Higher Education Opportunities.....	IV-5
Medical Services	IV-6

<u>SUBJECT</u>	<u>PAGE</u>
Rescue Squad	IV-6
Public Safety	IV-7
Fire Safety.....	IV-8
Library	IV-9
Municipal Building.....	IV-10
Community Facilities Policy Recommendations	IV-10
 V. UTILITY SERVICE PLAN ELEMENT	 V-1
Sewer Utility and Wastewater Treatment Facilities	V-1
Wastewater Treatment	V-1
Wastewater Collection	V-1
Future Expansion.....	V-2
Wastewater Treatment Policy Recommendations	V-3
Water Utility Treatment and Distribution Systems.....	V-4
Treatment and Production.....	V-4
<i>Table V-1. Annual Pumping Rates (mgd)</i>	V-5
<i>Table V-2. Water Storage Tank Capacity</i>	V-5
Distribution System	V-5
Water Service Policy Recommendations	V-6
Stormwater Collection System.....	V-6
Stormwater Management	V-7
 VI. CIRCULATION ELEMENT	 VI-1
Introduction	VI-1
Regional Placement and Description of Roads.....	VI-1
<i>Table VI-1. Road Miles by Governmental</i>	
<i>Jurisdiction in Millville</i>	VI-2
<i>Table VI-2. State and County Roads in Millville</i>	VI-2
Functional Classification Systems.....	VI-3
<i>Table VI-3. FHWA Minor Arterial Roads in Millville City</i>	VI-5
<i>Table VI-4. Master Plan Major Arterial Roads in Millville City</i>	VI-5
<i>Table VI-5. Master Plan Minor Arterial Roads in Millville City</i>	VI-6
<i>Table VI-6. Master Plan Major Collector Roads</i>	
<i>in Millville City</i>	VI-7
<i>Table VI-7. Master Plan Minor Collector Roads</i>	
<i>in Millville City</i>	VI-7
Residential Site Improvement Standards	VI-7
Rights-of-Way	VI-9

<u>SUBJECT</u>	<u>PAGE</u>
<i>Table VI-8. Master Plan Recommended Street</i>	
<i>Rights-of-Way</i>	VI-10
State Highway Policy	VI-10
The Land Use and Transportation Connection	VI-12
Peak Hour Congestion and Road Capacity	VI-12
Aesthetic Considerations for Streets	VI-13
Traffic Calming	VI-15
Bicycle and Pedestrian Routes	VI-18
Public Transportation.....	VI-20
Railroads	VI-21
Transportation Demand Management	VI-21
Proposed Circulation Plan Improvements.....	VI-23
Millville Airport Access	VI-23
High Street and Wade Boulevard Extensions.....	VI-25
Broad Street and Brandriff Avenue Bridge	VI-25
Rt. 55 Ramps	VI-26
Wawa Tract Collector.....	VI-26
Old Beaver Dam Road and Smith Road	VI-27
Circulation Plan Policy Recommendations.....	VI-27
<i>Map – Circulation Plan</i>	VI-29
VII. HISTORIC PRESERVATION PLAN ELEMENT	VII-1
Archaeological/Historic Resources	VII-1
Prehistoric Era.....	VII-1
Historic Era.....	VII-4
Historic Structures in Millville	VII-5
Potential Historic Districts	VII-8
Downtown/Foundryville.....	VII-8
Millville Airport Historic District.....	VII-9
Resources Available for Historic Preservation Projects.....	VII-9
Historic Preservation Policy Recommendations	VII-10
<i>Map – Downtown Historic Area</i>	VII-12
<i>Map – Foundryville Historic Area</i>	VII-13
<i>Map – Airport Historic Area</i>	VII-14
VIII. RECREATION PLAN ELEMENT	VIII-1
<i>Table VIII-1. Conserved Open Space, Millville, 2004</i>	VIII-1
Changes Since the 1997 Master Plan	VIII-1

<u>SUBJECT</u>	<u>PAGE</u>
Millville Recreation Facilities	VIII-3
State-Managed Wildlife Management Areas	VIII-3
County-Managed Recreation Lands	VIII-5
City-Managed Recreation Lands	VIII-5
<i>Table VIII-2. Millville Recreation and Open Space</i>	
<i>Inventory, Improved Land</i>	VIII-6
<i>Table VIII-3. Millville Recreation and Open Space</i>	
<i>Inventory, Unimproved Land</i>	VIII-7
Privately-Managed Open Space Land	VIII-7
Riverfront Facilities	VIII-7
<i>Map – Maurice River Bluffs Preserve</i>	VIII-8
Union Lake Park	VIII-10
Community Parks	VIII-10
Neighborhood Parks	VIII-11
Future Recreation Needs	VIII-12
Recreation Policy Recommendations	VIII-13
 IX. CONSERVATION ELEMENT	 IX-1
Introduction	IX-1
<i>NATURAL RESOURCES INVENTORY</i>	IX-1
Geology	IX-1
Bridgeton Formation	IX-2
Cape May Formation.....	IX-2
<i>Map – Geology</i>	IX-3
Cohansey Sand	IX-4
Aquifer Recharge and Stormwater Management.....	IX-4
Soils	IX-6
Atison	IX-6
<i>Map – Soils</i>	IX-7
Aura	IX-8
Berryland	IX-8
Downer	IX-8
Evesboro.....	IX-8
Fallsington	IX-9
Fort Mott.....	IX-9
Galloway	IX-9
Hammonton	IX-9
Lakehurst	IX-10
Lakewood	IX-10

<u>SUBJECT</u>	<u>PAGE</u>
Lakewood	IX-10
Manahawkin	IX-10
Mattapex	IX-11
Pits, Sand	IX-11
Psamments	IX-11
Sassafras	IX-11
Transquaking	IX-11
Urban Land	IX-12
Woodstown	IX-12
Freshwater Wetlands	IX-12
<i>Figure 1. Illustration of the Major Wetlands Categories</i>	IX-14
<i>Map – Wetlands</i>	IX-16
Flood Prone Areas	IX-17
<i>Map – Flood Plain</i>	IX-18
Vegetative Cover	IX-19
<i>Table IX-1. Vegetation Categories in Millville</i>	IX-19
<i>Map – Vegetative Cover</i>	IX-20
<i>POLICY ISSUES</i>	IX-21
Tree Management	IX-21
Greenways and Stream Corridors	IX-21
<i>Table IX-2. Buffer Widths for Different Stream Functions</i>	IX-24
Habitat Protection	IX-25
<i>Map – Threatened and Endangered Species</i>	IX-29
Use of Common Open Space	IX-31
Conservation Policy Recommendations Summary	IX-31
<i>Map – Conservation Plan</i>	IX-32
X. ECONOMIC DEVELOPMENT ELEMENT	X-1
Introduction	X-1
New Developments Since the 1997 Master Plan	X-2
Expansion of Millville Airport	X-2
Redevelopment Areas	X-3
<i>Map – Center City Redevelopment Area</i>	X-5
<i>Map – Airport Redevelopment Area</i>	X-6
Downtown – The Glasstown Arts District	X-7
Waterfront Improvements	X-8
Millville’s Economic Base	X-9
Overall Economic Development Goals	X-10

<u>SUBJECT</u>	<u>PAGE</u>
Indicators of Economic Development.....	X-12
<i>Table X-1. Building Permits in Millville, 1994-2003</i>	X-12
<i>Table X-2. Labor Market</i>	X-13
<i>Table X-3. 1999 Money Income</i>	X-13
<i>Table X-4. Sex by Employment Status –</i> <i>Population 16 Years and Over, 2000</i>	X-14
<i>Table X-5. Cumberland County Estimated and Projected</i> <i>Employment By Major Occupational Group, 2000-2010</i>	X-14
<i>Table X-6. Largest Private Employers,</i> <i>Millville, New Jersey, 2004</i>	X-15
<i>Table X-7. Public Employment, Millville, New Jersey, 2004</i>	X-15
Targeted Economic Development Areas.....	X-16
Industrial Parks.....	X-16
Millville Airport.....	X-17
<i>Map – Airport Layout Plan</i>	X-18
Industrial Park Policy Recommendations.....	X-19
Industrial Redevelopment: Brownfields.....	X-20
<i>Table X-8. Potential Brownfield Remediation</i> <i>and Reuse Sites</i>	X-21
Commercial Development Areas.....	X-22
Priority Development Projects.....	X-23
<i>Table X-9. Recent Millville Priority Projects</i> <i>(New Development)</i>	X-23
Economic Development Designations.....	X-25
Urban Enterprise Zone.....	X-25
Cumberland Empowerment Zone.....	X-26
Foreign Trade Zone.....	X-26
State Development and Redevelopment Plan:	
Regional Center.....	X-27
Citywide Programs and Initiatives.....	X-28
Community Development as Economic Development.....	X-28
Neighborhood Redevelopment Goals.....	X-29
Overall Neighborhood Redevelopment Goals.....	X-29
Program Mission Statement.....	X-30
Neighborhood Partners and Resources.....	X-30
Funding of Neighborhood Initiatives.....	X-31

<u>SUBJECT</u>	<u>PAGE</u>
XI. HOUSING PLAN.....	XI-1
Introduction	XI-1
Summary of Fair Share Plan	XI-3
Goals and Objectives	XI-4
Demographic, Housing and Employment Analysis.....	XI-4
Regional and Demographical Data.....	XI-4
Population.....	XI-5
<i>Table XI-1. Population Change, 1930 to 2000,</i> <i>Estimate, City of Millville.....</i>	XI-5
<i>Table XI-2. Population Change, 1930 to 2000,</i> <i>2003 Estimate, Cumberland County</i>	XI-6
Population Composition by Age.....	XI-6
<i>Table XI-3. Population by Age, 1990 & 2000,</i> <i>City of Millville.....</i>	XI-7
<i>Table XI-4. Population Distribution, 1990 and 2000</i> <i>City of Millville and Cumberland County.....</i>	XI-8
Racial Composition.....	XI-8
Household Characteristics	XI-8
<i>Table XI-5. Types of Households, City of Millville, 2000</i>	XI-9
Housing Unit Characteristics	XI-10
<i>Table XI-6. Units & Tenure, 2000, City of Millville and</i> <i>Cumberland County.....</i>	XI-10
<i>Table XI-7. Housing Unit Data, 2000,</i> <i>City of Millville and Cumberland County</i>	XI-11
<i>Table XI-8. Indicators of Housing Conditions, 2000,</i> <i>City of Millville, Cumberland County, New Jersey.....</i>	XI-12
Income.....	XI-12
<i>Table XI-9. Per Capita and Household Income, 1999 and 2004,</i> <i>City of Millville, Cumberland County, New Jersey.....</i>	XI-13
Housing Values and Costs	XI-13
<i>Table XI-10. Housing Values and Affordability, 2000,</i> <i>City of Millville and Cumberland County.....</i>	XI-14
<i>Table XI-11. Households by Income.....</i>	XI-15
<i>Table XI-12. Household Income by Ownership Status.....</i>	XI-15
Future Housing Projection	XI-15
Employment and Labor Force Characteristics.....	XI-15
Employment Trends.....	XI-16
<i>Table XI-13. Covered Private Sector Employment,</i> <i>1980-2000, City of Millville and Cumberland County.....</i>	XI-17

Labor Force Characteristics.....XI-17
*Table XI-14. Employment Data – 2000 Occupation
 Characteristics, City of Millville, Cumberland County*XI-18
 Future Employment Projections.....XI-19
*Table XI-15. Estimated and Projected Labor Force
 Estimates, 2000-2010, Millville*XI-19
FAIR SHARE PLANXI-20
 IntroductionXI-20
 Fair Share Need.....XI-20
 Fair Share Plan Components.....XI-20
 Projects and Funding Sources to Meet Fair Share Need.....XI-21
 Housing RehabilitationXI-21
 New ConstructionXI-23
 Inclusionary Zoning RequirementsXI-24
 Alternative Living ArrangementsXI-25
 Proposed Projects During Certification Period.....XI-25
 Administration of PlansXI-27
 Summary of Affordable Housing ResourcesXI-27

XII. FARMLAND PRESERVATION ELEMENT..... XII-1
 Current Strategies..... XII-1
 Proposed Strategies XII-2
 Transfer of Development Rights..... XII-2
 Residential Cluster..... XII-3
 Planned Unit Residential Development..... XII-3
 Farmland Preservation Policy Recommendations XII-4

XIII. RECYCLING PLANXIII-1
 Purpose of the Recycling Plan.....XIII-1
 Overall Goal of the Recycling PlanXIII-1
 Establishment of Curbside Residential Program.....XIII-1
 Commercial and Institutional Program.....XIII-2
 Recycling of Leaves.....XIII-2
 Unlawful Activities.....XIII-2
 Recycling Plan and RecommendationsXIII-3

<u>SUBJECT</u>	<u>PAGE</u>
XIV. LAND USE PLAN ELEMENT	XIV-1
Introduction	XIV-1
<i>EXISTING LAND USE</i>	XIV-1
<i>Table XIV-1. Land Use by Assessment Classification</i>	XIV-2
<i>Map – Land Use by Class</i>	XIV-3
Existing Land Use and Land Cover.....	XIV-5
<i>Table XIV-2. Existing Land Use by Land Cover</i>	XIV-5
<i>Map – Land Use by Land Cover</i>	XIV-7
<i>LAND USE ISSUES</i>	XIV-9
Millville Airport	XIV-9
Land Consumption in the West End.....	XIV-11
<i>Table XIV-3. Comparison of Population to Housing Units</i>	XIV-11
Village Development.....	XIV-13
Methods of Enabling Village Development	XIV-14
Transfer Development Rights (TDR).....	XIV-14
Residential Cluster.....	XIV-14
Planned Unit Development.....	XIV-15
Balance in Land Use.....	XIV-16
Areas of Competing Goals	XIV-17
Water Resources	XIV-19
Resource Extraction.....	XIV-19
<i>LAND USE CATEGORIES</i>	XIV-19
Village Nodes I and II.....	XIV-20
Agricultural Retention	XIV-21
Open Space.....	XIV-22
Residential – 5 Acre-Western Millville.....	XIV-23
Residential – 2 Acre.....	XIV-23
Residential – 1 Unit/Acre	XIV-24
Residential – 2-3Units/Acre	XIV-24
Residential – 4-5 Units/Acre	XIV-24
Center City Residential.....	XIV-25
Apartment and Townhouse	XIV-25
Waterfront Development.....	XIV-25
Downtown	XIV-26
Neighborhood Business	XIV-27
Highway Commercial	XIV-27
Regional Commercial.....	XIV-28
Institutional.....	XIV-28
Airport.....	XIV-28

<u>SUBJECT</u>	<u>PAGE</u>
Airport Industrial	XIV-28
Industrial	XIV-29
Land Use Policy Recommendations	XIV-30
<i>Map – Land Use Plan</i>	<i>XIV-31</i>
CONSISTENCY WITH OTHER PLANNING DOCUMENTS.....	XV-1
Introduction	XV-1
Land Use Policy in Surrounding Municipalities	XV-1
Commercial Township.....	XV-1
Deerfield Township	XV-1
Downe Township	XV-2
Fairfield Township	XV-2
Lawrence Township	XV-2
Maurice River Township.....	XV-3
Vineland City.....	XV-3
Cumberland County	XV-3
State Development and Redevelopment Plan	XV-4

APPENDICES

FARMLAND ASSESSED PROPERTIES	A-1
NEW JERSEY THREATENED AND ENDANGERED SPECIES	A-13
LIST OF BROWNFIELD SITES	A-15

I. Executive Summary

INTRODUCTION

The City of Millville is 44.3 square miles with a population of 26,847 (2000). The previous Master Plan was adopted in 1997 and reexamined in 2003. Since the 1997 Master Plan, Millville has experienced significant, primarily residential, development pressure as the City has continued to evolve from a manufacturing-based economy to one based on services. This Master Plan is timely as a new set of goals and policies are forged to address the central issue confronting the City today – What is the balance between economic growth and development and the preservation of the environment?

Since 1997, there has been a tremendous increase in interest from the development community. The challenge will be – How can Millville benefit from appropriate investment in development yet preserve its remaining rural character and environmentally sensitive areas?

GOALS OF THE MASTER PLAN

OVERALL GOAL: *The overall goal of the Plan is to encourage balanced growth for the enhancement of the community – permit growth in developable areas serviced by infrastructure while protecting land with development constraints or high resource value.*

COMMUNITY FACILITIES: *Establish and maintain a level of community facilities supplying public services sufficient to satisfy the needs of present residents and to allow for the well planned expansion of new facilities to meet future needs.*

UTILITY SERVICES: *Ensure the availability of utilities for a modern lifestyle.*

CIRCULATION: *Provide for the efficient movement of people and goods within and through the City in a manner compatible with the policies of the Land Use Element.*

HISTORIC PRESERVATION: *Establish policies governing the development or redevelopment of land which will promote the retention of Millville's architectural character and historic streetscapes in the community.*

RECREATION: *Provide active and passive recreation programs for residents of all ages.*

CONSERVATION: *Safeguard the natural beauty of Millville and preserve its significant environmental features, while balancing growth and development.*

ECONOMIC DEVELOPMENT: *Create a Millville that is a regional economic growth engine.*

LAND USE: *As the City develops, ensure that its relationship of open space, residential, institutional, industrial, and commercial uses is balanced and will provide sufficient revenue for the provision of public services at a level that meets the needs of its residents.*

FUTURE DEVELOPMENT AND GROWTH: *Encourage progressive, well-planned, and well-managed growth and development that provides the means of accommodating inevitable growth in a balanced manner that enhances economic, environmental, and community development / quality of life issues.*

MASTER PLAN ELEMENTS

COMMUNITY FACILITIES

Millville has 10 public educational facilities as an Abbott School District. The public school system has a student enrollment of nearly 6100 and a \$98 million budget. If development activity continues, there will be a need for land for the construction of new schools, including a new high school and middle school. There are 72 full time police officers; 9 paid firefighters and 73 volunteers. The city will need to consider a satellite fire station in western Millville. The Millville Public Library must also consider relocating to a larger, more modern facility.

UTILITY ELEMENT

The sewer plant has an average daily flow of 2.3 million gallons per day (mgd) with a plant capacity of 5 mgd. There are 90 miles of mains and 16 pumping stations. The water plant has an average daily flow of 4.4 mgd with a plant capacity of 8.5 mgd. There are 4 elevated storage tanks and 9 wells.

CIRCULATION

There are 102 miles of city roads; 48 state miles and 33 county miles; rail/freight service is provided by CSX national system and the Winchester/Western Shortline. There are 3 NJ Transit routes. The proposed improvements include: access to Millville airport; widening of Nabb Avenue; consideration of a bridge crossing; extension of Wade Blvd; extension north of High Street; New Beaver Dam Road; Rt. 55 interchange into S. Millville Industrial Park.

HISTORIC PRESERVATION

There are two downtown districts that are eligible for historic designation: Central Downtown and Foundryville. A small portion of the original area of the airport is also being considered as an historic district.

RECREATION

Over the last 7 years new recreational facilities constructed include Lakeside Soccer Complex, a transient public marina just south of the Main Street bridge, a walking/biking trail in the Stewart Estate, and the Holly City Family Center. The state or private conservation groups have permanently preserved and own 23.86% of all land in Millville. A future recreation opportunity will be the Maurice River Bluffs Preserve along the western banks of the Maurice River, recently purchased by the Nature Conservancy. A multi-purpose indoor recreational facility is needed in Millville.

ECONOMIC DEVELOPMENT

The pace, scope and scale of economic development in the city is unprecedented. The development pressure has been counterbalanced by an increase in state restrictions and regulatory constraints. In the past five years the city has seen new, large scale commercial activity in the Route 55/47 corridor, revitalization of the downtown retail core as the Glasstown Arts District, and increased interest in private development of industrial land. The riverfront has also become a prime target for public/private partnership and investment while over 800 acres have been added to the airport. In 2003, the city designated the Center City area and the Airport as Redevelopment Areas under state statute. The City is also pursuing state designation as a Revenue Allocation District. A goal of the long-term economic development plan is to diversify the economic base of Millville from its strong historic dependency on manufacturing jobs. The city has been negatively impacted by corporate decisions to close manufacturing facilities, including Dallas Airmotive and the Ball Foster Glass Plant.

FARMLAND PRESERVATION

The city envisions using the following tools for farmland preservation: cluster and planned unit development options, transfer of development rights, and revised zoning.

RECYCLING

The goal of the city's recycling plan is to reduce solid waste by 25%. There is mandatory source separation for residential and commercial/institutional solid waste generation. There is a compost facility at the former City landfill.

LAND USE

Existing Land Use in Millville

The existing land use consists of: agriculture, 12.1%; woodland, 46.3%; environmentally sensitive land, 13.8%; commercial and institutional, 1.8%; industrial, 1.9%; residential, 13.1%; mixed use, 1.2%; water, 5.3%; other, 4.5% of Millville's total land area.

Major Land Use Issues

- 1) The future growth and expansion of the Millville Airport and its associated uses;
- 2) Finding the ways and means to preserve 50% of the land area of Millville from development; and
- 3) Preservation of the greenbelt in the west, south and east sections of Millville as a crescent surrounding the historic City;
- 4) The pattern of large, deep lots with narrow frontage in West Millville and the desirability of new development methods and techniques for transfer of development rights for farmland preservation; and
- 5) Balancing new and existing development east of Union Lake.

Proposed Land Use Strategies

- 1) Future development in designated village nodes;
- 2) Creation of a Waterfront Redevelopment District from Sharp Street to Garfield Street;
- 3) Mixed uses and redevelopment of brownfield sites
- 4) Creation of an Agricultural Retention District – reduction in density and encouragement of clustering and Transfer Development Rights.
- 5) Creation of New Beaver Dam Road to provide infill options.
- 6) Lower density in center city.
- 7) Expansion of arts district to Third Street.

MASTER PLAN ELEMENTS

II. Introduction

The City of Millville is located in central Cumberland County about 10.7 miles east of Bridgeton, the county seat. The county is located in southern New Jersey. Regionally, Millville is 40 miles from Philadelphia, 36 miles from Wilmington and 111 miles from New York City. The City is surrounded by the municipalities of Vineland to the north, Maurice River to the east, Commercial, Downe and Lawrence to the south, and Fairfield and Deerfield to the west. The City comprises 44.3 square miles of which 41.81 square miles is land and 2.19 square miles is water. Though many traditional cities have lost population, Millville's population has continued to grow. The last census indicated a ten year growth rate of 3.3 percent between 1990 and 2000, resulting in a total population of 26,847. The city includes a total of 10,043 households and 10,652 housing units.

MASTER PLAN REEXAMINATION

Millville's last Master Plan was written in 1997. In 2003, the City contracted with Clarke, Caton and Hintz professional planners in Trenton, NJ to complete a Master Plan Reexamination, as required by the NJ Municipal Land Use Law. This state statute required municipalities to reexamine their master plans in six year intervals. The reexamination included an analysis of the assumptions and growth patterns that determine the goals and objectives for future growth, and an update of the various elements of the Plan itself.

A master plan is a composite of written proposals and graphic concepts that guides the future development of the municipality. It acts as a policy guide for public officials in the use of land so that the public health and safety are protected and the general welfare promoted. In this way it provides a legal framework upon which the City rests its ability to regulate. The central feature of the master planning process is the assemblage of information describing the many interrelated factors that may influence development patterns. This framework allows the municipality to take stock of its past and review comprehensively its vision for the future. It serves to empower residents by providing the information necessary to understand and influence land use decisions. Thus, the Master Plan has three primary roles: 1) a legal framework for zoning regulation; 2) an educational document for empowering residents; and 3) an advisory document to guide development decisions in light of overall goals and policies.

THE CONTEXT OF THE MASTER PLAN REEXAMINATION

The catalyst for changes in the Master Plan and other land use policies was the high level of development activity and infrastructure improvements occurring in Millville. Over the last decade, the city has been evolving from a manufacturing dominated economy to a more diverse service economy. As this transformation has been occurring, new industrial, commercial, and residential development activity has been proposed at an unprecedented level. Development interest has intensified despite an increasingly stringent state and federal regulatory environment.

Millville's economic transformation, fueled by affordable, vacant land, financial incentives, infrastructure capacity a competitive regional location, has centered on the move from the dominance of the glassmaking industry to air-park industry and higher value commodities. At the same time, Millville's downtown is enjoying a renaissance as the Glasstown Arts District, attracts pioneer artists as residents and merchants and increasing the value of older, historic buildings. Additionally, over the past decade, the residents of the surrounding high density neighborhoods have partnered with the city to implement neighborhood-based planning and local empowerment.

The demographic factors and development activity point to the central issue of this Master Plan- the balance of growth and preservation. This Master Plan is intended to strike a balance in land use by creating opportunities for both smart growth of the residential, business and industrial base as well as the protection of environmentally sensitive areas. The City's goals are to plan for intentional growth in areas well-suited for development while permanently preserving at least 50% of the land area of Millville. In this way the city will have an unparalleled quality of life and a legacy of balanced growth.

Challenges that the city will face during the life of this Master Plan include:

- Enhancing the Glasstown Arts District as a destination for ecotourism
- and cultural tourism, with linkages to the surrounding residential areas.
- Anchoring the community-building efforts through a continuation of
- neighborhood planning and downtown redevelopment.
- Implementing the Center City and Airport Redevelopment Area Plans.
- Implementing the Revenue Allocation District.
- Public investment in infrastructure upgrades.
- Improving the existing circulation system and preparing new forms of

- circulation for industrial expansion.
- Diversifying the local economy while maintaining our historic glass and general manufacturing operations.

REEXAMINATION RECOMMENDATIONS – 2003

The Reexamination Report 2003, completed by Clarke, Caton, and Hintz, contained a number of recommendations for municipal policies and the Master Plan:

- The revision of the Goals and Objectives to concentrate specifically on municipal objectives.
- Discussion on the types of development desired on remaining undeveloped lands and the waterfront.
- Incorporation of pending Center City and Airport Redevelopment Plans.
- Preparation of a new Circulation Element, including improved access to the Airport, the feasibility of a new river crossing, new ramps for Wade Boulevard/Rt. 49, pedestrian access along Sharp Street, east/west traffic flow through center city, and increased commuter traffic on the Brandriff Avenue Bridge, extension of Wade Boulevard to the Route 47 Interchange district.
- Implementation of the recommendations of the 2002 Airport Layout Plan Update.
- Discussions with state officials regarding the effects of proposed environmental policies on the airport.
- Coordinated discussions on facility needs with the Millville Board of Education.
- Revision of the Land Use Element.

These recommendations are addressed by this Master Plan.

THE MASTER PLAN 2005 AND SMART GROWTH

In recent years, planners nationwide have utilized the banner of smart growth to limit some of the unintended consequences of development, including traffic congestion, overcrowded schools, the loss of open space, and limited housing choices. With a physical orientation to land use and urban design, smart growth is often touted by competing interests as a means of justifying their viewpoint. For example, development interests emphasize design standards, density bonuses and expedited reviews as smart growth tools. Environmentalists see smart growth as a means of preservation while planners view the concept in terms of revitalizing urban cores and building

near existing infrastructure. In sum, smart growth can mean very different things to different people.

Each community must consider a smart growth policy in the context of its own unique conditions. Practiced in its true form, smart growth offers communities the means to accommodate inevitable growth in a manner that achieves economic, environmental, and quality of life objectives. In the end, smart growth is about enhancing the quality of life in a community and about reinforcing the sense of place and livability.

The City of Millville, through the policies and goals of this Master Plan, conforms to the smart growth definition offered by NJ Future:

“Smart Growth means adding new homes, new offices and businesses and new jobs to New Jersey’s economy in a way that enhances the communities where we already live – without requiring higher taxes, adding to our road and traffic woes and without consuming or polluting our remaining farmland, beachfronts, woodlands, and open spaces.”¹

Essentially, smart growth happens where development can be accommodated with minimal adverse impact to the environment and where it capitalizes on existing public investment. Choices are a big part of smart growth – that is – choices about the type of transportation to be used, the types and costs of housing offered, the types of common activities and interaction to be shared with neighbors.

The City’s smart growth goal is to seek common ground identified between all of the stakeholders in the planning process: developers, the public sector, and the environmentalists. Collaboration is the hallmark of smart growth, and collaboration must occur in conjunction with consensus building and compromise. Without collaboration, smart growth remains a conceptual model rather than a practical tool.

With this goal in mind, some of the features of smart growth that should be analyzed in new developments within the City of Millville include:

- Mix of land uses (residential, retail, commercial);
- Infill and redevelopment;
- Occurring near existing development or infrastructure;
- Preservation of open space and environmentally sensitive areas;

¹ - NJ Future: Smart Growth Scorecard as found at <http://www.njfuture.org>

- Master planning critical or large, undeveloped areas;
- Range of housing choices;
- Quality, integrated design encouraging personal interaction; and
- Creation of a sense of place.

Reinventing existing communities such as Millville through smart growth is a long term process. A pragmatic and incremental approach is needed to redesign the existing physical pattern of development which is clearly an expression of the community and a reflection of its history. “Smart growth” must similarly be flexible enough to consider the non-physical aspects of planning, particularly economic and market forces, educational opportunities, and the contemporary lifestyle trends such as the desirability of urban vs. rural setting and residential housing choices.

Based on the goals and constraints of smart growth described above, the city, through this Master Plan, will encourage *balanced growth*, reflective of the characteristics of smart growth that enhance our sense of community. Smarter land development can be achieved one project at a time with an understanding of our community’s existing character and future goals. Requiring community enhancement features of new development such as public greenways, affordable housing, recreation and open space, and preservation of environmentally sensitive areas will support our focus during the lifetime of this Master Plan, on “smart growth.” The concept and tool of smart growth will enable local decision-makers to have the ability to accept or reject development based upon its benefit to the overall community.

THE ORGANIZATION OF THE MASTER PLAN

The Master Plan has been organized into several elements or components that examine specific policy issues and provide background information that supports the land use element which is the focus of this plan. The Master Plan includes the required elements and statements of the NJ Municipal Land Use Law (Chapter 291 Laws of NJ 1975).

GOALS AND OBJECTIVES: Statements of the goals and objectives relate to each of the individual elements and determine the direction of the Master Plan. The goals and objectives serves as a type of performance standard, enabling the plan to be evaluated in six years.

COMMUNITY FACILITIES: This element examines the existing conditions and status of the city’s school facilities, police department, fire department, emergency rescue operations, hospital, library, and municipal administration building.

UTILITY SERVICE PLAN: This element details the existing capacity and future needs of the city's public utilities, including the water system, sewer system, and stormwater management

CIRCULATION: The Circulation Element discusses the means of moving people and goods in Millville. It describes the network of roads and classifies them according to standard methods. Problem areas in the road network are identified for potential improvements. Extensions of bicycle pathways are proposed in the Circulation Element. Trends in transportation, including public transportation, at the federal, state, and county level are reviewed.

HISTORIC PRESERVATION: Millville's past is examined in a brief history of the City to set the stage for the Historic Preservation Element. Background information is provided that supplies support for a local district should one be implemented.

RECREATION PLAN: This section of the Plan discusses the location and capacity of the city's comprehensive system of public recreational opportunities, including state-owned wildlife management areas, Union Lake, neighborhood recreation sites, waterfront opportunities and open space.

CONSERVATION: This element is intended to inventory natural resources and discuss the City's efforts at conserving environmentally sensitive land in a responsible manner.

ECONOMIC DEVELOPMENT: The City's efforts in supporting and enhancing its economy are highlighted in this segment of the Master Plan that also includes a detailed plan for future endeavors.

HOUSING PLAN: Millville's response to the state obligation for affordable housing is indicated in the Housing Plan. This includes a substantial exposition of the demographic characteristics of the City. The adoption of the Housing Element follows the time periods for substantive certification by the NJ Council on Affordable Housing.

FARMLAND PRESERVATION: This section of the Master Plan includes suggestions for methods of preserving farmland in Millville. A list of farmland assessed properties is included as an appendix.

RECYCLING: The Recycling Element provides a description of the policies and type of materials recycled in the City.

LAND USE PLAN: The Land Use Plan Element synthesizes the information presented in the background studies of the underlying trends and changes in Millville. Existing land use is classified and mapped in the element. The land use issues first identified in the *Reexamination Report* are explored in more depth. Based on the preceding elements, land uses are assigned to specific geographic locations at differing densities of development, designed to bring about the goals and objectives of the Master Plan.

REGIONAL LAND POLICY CONSISTENCY: A Statement of Consistency with other planning documents examines the land development policies of the surrounding municipalities. The Master Plan is also compared with the development policies of Cumberland County. Lastly, the Master Plan is analyzed for consistency with the policies of the State Development and Redevelopment Plan.

III. Goals and Objectives

The goals and objectives are intended to be a guide to enhance the quality of life in the City for its residents, business owners and visitors. The Master Plan is divided into elements or statements related to a land use subject each of which has a specific goal. Each goal is followed by a set of sub-goals, or objectives, by which progress in implementation may be measured. Each individual element may also include specific recommendations pertaining solely to its subject intended to implement the goals and objectives.

GOAL: COMMUNITY FACILITIES

Establish and maintain a level of community facilities supplying public services sufficient to satisfy the needs of present residents and to allow for the well planned expansion of new facilities to meet future needs.

OBJECTIVES

- Provide for police and fire protection, emergency medical transportation, library services, housing administration and other municipal services sufficient to meet the needs of the City of Millville's residents and business owners.
- Identify needs for land for new school facilities in close cooperation with the Millville Board of Education.
- Support the creation of new public facilities as needed in redevelopment areas.

GOAL: UTILITY SERVICES

Ensure the availability of utilities for a modern lifestyle.

OBJECTIVES

- Utility costs should be self-financed through user fees.
- New development should carry the cost of extending utility services sufficient for the needs of the new users.
- Utility replacement and enhancement in redevelopment areas should be undertaken through public/private partnerships.
- Promote the conservation of water and other natural resources.
- Continue to address potential public health issues through the extension of Water and sewer mains.

GOAL: CIRCULATION

Provide for the efficient movement of people and goods within and through the City in a manner compatible with the policies of the Land Use Element.

OBJECTIVES

- Improve east/west travel through the City.
- Study the feasibility of a future crossing of the Maurice River.
- Improve access from Route 55 to the Millville Airport and to South Millville Industrial Park.
- Create new pedestrian linkages between downtown and nearby recreation areas, and residential neighborhoods.
- Add attractive signage at the edges of the City directing motorists to the downtown, parking, tourist areas and community buildings.
- Optimize existing road infrastructure through improved signage, synchronization of traffic signals, and other improvements to enhance circulation.
- Eliminate the termination of the County road system by creating loops around or linkages through center city.
- Link land use and alternate transportation nodes such as bike trails, walkways, etc.

GOAL: HISTORIC PRESERVATION

Establish policies governing the development or redevelopment of land which will promote the retention of Millville's architectural character and historic streetscapes in the community.

OBJECTIVES

- Support educational opportunities for owners of historic property to learn about the benefits of historic preservation.
- Promote the development and redevelopment of buildings in center city that are attractive to public view and reflective of its established character of development.
- Support the designation of an historic district encompassing the original army building at Millville Airport.
- Promote architectural standards for rehabilitation of historic buildings in the downtown area.
- Promote private investment in recreation components to be incorporated into mixed use housing and commercial designs

GOAL: RECREATION

Provide active and passive recreation programs for residents of all ages.

OBJECTIVES

- Maintain the level of opportunities for youth sports participation
- Ensure adequate recreation facilities in new residential development.
- Continue collaborations between the Millville Board of Education and the Millville Housing Authority in providing targeted recreational opportunities for specific groups in the City.
- Support recreation and leisure activities for senior citizens.
- Incorporate the arts district into city-wide recreation opportunities.

GOAL: CONSERVATION

Safeguard the natural beauty of Millville and preserve its significant environmental features, while balancing growth and development.

OBJECTIVES

- Promote the preservation of land for steams, wetlands, flood plains, and important woodlands to maintain or improve the quality of air and water in Millville.
- Use the plan review process to ensure visually pleasing landscapes that integrate buildings and natural features.
- Continue to monitor state acquisitions of land for open space to ensure that economic goals can be met.
- Increase the level of recycling from private and public users

GOAL: ECONOMIC DEVELOPMENT

Create a Millville that is a regional economic growth engine.

OBJECTIVES

- Coordinate with the Delaware River and Bay Authority to implement the airport study recommendations.
- Continue to promote the City's tourist attractions.
- Pursue the redevelopment plans in center city and the airport to draw new investment to Millville.

- Promote the redevelopment of the Maurice River waterfront in the downtown for housing higher income households.
- Encourage new development to locate at the perimeter of existing development within close proximity to existing sewer and water utilities.
- Avoid the development of land for housing near the airport and on high quality farmland.
- Develop artist housing through reuse of downtown buildings.
- Encourage quality design that promotes a sense of place and a sense of community.
- Utilize contemporary technologies to respond to modern lifestyles, while respecting the history and culture that defined our local identity.

GOAL: LAND USE

As the City develops, ensure that its relationship of open space, residential, institutional, industrial and commercial uses is balanced and will provide sufficient revenue for the provision of public services at a level that meets the needs of its residents.

OBJECTIVES

- Direct new development and redevelopment to places with sufficient transportation and environmental capacities to accommodate growth.
- Discourage the introduction of land uses incompatible with existing patterns of development.
- Retail uses should be located within the downtown and on regional roads.
- Industrial uses should be located within the downtown and on regional roads.
- Industrial uses should be encouraged to have direct or nearby access to the regional highway network.

GOAL: FUTURE DEVELOPMENT AND SMART GROWTH

Encourage progressive, well-planned, and well-managed growth and development that provides the means of accommodating inevitable growth in a balanced manner that enhances economic, environmental, and community development / quality of life issues.

OBJECTIVES

- Economic Development – Projects should reflect the goal of diversification of the City’s economic base and expand and complement the existing business, industries, and skills of the labor force. Creating new job opportunities for residents is a major focus. Economic development is supported as a goal of this Master Plan.
- Community Development – Projects should enhance the quality of life and social well-being in Millville. The City encourages projects that contribute to the development and sustainability of social capital and a sense of place. Projects should build community as well as houses, industries or commercial facilities. The City’s neighborhood-based planning philosophy reflects this commitment to quality of life issues. Community development is supported as a goal of this Master Plan.
- Balanced Growth and Conservation – Projects should recognize and preserve environmentally sensitive areas through adherence to local, state and federal regulations. The City will encourage ways of balancing future development and conserving or mitigating impacts to environmental resources. This Master Plan supports a balanced approach to conservation and development and the goal of designating 50% of the City as permanently preserved open space.

IV. Community Facilities Plan Element

Physical or economic development or redevelopment that is safe, efficient and promotes the welfare of the entire community requires capital investment in public facilities. The desired quality of life in a community is directly correlated with the availability of appropriate public facilities. These public facilities are also a major determinant of community land development patterns. The community facilities that are highlighted as part of this element include: schools, police and fire protection, rescue squad, hospitals, libraries, and municipal administrative services.

EDUCATIONAL FACILITIES

The public school system represents one of the largest investments in public facilities required by a community. The City's future, to a large extent, depends upon the community's ability to provide a sound, quality educational program in adequate facilities. From a master plan perspective, the main priority is to ensure that adequate land is earmarked for school facilities.

The responsibility for constructing and operating educational facilities rests solely with the Board of Education. Millville is one of thirty special needs districts within the State of New Jersey known as Abbott Districts. In November 1991, the voters of the City elected to change the school system from a Type I district, with an appointed school board to a Type II district, with an elected school board. The Board of Education was expanded from seven members to nine members. In addition, under legislation enacted in 1995, two board members from the school system's sending districts are seated on the current 11 member board. The annual school budget must be approved by voters. In 2004, the total Board of Education budget was in excess of \$98 million. The Board employs a professional staff of 628 and a support staff of 380 people.

There are nine public educational facilities in the City, serving the population from ages three to senior citizen. Students from Commercial, Maurice River, and Lawrence Townships in addition to Woodbine attend Grades 9 to 12, comprising approximately 10% of total enrollment. St. Mary Magdalen Roman Catholic School, Millville's sole parochial school, is located on Buck Street and provides educational facilities for grades pre-kindergarten to eight.

The following tables indicate enrollment and capacity of school facilities.

Table IV-1. Millville School Enrollments by Grade, 2000 to 2004.

Grade	School Year			
	2000-2001	2001-2002	2002-2003	2003-2004
Pre-K	333	371	457	506
Kindergarten	365	379	351	387
1	434	367	385	373
2	387	367	353	332
3	353	374	375	354
4	365	349	399	369
5	358	375	364	400
6	359	357	375	351
7	394	379	376	370
8	399	436	417	415
9	567	537	581	583
10	504	535	518	551
11	500	483	496	454
12	415	462	447	463
Special Education	178	174	167	155
Totals	5,911	5,945	6,061	6,072

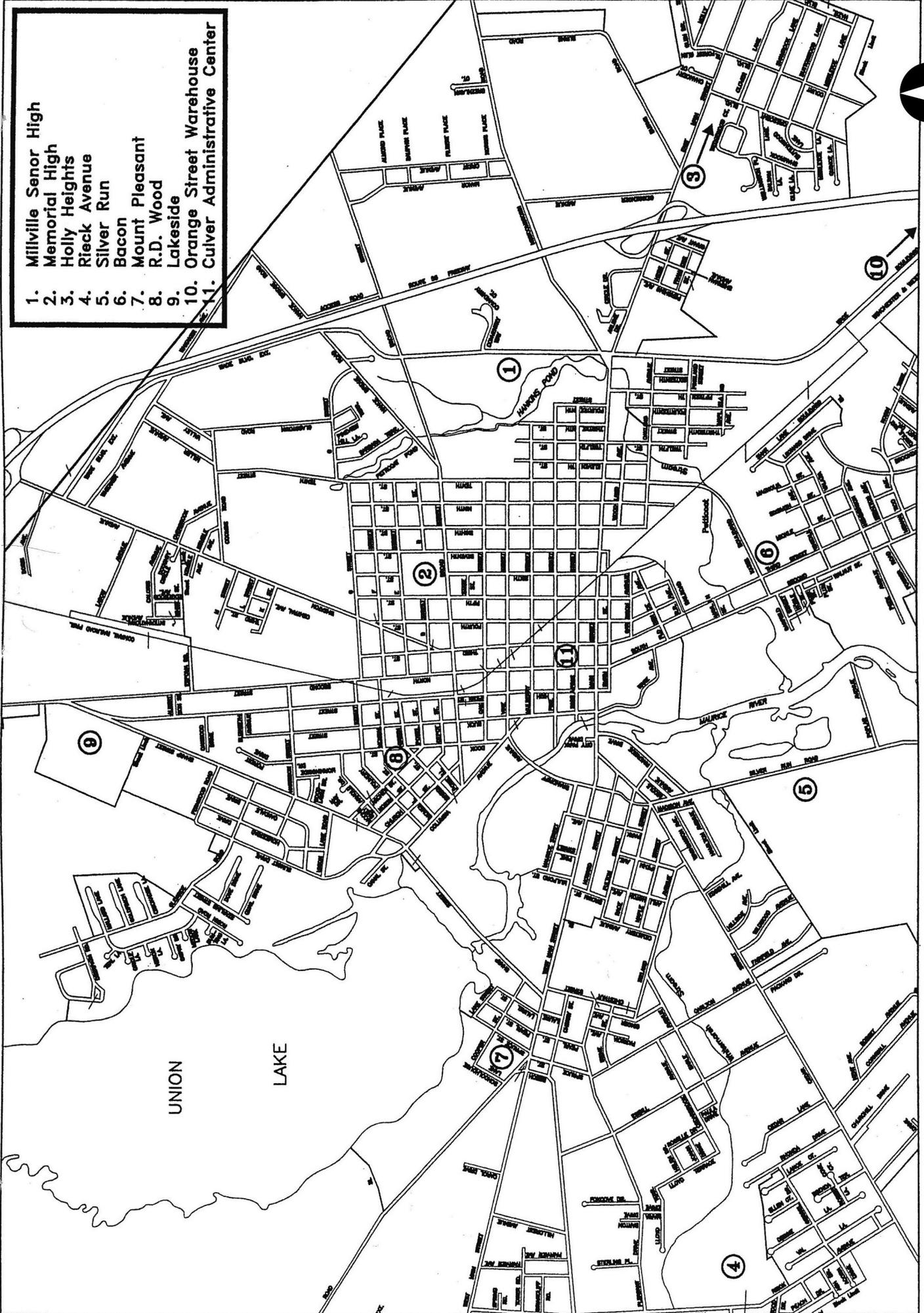
Source: Millville Board of Education. Enrollments as of October 15 of that school year.

Table IV-2. Millville School Capacities, 2003-2004.

School	Grades	2003 Enrollment	Design Capacity	Remaining Capacity	Date built
Holly Heights	PK-5	851	791	-60	1975
Rieck Avenue	PK-5	558	801	243	1969
Silver Run	PK-5	565	782	217	1992
R.M. Bacon	PK-5	299	350	51	1929
Mt. Pleasant	PK-5	230	280	50	1955
R.D. Wood	PK-5	308	414	106	1915
Lakeside Middle	6-8	780	1,335	555	1958, 1999
Memorial Jr. High	8-9	969	915	-54	1924
Senior High	10-12	1,512	1,417	-95	1964
Totals		6,072	7,085	1,013	

Source: Millville Board of Education

- 1. Millville Senior High
- 2. Memorial High
- 3. Holly Heights
- 4. Rieck Avenue
- 5. Silver Run
- 6. Bacon Pleasant
- 7. Mount Pleasant
- 8. R.D. Wood
- 9. Lakeside
- 10. Orange Street Warehouse
- 11. Culver Administrative Center



Milville School Locations

Millville's public school facilities have been expanded in recent years; however, because of rising enrollments, space requirements for mandated programs like special education and bilingual education, and the need for additional programs like full-day Kindergarten, the district anticipates a need for the continued upgrading of its facilities. The high school is operating beyond its constructed capacity and the Board of Education is seeking approximately 80-100 acres for construction of a new school campus with athletic fields and facilities. The former Prudential/AARP building on Wade Boulevard is being completely rebuilt in order to provide a facility for the 3 and 4 year old educational program. This building will become the new Child Family Center. The \$14 million project is expected to open in early 2005. In addition to 41 classrooms, the facility will have administrative offices, specialized instruction areas, a full kitchen and a parent center. This building will be able to accommodate up to 615 children.

Due to its designation as an Abbott School District, the Board can obtain significant resources from the State to upgrade its educational facilities. There are numerous construction projects underway in the school district. Presently, a gymnasium is being added to Lakeside Middle School which will enable the placement of the eight grade students at this facility in 2005-2006. This construction will open space at Memorial School which will enable the facilities at Memorial to be improved. In addition to the gymnasium, the \$13.7 million project includes an auditorium, lockers, bleachers, an auxiliary gym, and choral and instrumental music rooms.

There is also a significant renovation program underway at the high school. The existing 170,000 sf. facility is being expanded by approximately 61,000 sf. through the construction of six new science classrooms, 13 new general classrooms, a state-of-the-art media center, an auxiliary gym, ten small group classrooms, and a cafeteria/kitchen expansion. This \$16 million upgrade is expected to be completed in spring 2006.

With proposals for new residential development throughout the City, the Board of Education is analyzing student projections and growth rates by cohorts to determine the type of new facilities that may need to be constructed. One of the planning priorities will be to locate a site with sufficient acreage for a new high school.

STUDENT PERFORMANCE

Transience of the student population is an important factor in school performance. High mobility means that the teacher often has students that are either ahead or behind the material being taught in the classroom, which

can affect the existing students as well as the new arrivals. One method of addressing this problem from the Master Plan perspective is encouraging more homeownership. This is one of the goals of the City's Community Development Block Grant program, as well as a goal of the Millville Housing Authority and AHOME, Inc., a local affordable housing nonprofit organization. Homeownership correlates well with a lower student mobility rate.

Table IV-3. Public Student Test Scores, 2003.

2003 HSPA Scores (% proficient)

Language Arts Literacy	68.3%
Math	51.1%

Scholastic Aptitude Test 2002-03

Average Verbal Score	510
Average Math Score	511
Average Combined Score	1021

Source: Millville Board of Education

HIGHER EDUCATION OPPORTUNITIES

Opportunities for further education in the Millville area include the Cumberland County College, a two-year community college located on the Millville boundary. Cumberland County College is fully accredited by the Middle States Association of Colleges and Secondary Schools. The 100 acre campus first opened in 1966 and was the first two-year college in the State to open its own campus. It is an open door, comprehensive institution dedicated to meeting the needs of area residents and employers for educational advancement and career training.

Over 90 degree and certificate programs are offered on campus. The college is also dedicated to fostering social and cultural enlightenment within the community. In 2003-2004, the college had its largest enrollment to date – over 3,000 full and part time students. The college is also an active partner in offering customized training for local businesses and industries in conjunction with the NJ Department of Labor.

The Cumberland County Technical Education Center in Rosenhayn is a shared-time vocational school for secondary and adult students. High school students spend one-half of their day at their home high school and the other

half day at the Center. The Center has extensive evening courses and offers customized training for the county's businesses and industry.

MEDICAL SERVICES

South Jersey Healthcare previously operated a Millville Division hospital located at High and Harrison Avenues. The Millville division was a 144 bed nonprofit, acute care hospital founded in 1915. This healthcare facility was closed for the care of patients in 2000 as the hospital system began construction of a completely new, state of the art medical facility in a centrally located site within Cumberland County. The emergency room remained open until August 2004 to provide the services of an urgent care center while the new hospital was under construction.

In August 2004 the new South Jersey Healthcare Regional Medical Center opened on Sherman Avenue in Vineland. This site is directly off of exit 29 of Route 55 and will provide the emergency health care services for Cumberland County. The South Jersey Regional Medical Center is a 262 bed, 441,000 square foot facility built on 62.5 acres, creating an integrated, campus-like setting. The site is immediately adjacent to Cumberland County College.

The medical center campus includes a 4-story inpatient medical center, a 2-story diagnostic and treatment center, an ambulatory care center and a cancer center. All of the patient rooms are private rooms and the facility is equipped with wireless technology providing patient information bedside. The total cost to develop and construct the new regional medical center was \$163 million. This facility employs approximately 2,700 people.

RESCUE SQUAD

The Millville Rescue Squad has evolved from an all-volunteer organization into an emergency medical response organization and medical transportation agency with a seven member Board of Directors, a full-time, professional executive director, and 115 full and part time employees. The Millville Rescue Squad is organized as a non-profit organization under Section 501 (c) (3) of the Internal Revenue Code. The Squad staff is assisted by the fifteen active volunteer members.

Until 1996, the Rescue Squad operated totally on a volunteer basis with no direct charges to the public for transport services. From December 1958 until January 1996 the squad was housed at 500 Columbia Avenue and relied completely upon volunteers to supply all emergency medical services. Lapses

in response performance and critical shortages in volunteers lead to the decision to reorganize the squad as a professional non-profit, with employees assisted by volunteers. In January 1996, licensure and certification by the NJ Department of Health was obtained. By 2004, the Rescue Squad was handling about 4,000 emergency calls per year.

The Squad provides emergency medical services and rescue service 24 hours a day, seven days a week. It is the primary and secondary ambulatory medical service to all or part of ten municipalities in Cumberland and Gloucester Counties. The high performance system of emergency care has enabled responses to emergency calls to exceed national standards. The Squad operates 4 transporting ambulances, 1 rescue truck, 1 four wheel drive Jeep ambulance, 1 boat and numerous wheelchair vans. The Squad is the primary contracted provider of ambulatory transportation for South Jersey Healthcare. A critical care transport team was formed in 2000 with 10 registered nurses.

In 2003, the Rescue Squad moved into new state-of-the-art headquarters at 600 Cedar Street. This 60,000 sf. facility on 12 acres includes a headquarters for emergency management operations, offices, heated garage area, and training rooms.

PUBLIC SAFETY

The safety and security of the residents of the City is maintained by 72 full time officers and 16 civilian personnel. Twenty auxiliary special officer and 16 school crossing guards supplement the Police Department. Patrol units, working eight hour shifts operate from various City sectors for minimum response time. One walking patrol officer is assigned to the downtown area and is supplemented by special officers who regularly patrol the area at various times of the day. The Police Department maintains a Traffic Safety Section, a Training Unit, a K-9 Unit, a Detective Section, an undercover Street Crimes Unit, and the Community Policing Unit. The later unit helps with Neighborhood Watch programs, advises on home security, handles juvenile problems and counseling, and attends the monthly meetings of the various neighborhood associations. The City utilizes various state and federal grants for special programs, including the Community Development Grant Program, the federal Weed and Seed Program, Cops in Schools and the Safe and Secure program.

A 14,000 square foot police facility, immediately adjacent to the municipal building on High and Smith Streets, was constructed and completed in 1985. This facility houses all divisions of the police force, a lock-up facility and the

municipal court. A state-of-the-art computer system helps track all calls for service and assists in planning how to deploy personnel to serve the community effectively.

FIRE SAFETY

The City of Millville is protected by a 90 person Fire Department consisting of 9 career and 73 volunteer firefighters. There is one career chief and two part-time deputy chiefs. Current members are, as a minimum, all Fire Fighter I certified by the New Jersey Division of Fire Safety and the new recruits are required to attend an NJDFS certified county fire school. The department utilizes the nationally recognized Incident Command System (ICS) for managing fire ground operations. The fire station is centrally located at Buck and Oak Street and is manned 24 hours a day by at least one career fire fighter. The City maintains an ISO Class 5 fire insurance rating.

Emergency services provided by the department include Fire Suppression and Investigation, Level 1 Hazardous Materials response, and Confined Space/Technical Rescue Operations. Non-emergency services provided include a wide array of fire prevention activities, such as public education programs for senior citizens and school children, and fire extinguisher training classes for business and industry groups who need to comply with federal and state mandates.

It is anticipated that an increase in fire protection activities and prevention codes should cause the department's emergency response of approximately 900 calls annually to remain relatively constant, even with moderate municipal growth. An average of 30 firefighters responds to each alarm.

The department's fleet of apparatus includes: Four Class A pumper trucks, one 100-foot ladder truck, one-75 foot ladder truck, one rescue/salvage truck, one brush truck, 1 utility truck and one mobile breathing air compressor system. In 2005, the Department will acquire a new piece of equipment - a 20-foot rescue emergency vehicle that will carry extrication and rescue equipment and can transport ten firefighters. This \$625,000 piece of equipment will include a 35 kilowatt generator and a remote operated light tower.

In 2003-2004, the Fire Hall on Buck Street was refurbished through a bond ordinance. The capital improvements completed with these bond funds included upgrades to the plumbing, electrical, and HVAC systems, asbestos removal, ADA compliance, security systems, fire alarm and suppression

systems, new overhead doors, furnishings, moving the bunk room facilities to the second floor and moving the chief's office and conference rooms.

As the level of development in the City increases, the Fire Department must analyze equipment needs, volunteer accessibility, and the need for additional substations in the City. A 1999 Deployment Analysis concluded that the deployment of all fire apparatus from the Buck Street fire station was inadequate based upon the size of our community. They recommended consideration be given to the construction of a second fire sub station in the City. This substation should be a two bay garage capable of housing one engine company and one ladder company. This recommendation was based not only upon growth in the City, but also upon the geographic location of many of the fire station's volunteer base.

LIBRARY

The Millville Public Library, on Buck Street, is part of the CLUES consortium, sharing electronic databases, network architecture, and technical services with other libraries in Cumberland County. The tax supported local library provides a range of services including reference and interlibrary loan. The collection consists of 62,600 volumes; 120 magazine subscriptions with access to an additional 2,500 magazine titles available through internet services; 1,704 videos; 706 audio books, 415 music CDs, and a variety of internet subscription services which are available to City card holders either at the library or through the internet at the CLUES homepage (<http://www.clueslibs.org>). The library has 9 public computers for internet access and productivity software applications, a computer lab consisting of 10 computers used by the library and the Millville School District for instructional purposes, and 8 computers for library administration.

The Millville Public Library plays a central role in providing recreational, informational, and educational opportunities to the community. There are 18,950 registered patrons visited the library 142,000 times in 2003. By the end of that year, 42 community and civic organizations used the library's two meeting rooms and other facilities 447 times. Additionally, the library routinely schedules story times, craft sessions, exhibits, bus trips and computer classes. The Millville Public Library also circulates books to the various senior residences in the City as well as providing library services to shut-ins.

MUNICIPAL BUILDING

The majority of municipal administrative services are provided in the municipal building at 12 South High Street. This facility was constructed in 1970 and has reached capacity in terms of office and storage space. All meetings of the City Commission are held on the fourth floor of the municipal buildings. All tax, water, and sewer service bills are paid in this building. In 1996, an expansion of City Hall was completed. The third floor plaza was enclosed to provide additional office space (6,900 sf) and physical improvements.

Five departments are housed in separate buildings remote from City Hall. The Streets and Roads Department and the Water Department occupy separate buildings on Ware Avenue, just behind City Hall. The Parks Department occupies a building on the corner of Ware and Second Street, and the Sewer Utility has its office for administrative services on Fowser Road. Additionally, a neighborhood resource center is located on 1011 N. Buck Street. This center, donated to the City by South Jersey Healthcare Systems, is utilized as the headquarters for the Third Ward Neighborhood Preservation Project and for meetings for all of the neighborhood associations.

COMMUNITY FACILITIES POLICY RECOMMENDATIONS

- 1) All major development projects including major subdivisions and planned developments should submit a community impact statement detailing the impacts of the proposed developments on existing community facilities.
- 2) City administration should consider reserving land for future expansion of public services, including fire service, schools, and athletic facilities.
- 3) As permitted by state enabling legislation, new development that has a direct impact upon community facilities should provide a pro rata contribution to mitigate their impact.
- 4) Consider the placement of a new fire station on the west side of Millville, possibly at the Airport.
- 5) Consider the construction of a new or expanded library.

V. Utility Service Plan Element

SEWER UTILITY AND WASTEWATER TREATMENT FACILITIES

WASTEWATER TREATMENT

Wastewater treatment has been in existence in the City of Millville since the turn of the century. The Wastewater Treatment Plant is located along the Maurice River, at the terminus of Fowser Road. The current Wastewater Treatment Plant configuration was constructed and put into service in 1971. Major plant rehabilitation projects were completed in 1994 and 2004. The treatment facility utilizes secondary treatment through a contact stabilization process.

The design capacity of the treatment plant is 5 million gallons per day (mgd) average daily flow. The current average daily flow is 2.2 mgd. Under New Jersey Department of Environmental Protection rules, a facility should begin planning for an expansion or a new facility when 80%, or 4 mgd, is reached.

The Millville Wastewater Utility maintains a Wastewater Discharge Permit issued and administered by the Division of Water Resources of the New Jersey Department of Environmental Protection. The treated effluent is discharged into the receiving waters of the Maurice River at the terminus of Fowser Road and is subject to limitations on several pollutant parameters. The plant has consistently met all of the pollutant limitations reporting a removing efficiency of 85% or better.

WASTEWATER COLLECTION

Millville's existing wastewater collection system is a common gravity/pump station configuration. There are approximately 90 miles of sewer main of various sizes, ranging from 8" to 30" in diameter. The system serves approximately 8,739 private residences including apartments, 82 industrial users, and 474 commercial establishments. The Wastewater Utility maintains and operates 17 pump stations distributed throughout the City.

As noted, the current average daily flow at the Wastewater Treatment Plant is 2.2 mgd. This is significantly lower than the average flow to the Plant in 1997. At that time, the influent was measured at 3.3 mgd. To accomplish this decrease in flow, the City has improved the efficiency of the system by cleaning pipes, performing video inspections, and repairing and/or replacing

mains as necessary. The major collector lines, including lines on Smith Street, Second Street, and Fowser Road, underwent a complete slip lining operation, which included manhole rehabilitation and new laterals. The major collection lines that are within the older sections of the West Side, between the Ireland Avenue Pump Station and the West Side pump station, were inspected, repaired and/or replaced, as necessary. The mains located on Columbia Avenue were completely removed and replaced. These projects eliminated more than one million gallons per day of inflow and infiltration from the sewer treatment system.

Recent extensions and improvements to the collection system include the extension of sewer lines to West Millville including Marlyn and Westwood Terraces and points further west along Route 49 terminating near King Avenue, Oak Estates, and new gravity lines out to the Airport. In East Millville sewer lines have been extended to serve a new housing development on the east side of Route 55, which includes a new pump station. To the north sewer was extended on Route 47 to serve the commercial interchange near Route 55. In addition, modernization improvements were made to the following pump stations: The West Side, S. Second Street, Buck Street, Ireland Avenue, Gorton Road and JFK Blvd. Stations. Currently, the City is upgrading the treatment plant aeration, disinfection, and SCADA systems at an estimated cost of \$2.4 million.

FUTURE EXPANSION

The future expansion of the municipal collection system will be based on planned development. The City has targeted the Airport area for future development of airport-related industries. An 800+ acre area has recently been purchased and will be developed for a number of industrial users. Current plans call for the construction of a hydroponics facility, a cogeneration facility, a regional distribution center, and a motorsports/entertainment complex.

Future development has also been proposed in other areas of the City. An over 55 housing development has been proposed for the Conectiv site on the east side of town on Route 49. This project has general development plan approval by the Millville Planning Board for 950 age-restricted units. A second age-restricted development of 358 units has preliminary approval near the intersection of Millville-Cedarville Road and Buckshutem Road. This project is within the AC Zone on the West side of town. Sanitary sewer will need to be extended to these areas that are not currently serviced. Considering the recent onslaught of residential demand, the City of Millville

is concerned with preserving adequate sewer capacity for commercial and industrial projects necessary to improve the local economy and the quality of life. As part of this master plan update, it is recommended that the Planning Board review the existing zoning, particularly the Agricultural Conservation and Lake Shore Conservation Zones that allow for significant density bonuses if the developer exercises the cluster option allowed by Ordinance.

A specific area of concern is the Laurel Lake section. There are existing homes on small lots with failing septic systems that have the potential to cause the pollution of Laurel Lake. If conditions worsen, a sewer extension would be necessary for health reasons and to maintain water quality standards.

The City's approved NJDEP Section 208 Sewer Plant identifies the entire City as part of the future sewer service area.

WASTEWATER TREATMENT POLICY RECOMMENDATIONS

- 1) *Sewer Allocation Policy:* In order to maximize the economic return on its previous capital investments, the City shall encourage residential development in those areas where sewer infrastructure already exists or can readily be accessed. All extensions of service for privately constructed developments shall be constructed and financed by the developer in conformance with City design standards. The City Engineering staff shall approve the design through the site plan review process.
- 2) *Sewer Reservation Policy:* To prevent speculation, the City shall require that adequate capacity exists or can be reasonably projected to exist, in a timely fashion to service any proposed development. Developers may be required to obtain and maintain adequate commitments or reservations of capacity.
- 3) *Sewer design:* Design sewer infrastructure to accommodate expansion in designated growth areas.
- 4) *Center City Replacement:* Utility replacement and enhancement in redevelopment areas should be undertaken through public/private partnerships.

WATER UTILITY TREATMENT AND DISTRIBUTION SYSTEMS

TREATMENT AND PRODUCTION

The City's water supply is derived from nine deep wells. Eight of those wells are in the Cohansey Aquifer and one is in the Kirkwood Aquifer. These wells range in depth from approximately 110 feet to 282 feet. The City-owned and operated utility pumps an average of 3.28 million gallons per day and has a capacity of 9.32 million gallons per day. The allocation restrictions imposed by the Bureau of Water allocation are 200 million gallons per month maximum and 1.65 billion gallons per year.

Currently the utility serves 9,234 residences, 553 commercial and 74 industrial customers. Water quality complies with the stringent parameters of NJDEP as well as the Federal Safe Drinking Water Act.

City wells supply four treatment locations. The Airport Well Field consists of Wells #1, #2, and #4. A new treatment facility has been constructed to provide volatile organic compounds (VOC) removal, chlorination, pH adjustment and auxiliary power. This project was completed in August 2004. This facility will be able to pump more than 3.4 mgd with auxiliary power from three points of entry.

The Ware Avenue Well Field consists of Wells #13A, #14, #15, and #16. Treatment process includes: aeration, chlorination, pH adjustment with hydrated lime, and iron removal through four pressure filters. The treatment plant on Ware Avenue was constructed in 1964 and has undergone numerous physical and processing upgrades. All backwash water is now discharged to the City's sanitary sewer utility. The Aerator and Lime house was refurbished in 1998 in addition to the replacement of the chart recorders and tank transmitters.

The E Street Well #17 and treatment facility came on line in 1997. This facility has the ability to pump 1.5 mgd with auxiliary power available. The Bridgeton Pike Well and treatment facility was constructed in 1992. This facility also has auxiliary power which assures 1 mgd continued operation in the event of a power failure.

The Water Utility pump records indicate the following annual pumping rates in millions of gallons at each facility.

Table V-1. Annual Pumping Rates (mgd).

Facility	2000	2001	2002	2003	2004
Airport	348.03	361.19	430.64	402.22	461.17
Bridgeton Pike	341.87	348.06	351.02	387.92	358.52
Ware Avenue	65.31	91.68	69.85	76.01	138.66
E Street/#17	394.74	421.92	336.92	355.49	355.38
Totals	1,149.95	1,222.85	1,188.43	1,221.64	1,313.73

Source: Millville Engineering Dept.

There are four elevated storage tanks in the City, which supply a total of 1.2 million gallons of storage as follows:

Table V-2. Water Storage Tank Capacity.

Storage Tank Facility	Capacity
Orange Street	150,000 gallons
Tower Road	400,000 gallons
Coombs Road	400,000 gallons
Rt. 47/Bluebird Lane	250,000 gallons
Total	1,200,000 gallons

Source: Millville Engineering Dept.

The Rt. 47/Bluebird Lane tank was constructed privately as part of the site plan approval for new commercial construction in the Rt. 47/55 corridor. In addition to these elevated tanks there is also a 5 million gallon ground storage tank at Geissinger Avenue. This provides a total of 6.25 million gallons and provides an adequate reserve supply for pressure and fire fighting needs, as well as power outages.

DISTRIBUTION SYSTEM

The distribution system consists of more than 100 miles of water mains ranging in size from 6 inches to 24 inches and 800 fire hydrants. All leak repairs, new services, and water meter installations and emergencies are handled by water utility personnel.

Some of the original water mains from the 1880's still provide water service in the City's core. The City's services are provided uninterrupted seven days

a week, 365 days per year. The water quality meets or exceeds all NJDEP and Federal Safe Drinking Water Standards for potable water.

The City has utilized low interest loans from the NJDEP Water Supply Rehabilitation Loan fund for upgrades such as computerized meters, painting tanks, replacing undersized mains, and replacing fire hydrants. The City has also installed an 8" main across the Maurice River on Brandriff Avenue for a third river crossing.

WATER SERVICE POLICY RECOMMENDATIONS

- 1) *Water Allocation Policy:* The City shall encourage residential development in those areas where water infrastructure already exists or can readily be accessed. All extensions of service for privately constructed developments shall be constructed and financed by the developer in conformance with City design standards. The City Engineering staff shall approve the design through the site plan review process.
- 2) *Water Reservation Policy:* To prevent speculation, the City shall require that adequate capacity exists or can be reasonably projected to exist, in a timely fashion to service any proposed development.
- 3) *Water System Design:* Design water infrastructure to accommodate expansion in designated growth areas.
- 4) *Center City Replacement:* Utility replacement and enhancement in redevelopment areas should be undertaken through public/private partnerships.

STORMWATER COLLECTION SYSTEM

Currently, the municipal storm water collection system is under the jurisdiction of the municipal Streets and Roads Department. The system consists of a number of network gravity mains that serve municipal roads, and discharge into the Maurice River or its tributaries.

Because of predominantly sandy soils, numerous individual stand-alone perforated pipe systems exist. The ages of the gravity or perforated pipes range from pre-1900 to the present. The exact number of inlets, pipe sizes and lengths is currently being tabulated as a result of the adoption in 2004

statewide Storm Water Regulations to control non-point source pollution from runoff.

STORMWATER MANAGEMENT

In 2004, the State of NJ radically revised the stormwater regulations in an effort to further control “non-point” source pollution. According to NJDEP, some 60% of the state’s current water pollution is attributable to contaminated or poorly managed stormwater runoff. These new regulations have an extensive impact on land use decisions by the private sector and important implications for enforcement and implementation for the state’s municipalities. The stormwater regulations issued by NJDEP reflect the requirements of the federal Clean Water Act and are intended to improve the quality and quantity of New Jersey’s waters. The underlying idea is to increase the recharge of fresh water into underground aquifers and to decrease the amount of pollutants flowing into state water supplies from construction sites, new developments, and storm surges. Thus, under the new regulations, stormwater is viewed as a valuable resource that recharges groundwater supplies. The new rules were adopted February 2, 2004 and represent the strongest clean water initiative in the nation.

The new stormwater regulations consist of three components: the regulations themselves, the designation of Category One waterways, and the development of regional stormwater management agencies. The requirements are two-pronged in providing direction for how municipalities will plan for, regulate, and review new development with respect to stormwater; and secondly, in addressing how municipalities can comply with new permits controlling how stormwater is managed from all land uses.

Under the new rules, new development projects must demonstrate to the maximum extent feasible that the development has minimized stormwater runoff and that stormwater must be recharged to the same extent as it was before development. Non-structural alternatives, such as swales, bioretention systems, and minimization of impervious surfaces must be used to the extent possible. The site must also be developed so that soil compaction and land disturbance is minimized, and the use of water quality measures to reduce the post-construction load of total suspended solids. New residential development must be reviewed to insure NJDEP’s Best Management Practices Manual is being utilized in the design of stormwater systems. The rules contain a prohibition against the discharge of any stormwater or the location of any encroachments or structures within 300 feet of the top of the bank of any Category One waterway. Millville has

several waterways classified as C1 waters, including the Maurice River, Buckshutem Creek and Chatham Branch where they run through state wildlife management areas.

The new rules require that all NJ municipalities undertake a detailed examination of their land areas and create a Stormwater Plan Element of the Master Plan (pending). By 2006, the City must pass an ordinance to implement the NJDEP stormwater management goals and provide for long term maintenance of the stormwater management system. The City must then provide and administer a permitting system for development applications with stormwater management plans. The City will also have to enforce any maintenance responsibilities for these stormwater management facilities.

The City also had to apply for a New Jersey Pollutant Discharge Elimination System (NJPDES) General Permit (NJG0149063) in order to be authorized to discharge stormwater. The City of Millville is authorized to discharge under this general permit (issued in 2004) and must adopt a Stormwater Pollution Prevention Plan. The City will be adopting a Stormwater Management Plan and ordinances to reduce pollutants picked up in stormwater, identify components of the system, reduce solids, reduce runoff from maintenance facilities, comply with the Residential Site Improvement Standards, and develop outreach to the community.

VI. Circulation Element

INTRODUCTION

The Circulation Element examines the transportation network of streets, sidewalks and pathways that provide mobility for commuters, residents and visitors and provides for the movement of goods that support the economy. This document primarily takes a local view of the transportation system and its influence on the policies of the Land Use Plan Element. Most of this element will focus on the street network but it also includes a description of airport users, rail service, public transportation and pedestrian access. Lastly, the element discusses design concepts for improvements to the aesthetic quality of streets.

REGIONAL PLACEMENT AND DESCRIPTION OF ROADS

Millville's location in the south central part of New Jersey places it in between the New Jersey Turnpike and the Garden State Parkway, and considerably south of the major southerly east-west highway, the Atlantic City Expressway. These expressways are the major travel routes to points north and west of Millville. The City's only limited access highway is NJ Route 55 that begins in the north at NJ Route 42, the North South Freeway, and ends just south of the City's border in Maurice River Township. In addition to providing access to the Philadelphia metropolitan area, Rt. 55 connects to U.S. Rt. 40, a principal arterial that traverses between the Delaware Memorial Bridge, the most southerly crossing of the Delaware River, and Atlantic City. Millville's location is somewhat removed from the principal centers of population in the state that have more convenient access to the regional highway network.

Two other state roads mark a major crossroads in Millville's downtown, NJ Routes 47 and 49. Prior to the construction of Rt. 55, Rt. 47 was the major north-south route through central southern New Jersey. In the 1970's, Rt. 47 was constructed as an extension of Second Street into Vineland, paralleling High Street, the traditional commercial street in Millville. Rt. 47 is also known as Delsea Drive for much of its length. Subsequently, Rt. 47 has developed with more highway commercial uses with High Street retaining its pedestrian orientation. South of Millville, Rt. 55 remains uncompleted and Rt. 47 functions as a major route to shore points in Cape May County. Route 49 is also known as Main Street in the downtown area, Bridgeton Pike to the west and Cumberland Road to the east. As its western segment suggests, Rt. 49 is the main thoroughfare connecting Millville with Bridgeton, the county

seat. To the east, Rt. 49 connects to NJ Route 50 and other shore points.

The jurisdiction of the public road network is divided among state, county, and local governments. This section of the Element describes the road system within Millville. Since no federally designated routes traverse Millville, they have been excluded from this section. Private roads such as those serving apartment buildings, townhouse developments and industrial complexes or those that create shared access among several uses may serve many of the same functions as the public street network but will not be dealt with in this element.

Table VI-1 enumerates the total number of miles under each level of government.

Table VI-1. Road Miles by Governmental Jurisdiction in Millville.

<u>Jurisdiction</u>	<u>Number of Miles</u>
New Jersey	48
Cumberland County	33
Millville City	<u>122</u>
Total	203

Source: NJDOT, Millville Engineering Department and CCH calculations.

Table VI-2 lists the roads under state and county jurisdiction in Millville. These include the following:

Table VI-2. State and County Roads in Millville.

NEW JERSEY STATE ROADS:	Route 47
	Route 49
	Route 55
CUMBERLAND COUNTY ROADS:	Sugarman Road (Route 682)
	Nabb Avenue (Route 634)
	Carmel Road (Route 608)
	Morias Avenue (Route 714)
	Hogbin Road (Route 625)
	Fairton Road (Route 698)
	Rieck Avenue (Route 712)
	Sharp Street (Route 667)
	Cedarville Road/Cedar Street (Route 610)

CUMBERLAND COUNTY ROADS: Brandriff Avenue (also Route 610)
Buckshetum Road (Route 670)
Dividing Creek/Silver Run Road, pt. (Route 555)
Silver Run Road, pt. (Route 627)
Wheaton Avenue (also Route 555)
Wade Boulevard (Route 678)
Hance Bridge Road (Routes 673 and 707)
Broad Street/Mays Landing Road
(Route 552 Spur)
Crest Avenue (Route 683)
Newcombtown Road (Route 684)

Source: NJDOT and Cumberland County Highway Master Plan

Road jurisdiction roughly reflects the functional relationship between governments in the use of streets and highways. An examination of the road system indicates several discontinuous county routes that will be discussed in the section on proposed improvements. Highways of national importance are federally designated and the majority of funding is provided by the federal government. Streets providing access to residential lots are provided by municipalities. A hierarchy has been created of functional categories that range from roads of national importance to those at the local level. A description of these functional categories is in the following section.

FUNCTIONAL CLASSIFICATION SYSTEMS

Streets and roads are classified in three different ways depending on the agency and purpose of the system. One classification of roads is based on the Federal Highway Administration's (FHWA) definitions². This classification is highway oriented covering the interstate and regional highway network. The character of the traffic using this system determines its classification. The second road classification system categorizes residential streets under the state's Residential Site Improvement Standards (RSIS). The RSIS establishes a hierarchy of roads for access to residential property. These types of roads form the large majority of the streets under Millville's jurisdiction. Though the two systems use some of the same terminology, they are distinct.

Neither of these two systems is completely satisfactory for use in the Master Plan. The FHWA system lumps together important distinctions among lower order roads. The RSIS system is incomplete and does not reflect commercial,

² - Under the Municipal Land Use Law, the Circulation Element is required to address these classifications.

industrial and through travel streets. Accordingly, for the purposes of the Master Plan, a third system that allocates a classification system suitable for Millville has been developed. The Master Plan road designations are described following the section on the FHWA system and depicted on the Circulation Plan at the end of this document.

The FHWA's classification system is described in the following sections³:

Principal Arterials - Principal Arterials are intended to handle large volumes of regional and through traffic. Principal Arterials include the National Highway System⁴ - the Interstate Highway System and other major routes like the New Jersey Turnpike. State Route 55 is thus classified as a Principal Arterial. Highways of this type are intended for large volumes of traffic in urban areas, such as Millville⁵. The FHWA also classifies Rt. 49 from its intersection with Rt. 55 west as a Principal Arterial. Rt. 55 carries from 10,000 to 23,000 vehicles per day, depending on the season and location (the Rt. 47 interchange is the most heavily used in Millville). Rt. 49 generally carries less than 10,000 vehicles per day except for the several block stretch from Cedar Street to Rt. 47 (Second Street) where 20,000 vehicles (more or less) were counted in 2003. The prime characteristic of this category is the principal arterial's ability to carry through traffic. On the Circulation Plan, this designation is also called a Principal Arterial.

Minor Arterial - Minor Arterials are intended to move traffic from municipality to municipality within a region and to provide connections between Principal Arterials and lower orders of streets. In Millville, the FHWA has classified the following streets as Minor Arterials:

³ - From the NJDOT Functional Classification Map for Cumberland County.

⁴ - The National Highway System is an extensive network of primary roads of national importance, totaling about 164,000 miles of which 2,100 miles are in New Jersey.

⁵ - All of Millville is within an urban area. The FHWA makes a distinction between urban and rural areas in its classification system. In urban areas, volumes exceeding 25,000 vehicles per day are common, though may not exceed 5,000 vehicles average daily traffic (ADT) in rural parts of the county. Sometimes this changes the classification. For example, an urban collector road becomes a rural major collector outside of urban areas.

Table VI-3. FHWA Minor Arterial Roads in Millville City.

<u>Name</u>	<u>Between</u>	<u>No. of Lanes</u>	<u>Jurisdiction*</u>
Rt. 47	Entire Length	2-5	S
Wheaton Avenue	Entire Length	2	C
Broad Street	2 nd St. & 10 th St.	2	C & M
Mays Landing Rd.	Entire Length	2	C
Brandriff Ave./Vine St.	Rt. 49 & Rt. 47	2	C & M
Cedar St.	Buckshetum & Rt. 49	2	C
Silver Run Rd.	Buckshetum & Rt. 49	2	C
Buckshetum Rd.	Cedarville Rd. & Silver Run Rd.	2	C
Rt. 49	Rt. 55 & East	2	S

* - S=State of New Jersey, C=Cumberland County, and M=Millville

However, in this document the FHWA Minor Arterial classification is too broad for the purposes of the Master Plan. Instead, this category is divided into two classes for the Master Plan: Major and Minor Arterials. Major Arterials are intended to carry heavier levels of traffic, typically in excess of 8,000 vehicles per day, that constitute the main routes of travel for commuters and shoppers through the City. Minor arterials carry lesser levels of traffic, typically greater than 3,000 ADT, but less than 8,000 ADT. In Millville, these are mostly two lane roads. Master Plan Major Arterials include the following roads:

Table VI-4. Master Plan Major Arterial Roads in Millville City.

<u>Name</u>	<u>Between</u>	<u>No. of Lanes</u>	<u>Jurisdiction*</u>
Rt. 47	Ellis Ave. & Orange St.	2	S
Wheaton Avenue	Entire Length	2	C
Broad Street	Dock St. & 10 th St.	2	C & M
Sharp St.	Entire Length	2	C
Brandriff Ave./Vine St.	Rt. 49 & Rt. 47	2	C & M
Cedar St.	Buckshetum & Rt. 49	2	C
Silver Run Rd.	Buckshetum & Rt. 49	2	C
Buckshetum Rd.	Cedarville Rd. & Laurel Lake	2	C
Rt. 49	Rt. 55 & East	2	S
Airport Connector	Entire Length	2	tbd
Orange St.	Entire Length	2	M

* - S=State of New Jersey, C=Cumberland County, and M=Millville; tbd = to be determined.

Some of the streets in Table VI-4 are classified as Urban Collectors by the FHWA (see discussion below on collectors). These include Sharp Street and Orange Street.

Minor Arterials in the Master Plan function for many of the same purposes as Major Arterials but with lesser volumes of traffic and fewer through routes. They provide a connection between major arterials and residential or non-residential collector streets, as well as providing intra-municipal travel paths. Minor arterials are not intended to be enlarged to handle major arterial levels of traffic. Table VI-5 lists the streets designated as Master Plan Minor Arterials in Millville City.

Table VI-5. Master Plan Minor Arterial Roads in Millville City.

<u>Name</u>	<u>Between</u>	<u>No. of Lanes</u>	<u>Jurisdiction*</u>
Carmel Rd.	Entire Length	2	C
Nabb Avenue & Extension	Entire Length	2	C & tbd
Fairton Rd.	Entire Length	2	C
Buckshetum Rd.	Cedarville Rd. & West	2	C
Cedarville Rd.	Buckshetum Rd. & West	2	C
Dividing Creek Rd.	Airport Connector & South	2	C
Broad Street	3 rd & 10 th Sts.	2	C & M
Hance Bridge Rd.	Entire Length	2	C
Mays Landing Rd.	Entire Length	2	C
Rt. 47	Rt. 49 & Ellis Ave.	2	S
	Orange St. & South	2	S

*- S=State of New Jersey, C=Cumberland County, and M=Millville; tbd = to be determined.

Some of the streets in Table VI-5 are classified as Urban Collectors by the FHWA. These include Nabb Avenue, Carmel Road, Fairton Road, Cedarville Road, Dividing Creek Road and the portion of Buckshetum Road east of Silver Run Road.

Urban Collector streets are the lowest step in the FHWA street classification system – any other road is considered a local street. As noted in Tables VI-4 and VI-5, some of the Urban Collectors are re-designated either major or minor arterial roads in this Master Plan. Urban Collectors distribute traffic between residential, commercial and industrial streets to Principal and Minor Arterials in the FHWA system. In this Master Plan, Collectors are defined somewhat differently. Collectors have been divided into two groups, Major and Minor Collectors. Collectors are intended almost exclusively for intra-municipal travel between arterial roads. In Millville,

many collectors connect between the radial arterial streets fanning out from the downtown areas. Collectors serve to connect residential neighborhoods with higher order streets. Non-residential collectors also service industrial and business parks by channeling traffic to arterial roads. Collectors are intended to carry up to 3,000 vehicles per day (ADT), with lesser amounts to 2,000 vehicles per day for minor collectors. Table VI-6 indicates roads classified as Major Collectors on the Circulation Plan.

Table VI-6. Master Plan Major Collector Roads in Millville City.

<u>Name</u>	<u>Between</u>	<u>No. of Lanes</u>	<u>Jurisdiction</u>
Hogbin Road	Entire Length	2	C
Bluebird Lane Relocation	Entire Length	2	M
High Street & Extension	Entire Length	2	M
Ware Blvd. & Extension	Entire Length	2	C & M

* - C = Cumberland County, M=Millville

Table VI-7 indicates roads classified as Minor Collectors in the Master Plan.

Table VI-7. Master Plan Minor Collector Roads in Millville City.

<u>Name</u>	<u>Between</u>	<u>No. of Lanes</u>	<u>Jurisdiction</u>
Sugarman Ave.	Entire Length	2	C
Morias Ave.	Entire Length	2	C
Rieck Ave.	Entire Length	2	C
Carlton/S. Spruce St.	Entire Length	2	M
Buck St./Columbia Ave.	Sharp St. & W. Main St.	2	M
Coombs Rd.	Wheaton Ave. & 10 th St.	2	M
10 th St.	Coombs Ave. & E. Main St.	2	M
Kates Blvd.	Entire Length	2	M
Newcombtown Rd.	Entire Length	2	C

* - C = Cumberland County, M=Millville

RESIDENTIAL SITE IMPROVEMENT STANDARDS

In January 1997, the New Jersey Department of Community Affairs adopted the Residential Site Improvement Standards (RSIS) in accordance with law enacted in 1993 to standardize the level of required public improvements for residential development throughout the state. The RSIS has preempted

municipal street standards for residential uses and has rendered invalid any existing ordinance provisions pertaining to the width of streets and cartways, parking requirements and technical engineering criteria for residential subdivisions.

Like the Federal Highway Administration, the RSIS established a hierarchy of streets for residential development. The RSIS classifications have some commonality with the FHWA terms, but are defined in a different way. For example, the RSIS's major collector is intended to handle traffic that would be classified as a minor arterial under the FHWA definition. All of the streets noted in this section are considered Local Streets in the FHWA classification system. The RSIS establishes the following street hierarchy:

Major Collector - The highest order of residential street is also called a residential collector. This street type, as its name suggests, collects and distributes traffic between lower-order residential streets and the higher-order streets in the FHWA's system. This type of street carries the largest volume of traffic at higher speeds compared to other residential streets. Its function is to promote free traffic flow. On-street parking and direct access reduce this free flow and should be avoided for this type of street. Major Collectors should be limited to no more than 7,500 trips per day.

In Millville, modern neighborhoods have been designed without major collectors due to the comparatively small number of housing units in any one location. Many of the City's residential areas were constructed before the hierarchy of streets concept was established. For instance, Tenth Avenue functions as a Collector for the surrounding neighborhoods as well as funneling traffic from Broad Street to Wheaton Avenue via Coombs Road. Several large tracts of land have the potential for a significant amount of houses. For example, the Conectiv tract in eastern Millville has the potential for perhaps 1,000 housing units, or approximately 10,000 vehicle trips per day. This type of large scale development should be designed with major and minor collectors to reduce adverse impacts on future residents.

Minor Collector is a middle order residential street. It is also known as a residential sub-collector. Such streets provide frontage for access to lots and carry traffic to and from adjoining residential access streets. Minor Collectors connect to either (Residential) Major Collectors or Arterials. This type of street should be designed to carry traffic volumes higher than lower-order streets such as rural and residential access streets, with traffic limited to motorists having origin or destination within the immediate neighborhood. They are not intended to carry regional or through traffic. Each half of a loop-configured minor collector may be classified as a single minor collector

street, but the total traffic volume conveyed on the loop should not exceed 3,500 ADT, nor should it exceed 1,750 ADT at any point of traffic concentration.

Residential Access streets are the lowest order classification, other than the rural street type. Most streets in subdivision design fall into this category. As its name suggests, this street type allows access to lots and carries traffic with a destination or origin on the street itself. They are designed to carry the least amount of traffic at the lowest speed. The best design practice is to front all of the lots on streets of this order. Each half of a loop street should be classified as a single residential access street, but the total traffic volume generated on the loop street should not exceed 1500 ADT, nor should it exceed 750 ADT at any point of traffic concentration.

Specialized forms of residential access streets are cul-de-sacs, alleys, and parking loops which should not exceed 250-500 ADT, depending on design.

RIGHTS-OF-WAY

Establishing a policy for rights-of-way ensures that adequate width is obtained to handle the traffic expected from development (*see* The Land Use and Transportation Connection). The right-of-way contains the paved portion of the street - known as the cartway - curbing, sidewalks, street trees, traffic control devices and many utilities. Fitting this infrastructure into the right-of-way width available takes careful planning. Millville is limited to the degree that it can establish right-of-way widths policy since many of the important travel routes are controlled by Cumberland County or the state Department of Transportation. At the residential level, the RSIS limits street widths⁶. Notwithstanding these restrictions, policy for street widths based on their functional classification in this document is set forth in Table VI-8. Millville was originally laid out by Colonel Joseph Buck, who is generally credited with establishing Millville as an industrial town after his purchase of the Union Company Mill's operations and land in 1795. It is unknown what sources Colonel Buck used for establishing his plan, but it features rights-of-way wider than is typically found in most communities in the state. The standard street width is 66 feet wide and certain prominent streets, such as High Street, have rights-of-way from 80 feet to 114 feet in width. In most circumstances, adequate right-of-way width already exists. Right-of-way widening is most needed on a number of the rural roadways,

⁶ - *N.J.S.A. 40:55D-38.b(2)* limited, even before the adoption of the RSIS, residential streets to 50 feet in width.

such as Nabb Avenue, that has a right-of-way width of 50 feet, but is anticipated to carry more regional traffic in the future.

Table VI-8. Master Plan Recommended Street Rights-of Way.

<u>Functional Classification</u>	<u>R.O.W. Width</u>
Principal Arterial	78'-300'
Major Arterial	66'-100'
Minor Arterial	66'-86'
Major Collector	66'-86'
Minor Collector	50'-86'
Local Street	50'-66'

In the downtown area where the frontages are developed, imposing a larger right-of-way width will be largely infeasible and undesirable from the viewpoint of preserving its unique character. In these areas, the necessity for a wider right-of-way should be examined in light of the redevelopment of property and its associated traffic and pedestrian impacts. The need for additional right-of-way should be flexibly applied to, for example, create turning lanes or similar incremental improvements to traffic flow, instead of indiscriminant widening (*see AESTHETIC CONSIDERATIONS FOR STREETS*).

STATE HIGHWAY POLICY

Several policies established by the state have local effects and are discussed below:

Highway Access Management Code - The New Jersey Department of Transportation (NJDOT) adopted a Highway Access Management Code (HAMC) in April 1992, with several subsequent amendments, that applies to all of the roads under its jurisdiction. The HAMC was developed in response to the unprecedented increase in traffic congestion in the 1980's when the state realized that it could not construct enough road capacity to satisfy potential demand. This demand arose from several trends that solidified in the 1980's - a high percentage of women in the workforce, an increase over time in the average lot size and house, and decreasing household size. These latter two factors increased the consumption of land at the urban fringe where the existing road capacity is thinly stretched. In response, NJDOT changed the emphasis of the highway system from providing access to property to providing mobility for people and goods. NJDOT discovered that easy access to the state highway system impaired its traffic moving capabilities and added extra costs to the economy in the form of delays.

NJDOT is in the midst of updating the HAMC with revised regulations anticipated in 2006.

Access Levels - Each state highway has been classified for different levels of access, depending on existing conditions and NJDOT's functional plans for the highway system. Route 55 is classified as an Access Level 1, which allows access only from interchanges. Route 49 has an Access Level 4 for its entire length. Access Level 4 allows right turns into and out of a property and requires that left turns occur from a dedicated left hand turn lane. Route 47 also has an Access Level 4, except for the portion south of Columbine Avenue, where the Access Level is 5. Access Level 5 is the same as 4 except that a dedicated left hand turn lane is not required (provided that it has a paved shoulder). These two roads have relatively unrestricted access to and from abutting property.

Desirable Typical Sections - NJDOT has also established an ultimate highway development classification called Desirable Typical Sections (DTS). This indicates how wide the highway, under ideal circumstances, would become in the future. Rt. 55 is designated with a DTS of 1A meaning that its 300 foot right-of-way would not need to be widened. Rt. 49 has a DTS of 4C and 4D. These indicate an ultimate four lane cross-section with a width of 102' and 78', respectively. Rt. 47 has a DTS of 2A and 2C south of Sharp Street with a 78' and 68' right-of-way, respectively. North of Sharp Street, the DTS is 4D, with a right-of-way of 78 feet.

Improvement Projects – NJDOT is nearly finished with a road improvement project on Rt. 47 that involves the reconstruction of the road under Rt. 55 at the interchange and a widening south to Sharp Street. The widening creates four travel lanes with a series of left hand turn lanes, traffic signalization, and the relocation of Bluebird Lane. The Bluebird Lane intersection with Rt. 47 has been moved south as part of the Lowe's Home Improvement Center construction and now aligns with the Cumberland shopping center signal. The City has also proposed the construction of access ramps to Rt. 55 at Wade Boulevard/Orange Street and Gorton Road to provide access to the South Millville Industrial Park that is further discussed under a later section.

THE LAND USE AND TRANSPORTATION CONNECTION

The classification and regulatory systems under which Millville can develop policies for circulation have been described in the previous sections. The ability to move people and goods from one location to another – the essence of transportation – is based on the land uses that generate traffic and the capacity of the circulation system. Since most trips in the United States and New Jersey use motorized vehicles, this section is focused on the road system. Only in the most densely settled areas, such as Philadelphia, or at a special venue, such as an arena, does the capacity of the pedestrian system become an issue.

Each land use generates a certain number of vehicle trips. Reports on the amount of traffic that is generated by a particular land use have been assembled into reference manuals used by transportation engineers and planners to predict the level of traffic that a proposed development will generate. Each level of traffic can then be assigned to a road segment or an intersection to determine if improvements are necessary. In this way, lands with traffic intensive uses can be located in a close physical relationship to higher order streets and highways (*see* Functional Classification Systems, above, and the Land Use Plan Element).

Traffic is not evenly distributed throughout the day but has higher levels of use at certain times. The capacity of the road system to handle the traffic generated is usually examined from a “peak hour” perspective. Congestion occurs when the capacity of an intersection or road segment is reached. Congestion is defined as travel delay and the relationship of the volume of traffic to road capacity. These are discussed in the next section.

PEAK HOUR CONGESTION AND ROAD CAPACITY

The use of the road system is heaviest at certain times of the day during rush hour, or technically, the peak hour of travel. During the weekday, one hour within the range of 7 a.m. to 9 a.m. is typically the morning peak hour and one hour between 4 p.m. and 6 p.m. is the afternoon peak hour. Different land uses generate traffic that uses the road system at different times. The accumulation of the traffic generated from different land uses is what leads to the overall peak hour. Office uses, for example, have a peak hour that corresponds generally to the overall peak hour, but retail uses do not contribute much to the morning peak hour since main shopping areas are not yet open. During the weekday, retail uses have a peak hour in the late afternoon to early evening period that slightly lags the office peak hour as workers stop on their way home to shop. Retail uses, such as shopping

centers, usually have a peak hour that occurs in the early afternoon on Saturdays, between 12 noon and 2 p.m. Schools have a peak hour that often begins at 6:30 a.m. in the morning but ends by 3:30 p.m. in the afternoon. Manufacturing, which has traditionally operated as shifts of workers, has a peak hour pattern similar to that of schools. In Millville, which has a higher level of workforce participation in manufacturing than most places in New Jersey, an earlier morning and afternoon peak hour can be anticipated.

Capacity constraints in the road system occur primarily at intersections. Traffic signals identify those intersections with the highest levels of traffic. By definition, intersections without traffic signals have lower levels of traffic, since a certain threshold of traffic, called a warrant, is necessary before state approval can be obtained to install a signal⁷. Which segments and intersections of the City's road system have the greatest capacity constraints has not been systematically studied. However, the City Engineering Department has identified the stretch of Main Street (Rt. 49) from Brandriff Avenue to Rt. 47 as continuously experiencing congestion. Data from a study prepared for the South Jersey Transportation Planning Organization suggests that peak hour congestion on this stretch of road will substantially increase in the next decade. The City Engineering staff has also identified Sharp Street, because of its use as a bypass around the city center between Rts. 47 and 49, as an increasingly congested artery. Both of these segments allow vehicles to cross over the Maurice River. The only other means of crossing the river is Brandriff Avenue. In the section on proposed improvements, encouraging more use of the Brandriff Avenue Bridge to cross the river is proposed to more evenly spread out the traffic at the three bridges. In the long run, should the City be successful in its desire to have a fourth crossing of the river, this new route would serve as a southerly bypass around center city, particularly for truck traffic, that would aid in reducing congestion at Main and Sharp Streets.

AESTHETIC CONSIDERATIONS FOR STREETS

The view from the public street forms many people's perception of the aesthetic quality of a place. The need to provide for mobility within the City – in particular the downtown area - should be balanced with the negative aesthetic impacts of wide streets, overhead utility lines and lack of vegetation. Clearly, what can be viewed from the street plays as important a role in the attractiveness of a view. Surveys have indicated, for example, that a well-developed tree canopy is associated with high quality residential

⁷ - All of the traffic signals in Millville are under the jurisdiction of the state or county governments.

neighborhoods. Street trees and hedges can provide for a masking or screening effect of large parking lots, loading docks and trash receptacles. This is perhaps most apparent on Rt. 47. When Second Street was extended to become Rt. 47 in the 1970's, it opened to view the backs of buildings that front on High Street. The view from Rt. 47 is devoid of any screening or masking of the undesirable view of loading docks and trash receptacles. Since Rt. 47 is one of the most heavily traveled roads in Millville, many motorists see this view and form impressions of the City. A beautification plan to improve the corridor, now that the northern portion is undergoing new and attractive development, should be considered by the City. While the north part of Rt. 47 is the best example of an area in need of an aesthetic improvement, upgraded landscaping requirements for street edges should be pursued in commercial and industrial districts.

One of the objectives of the Master Plan is the retention of the rural landscape surrounding the built up portions of the City. With at least 50% of the municipality expected to be permanently preserved in open space and agriculture, the focus should be on the other lands that can be developed in the rural fringe. A major effect on the rural landscape is the design of the road system. Rural roads are typified by narrow cartways, with or without shoulders, drainage swales rather than curbs and the delineation of the road edge by woods, hedgerows and open fences. Historically, rural roadways were developed over a lengthy time period instead of being pre-engineered and constructed to modern standards from their inception. Rural roads were typically created by cutting trees, pulling the stumps out and scraping the ground with horse-drawn sledges to even the road bed. Later, starting in the 1920's, gravel would have been added to dirt roads to allow travel during spring thaw and to accommodate the rapid increase in motorized transportation. Early paved roads in rural areas would have been made from a mixture of bitumen and small stones ("oil and chip"). Finally, asphalt paving (bituminous concrete) would have added yet another layer, creating a durable all-weather surface.

Roads built over a long period of time follow the contour of the land more closely than modern roads because horses and carriages moved much more slowly than automobiles. Vertical and horizontal curves are hence sharper than is desirable for motorized vehicles. Edge clearance - which is the separation of travel lanes to obstacles on the shoulder - was not a consideration when people traveled at 8 or 10 mph. Nowadays, greater edge clearance is necessary to allow motorists to correct driving errors. While cartways should be narrow on contemporary rural roadways to retain the sense of rural character, the grassed shoulder should be undergirded with stabilizing materials to provide a firmer surface than can be achieved merely

with soil. In the reconstruction of rural roads, their aesthetic characteristics need to be understood and retained while ensuring a safe and convenient passage for the traveling public.

In the next section, traffic calming devices and techniques are discussed. In addition to their traffic control properties, traffic calming can also have an aesthetic benefit by creating locations for landscaping and the use of different paving materials.

TRAFFIC CALMING

Traffic calming is an approach to traffic planning that attempts to reduce the volume and speed of vehicles in neighborhoods while maintaining maximum mobility and access. By reducing vehicle speeds, traffic calming methods can help decrease the number and severity of accidents, reduce air quality and noise impacts related to vehicle traffic, and can actually increase the capacity of existing road space by reducing the travel distance required between each vehicle.⁸ These methods can also encourage greater use of the street by pedestrians and bicyclists.

Traffic calming techniques include both active and passive controls. Active controls focus on physical alterations to roadway design, including the installation of speed tables, rumble strips, diagonal diverters, median barriers, curb extensions, and other construction that alters the cartway. Passive control devices include traffic signs, traffic signals, and pavement markings that are intended to regulate traffic without direct physical intervention. Studies that have been done in the United States, particularly in the Pacific Northwest states, and Western Europe find that the active controls are more effective than passive controls in instituting traffic calming. Studies have consistently shown that speed limit signs, for example, are widely ignored when the design of the roadway permits motorists to comfortably travel at higher speeds. Roadway design is evolving towards “self-reinforcing” speed limits through traffic calming methods that alert motorists to the proper speed for their vehicles.

Following are descriptions of various active traffic calming controls that may be suitable for Millville. The proposed village nodes identified in the Land Use Plan are logical places for instituting traffic calming devices and they may also have application in the reconstruction of streets in and around the

⁸ - Cynthia L. Hoyle, Traffic Calming (Chicago: American Planning Association, PAS Report No. 456, 1995)

downtown area.

Speed Tables. A speed table is a raised hump in a street that extends across the roadway. The speed table is approximately 12 feet long, so that both the front and rear wheels of a car can be on top of the table at the same time. The extended length is also needed to allow normal snow plowing operations. Speed tables can be comfortably crossed only at a speed of 15 to 20 miles per hour.



Rumble Strips. Rumble strips are patterned sections of rough pavement that cause vibrations in a vehicle, causing a driver to become more alert and slow down. Studies have shown that a change in road surface affects primarily the upper end of acceptable speeds in residential areas. However, studies have also shown that such strips have noticeably reduced accidents when placed in advance of stop signs.

Chokers and Protected Parking. These devices reduce vehicle speed by extending the curb to block access in one direction or to provide protection for parking bays.

Chicanes. A variation of the *choker* technique is the use of *chicanes*, which are curbed extensions to protect parking that alternate from one side of the street to the other. These are sometimes called *woonerfs*. An extension of this concept is the creation of pedestrian streets as in found in Western Europe, where the entire surface is paved for pedestrians. The



vehicle travel lane is then limited to about eight feet, with a widening for passing every 100 feet. Streets are broken up into small sections by the use of large planters, walls, benches, barriers, or mounds.



Traffic Circles or Roundabouts. A traffic circle or roundabout is created by installing a raised island, which is usually landscaped, at the intersection of two streets. In addition to reducing traffic speed, roundabouts are more effective than stop signs and traffic

signals, when designed correctly, in reducing the number of accidents at intersections. In New Jersey, “traffic circle” has become a pejorative term because of motorists’ experience with state highway circles. However, the roundabout illustrated here differs in substantive ways from the state highway circles. Roundabouts are much smaller than the state traffic circles and handle less traffic. One of the reasons that state highway circles gained their poor reputation was that the volume of traffic greatly exceeded their design specifications. Roundabouts would only handle one lane of traffic at each intersection into the circle; state highways often had multiple lanes entering in the same direction. The state of the art has advanced since the time when the New Jersey’s traffic circles were first designed. Roundabouts have been successfully implemented in Massachusetts, Washington and Oregon and are encouraged by the Federal Highway Administration.



Interrupted Sight Lines. Many of the devices discussed above create interrupted sight lines, which cause drivers to slow down to widen their field of vision. In Millville, for example, the Police Building terminates the vista looking south on High Street. Terminating the view can also be accomplished through landscaping elements, such as those in a

roundabout. Other methods of interrupting sight lines are gateways that arch over the road and walls that define the street line at a T-intersection.

Traffic calming devices and techniques are becoming more common as traditional methods of maintaining speed control consume more manpower and the costs of maintaining traffic signals increases.

BICYCLE AND PEDESTRIAN ROUTES

Pedestrian routes in Millville have been traditionally created through the construction of sidewalks at the street edge that also double for bicycle use (particularly for children). A greater emphasis on pedestrian mobility for walkers and cyclists has arisen as transportation funding from the federal government became available, the health benefits of exercise have been trumpeted and the creation of 'walkable' communities has become a trend. The previous Master Plan proposed pedestrian paths that connected various places of interest to the public along the Maurice River and White Marsh Run. This document continues that policy, especially along the Maurice River, and is integrated into the redevelopment efforts proposed for center city.

Pedestrian and bicycle paths can take a number of different forms. At the most formal, an esplanade or promenade can be constructed. In wetlands



areas, a wood chip path no greater than 6 feet wide or a wooden bridge is required by state regulation to minimize disturbance. In between these extremes, the path system can consist of concrete or asphalt of varying widths to accommodate pedestrians and cyclists or pedestrians only. Hard surfaces are best suited for upland areas and formal connections between places of resident and visitor interest, such as

locations for recreation, shopping and government services. Soft surfaces, such as wood chip and pea gravel, are best suited for weaving a trail through woods and wetlands. Sidewalk systems along roads should be continued as part of residential and commercial development. Pedestrian and bicycle links from residential neighborhoods to nearby schools and shopping areas should be encouraged so that every trip does not require a motorized vehicle. Shared use paths, mixing pedestrian and bicycle traffic, typically require wider widths to safely accommodate both types of users. Several design

publications from the U.S. Federal Highway Administration, American Association of State Transportation and Highway Officials, and the state Department of Transportation exist that should be used in the design of hard surfaced paths.

The Master Plan envisions a redeveloped waterfront along the eastern edge of the Maurice River from the new docking facility currently under construction on Ware Avenue north to Sharp Street. As part of the redevelopment into housing, offices and stores, a public access promenade along the river's edge is planned. The promenade will become an urban design feature of the waterfront in the downtown. It is hoped that this area would be a mixture of residential and commercial uses taking advantage of existing factory building that could be rehabilitated plus infill buildings as appropriate (*see* Land Use Plan Element). The promenade has been started by the City at Joe Buck Park, found on the east bank of the river on the north side of Main Street. The completion of the promenade to Sharp Street would have several benefits. The promenade would link together a number of government buildings – City Hall, the Millville Library, and the Housing Authority offices. This pedestrian path would be extended from the promenade to downtown streets to enable new citizens to patronize shops and restaurants on High Street. The promenade would be a springboard to less formal paths that would link to the Union Lake Wildlife Management Area and adjacent municipal park on the north side of Sharp Street to the Peek Preserve and the Fowser Street boat ramp, about a mile south from Rt. 49. In addition, City construction plans include creating a path on the west side of the Maurice River from Sharp street to Main Street that would enable a complete pedestrian loop. A substantial portion of this project is under construction and will include a pedestrian bridge to Waltman Park. A fundamental need has been identified to construct and complete a sidewalk system along Sharp Street because of the active recreation parks (Sharp Street Park, Lakeside soccer complex) and Lakeside Middle School. The path would link important recreation areas aside from the marina, including Veterans Park, Sharp Street Park and Waltman Park.

While the planning and construction of a pedestrian system has advanced most around the upper reaches of the river, other linear paths and parks are contemplated. The development potential on the Wawa tract – on the upper eastern side of Union Lake – provides the opportunity to have a public access pathway paralleling the shoreline and connecting to vantage points for views of the lake. Union Lake is home to a bald eagle nest on one of its islands and the Wildlife Management Area has other threatened and endangered species. A wide setback from the lake is thus likely within which the path could be constructed. Such a path should be designed to minimize impacts to wildlife

and their habitat. A parallel path set back from the shore edge would likely have a lesser effect than one that hugs the water. If feasible, a connection to Union Lake Park should be made. Redevelopment potential along the river at the former Ball-Foster plant also exists that creates an opportunity to have a more substantial linear park at the water's edge that would extend the promenade concept to this location.

The development of a path following the White Marsh Run is desirable that would link Rieck Elementary and Silver Run School to the Maurice River. This would provide a means for residents in the Rieck Avenue and Carlton Avenue area to bike or walk to the river for recreational purposes without utilizing increasingly busy roads.

Millville is the location of three major state landholdings for conservation: the Union Lake Wildlife Management Area, Edward G. Bevan Wildlife Management Area and Menantico Ponds Wildlife Management Area. Path systems for public access should be pursued with the state Fish and Wildlife division in appropriate locations. Ecotourism is a growing component of tourism in general. Preserved lands with public access promoted successfully would aid in Millville's own tourism efforts where center city could be the base for excursions not only in Millville, but in the more rural municipalities to the south and east. Trailheads on county roads and a well-marked recreational path would be beneficial to this fledging industry.

PUBLIC TRANSPORTATION

Public transportation is limited to bus service in Millville and is provided by New Jersey Transit, an arm of the state government. Three different routes operate in the City and are described below:

- *Route 313.* This route is an express that runs between Philadelphia and Cape May. The route runs four times daily from Philadelphia to Cape May and three return trips. The bus makes one stop in Millville at the intersection of Second and Pine Streets, the main bus stop for the City.
- *Route 408.* Route 408 is a local route that runs between Philadelphia and Millville. Its main route is a loop that runs south from the Vineland Transportation Center on Landis Avenue to its main stop at Second and Pine Streets in Millville. This bus also stops at Second and Stratton Streets and Third and Broad Streets. This route runs 20 times daily on weekdays, nine times on Saturdays and seven times on Sundays.

- *Route 553.* This route is a local run from Upper Deerfield to Atlantic City. It provides access to the Cumberland Mall for shopping as one of its stops. In Millville, the bus stops at the main stop at Second and Pine Streets but it also provides limited evening service to the Cumberland Family Shelter on County Route 552 spur.

In addition to these three bus routes, NJ Transit operates Access Link for disabled persons unable to use the bus service. Access Link provides curb to curb pick up and drop off for origins and destinations within three-quarters of a mile of the bus route. The three routes that service Millville are concentrated in the downtown area.

No bus routes operate to the airport or the City's employment centers in its industrial parks. Finding a method to increase bus service to the City's business parks would help to moderate future levels of traffic when employment grows as expected.

RAILROADS

Railroad transportation is limited to freight service operated through the CSX national system and a short line railroad called the Winchester and Western Railroad (W&W). Rail access is limited to the eastern side of Millville; no railroad bridges cross the Maurice River. CSX, along with Norfolk Southern, bought portions of the former Conrail system that was previously the main freight carrier in the state. The CSX system connects Millville to the northeast corridor lines through Winslow Junction in Winslow Township, Gloucester County. It terminates at the South Millville Yard in the South Millville Industrial Park near Wade Blvd. The W&W railroad is owned by the Unimin Corporation, which operates major sand mining operations in South Jersey. W&W's South Jersey holdings are separated by the CSX-owned segment of the Winslow Industrial Track and the Millville Secondary Track (which runs from Millville to Leesburg), their two lines are connected to one another through a track usage agreement with CSX. Interchanges of cars are also made with CSX trains at the South Millville Yard. Lastly, intermodal transshipment occurs at the former Ball - Foster site on S. Second Street.

TRANSPORTATION DEMAND MANAGEMENT

The traditional method of handling traffic congestion has been by constructing new roads and widening existing ones. In many circumstances,

this is the only feasible alternative where trips by automobile constitute the overwhelming majority of commuting and shopping travel. Increasing the capacity of the road system in economic terms is the same as increasing the supply of a good. There is a certain demand for road capacity by motorists. Congestion, in effect, is the unsatisfied demand for more road capacity. To satisfy the demand and reduce or eliminate congestion, either the supply needs to be increased or the demand reduced. If demand, meaning the volume of traffic, can be reduced, then the need for wider roads declines.

The City is well-established in its development pattern of streets and buildings. Building wider roads is expensive and can have quality of life impacts. Widening roads or intersections, particularly in center city, can have negative consequences, which can include:

- Impacts on historic buildings;
- Increased noise and air pollution on residential property;
- Narrowing of sidewalks that create unpleasant walking situations for pedestrians;
- Impacts on streams with effects on wildlife and water quality.

Transportation Demand Management is the term of art for reducing the need for new infrastructure by reducing vehicular use. It is a difficult proposition to undertake since it requires people to change their driving behavior. Transportation Demand Management (TDM) requires a strong collaborative effort between business owners and government to establish a city-wide or regional program that creates incentives for employees to use means other than the single occupant vehicle to reach their job. TDM programs can be either government or employer run. The oldest one in the state, the Greater Princeton Transportation Association, is employer operated. Millville, with concentrated business activity in several industrial parks, is well situated to have such a system. The concept of TDM may take a number of forms and includes such activities as:

- *Car Pooling and Ride Sharing.* Car pooling has traditionally operated among neighbors going to the same company. In TDM, rides are matched by a transportation coordinator to bring together people from the same neighborhood who work for different companies in the same business park.
- *Van Pooling.* Van pools operate with paid drivers who may have other duties in the middle of the day. They pick up passengers and deliver them to their jobs. Employees pay a fee for the service, but this is often subsidized by employers.

- *Bus Service.* More frequent bus service or, as noted above, routes that are specific to a particular location such as a business park may be instituted. For example, New Jersey Transit might be petitioned to alter its route to include the airport industrial park. If there is sufficient demand within Millville, a jitney service using passenger vans could be explored.
- *Staggered operating hours.* Coordination among companies to stagger their beginning work hours would spread the peak hour of congestion over a longer time span. This differs from flex time in that there is an established starting time for businesses.

TDM efforts have a thirty year history in the state. The concepts behind TDM have the potential for mitigating at least some of the increase in traffic expected from the level of employment anticipated from the City's economic development projects. Since the visual and environmental effects from wider roads are known; utilizing TDM methods can have benefits in the preservation of Millville's character and natural resources.

PROPOSED CIRCULATION PLAN IMPROVEMENTS

Though TDM holds out the promise of reducing demand, its effects are more long term and not suitable to address existing, identified problems in the road system. The City's long term economic health is dependent on job creation in its established industrial parks, the airport, and tourist-oriented services (historic preservation and the arts, motorsports and eco-tourism). These are discussed below:

MILLVILLE AIRPORT ACCESS

Improved access to the Millville Airport has been identified as a crucial issue for the continued economic development of the airport and its related industrial park by the Delaware River and Bay Authority (operator of the airport) and the City Planning Board in the 2003 Millville Reexamination Report⁹. In addition to these entities, the South Jersey Transportation Planning Organization (SJTPO) contracted with a transportation consulting firm to examine potential access improvements. The SJTPO is the designated metropolitan planning organization for Cumberland County required to tap federal funds for transportation projects. Access to the airport is hampered by its location on the opposite side of the Maurice River

⁹ - *Airport Layout Plan Final Report*, C & S Engineers, Inc., March 2002.

from Rt. 55 – the only four lane limited access highway – located on the eastern side of the City. The study¹⁰ examined two approaches, the westerly approach and the bridge option. The City favors the bridge option since it would bring additional mobility for motorists crossing the Maurice River regardless of whether the airport was their destination. The bridge option is the most expensive, with an estimated cost of \$20.1 million to \$22.8 million. In an informal discussion with NJDEP and assuming that the environmental impact statement had a favorable conclusion, several required permits were identified, including an individual permit for wetlands fill requiring mitigation, stream encroachment, U.S. Army Corps of Engineers for structures within the navigable waters of the river, and the U.S. Coast Guard for determining any effects upon their operations on the river. The bridge option is clearly a long term proposition beyond the six year period of review of this Master Plan. It has been included on the Circulation Plan as a goal for Millville, recognizing the obstacles that exist for its construction. The bridge is shown in only the most general way and could be placed in any number of locations that would be the subject of further study and evaluation.

The other main option was examining a westerly route from the Rt. 55 interchange with Sherman Avenue (County Route 552). Sherman Avenue is located in Deerfield Township and roughly parallels the municipal boundary. Three western Millville roads intersect Sherman Avenue: Sugarman Avenue, Nabb Avenue and Carmel Road. The SJTPO study evaluated three new road segments from Sherman Avenue, one connecting to Rieck Avenue and two connecting to Morias Avenue in two different locations. These require crossing Mill Creek and the Union lake Wildlife Management Area. A different route is proposed on the Circulation Plan that utilizes Nabb Avenue. Nabb Avenue is proposed to be extended southward to curve around to Buckshetum Road. This route requires the crossing of White Marsh Run and small portions of the Buckshetum Wildlife Management Area. If the road could be moved a short distance westward into Lawrence Township, then the wildlife management area and perhaps the stream could be avoided. This route has the benefit of less environmental impact and would serve as a circumferential connector between a number of radial higher order streets, including Rt. 49 (Bridgeton Pike), Fairton Road and Buckshetum Road. Since the area is sparsely settled, impacts from traffic would be minimized. Coupled with the City's land use policy to transfer development from the farm areas to new nodes of development, the new road segment should not

¹⁰ - *Millville Airport and Industrial Park Intermodal Access Plan*, McCormick, Taylor & Assoc., 2002

induce sprawl. The existing portion of Nabb Avenue is earmarked for widening and intersection improvements by Cumberland County in 2004.

In the immediate vicinity of the airport, a new road segment paralleling Bogden Boulevard is proposed to create industrial blocks. A small portion of this road, called Pryor Street, presently exists. Pryor Street would provide a second means of access to Cedarville Road. Extended to the east, the street would intersect with Dividing Creek Road (County Route 555). The location of this road is dependent on the site needs of large industrial users. It is shown generally skirting the airport safety zone and crossing an unnamed tributary of the Maurice River.

HIGH STREET AND WADE BOULEVARD EXTENSIONS

The construction of new retail development associated with the Rt. 55 and Rt. 47 interchange prompted an examination of the road system in that area. Access, aside from Rt. 47 and Wheaton Avenue, is limited and circumferential connections missing. Further, Rt. 55 functions as a barrier to connecting to the road network in Vineland to create a more integrated system. To address this situation and to complement the work presently under construction on Rt. 47, an extension of High Street is proposed. High Street presently terminates at Sharp Street. An extension northward to the relocated Bluebird Lane would create a service road to commercial businesses fronting on Rt. 47 and provide additional relief for congestion on the state road. Further, residential development is anticipated on the Wawa tract immediately west of the new Lowe's Home Center complex that would utilize this road to reach the downtown. This road is intended to be funded through the development of that tract and additional retail development on Rt. 47.

Wade Boulevard (County Route 678) presently provides a circular route from Wheaton Avenue (County Route 555) south to the southerly portion of Rt. 47 via Orange Street. It is proposed that Wade Boulevard be extended westward to the northerly portion of Rt. 47, encompassing the signalized access to the Cumberland shopping center, and intersecting the state road at the relocated Bluebird Lane. This would require crossing the CSX track and the upper reach of Petticoat Stream. In addition, the street would need to either skirt the Nascolite brownfields site or wait until site remediation was completed. A spur is also proposed along the railroad line into Vineland to take advantage of the Rt. 55 underpass in providing a more connected street system with Vineland.

BROAD STREET AND BRANDRIFF AVENUE BRIDGE

An objective of the Circulation Plan is to improve the use of the Brandriff Avenue Bridge to spread the traffic more evenly over the three Maurice River crossings. Related to this objective is the need to improve east-west travel to relieve some of the traffic congestion on Main Street in the downtown. Broad Street is the logical route to use for several reasons. Broad Street has a wide right-of-way of 66 feet that can facilitate multiple lanes of traffic. Broad Street is also the terminus of three county routes: Wheaton Avenue, Hance Bridge Road and Mays Landing Road. On the west side of downtown, Brandriff Avenue terminates at the intersection of Columbia and Vine Street, two blocks south of Broad Street. This is close enough that two intersection improvements would create a smooth transition from Broad Street to the Brandriff Avenue Bridge. Further, improvements at the intersection of Columbia Avenue and Broad Street would allow for better use of Columbia for access to Sharp Street. If these are implemented, then they would create a through route that is functionally a county route through the City. The intersection improvements that are necessary include the aforementioned Columbia/Broad Street; Brandriff Avenue, Dock Street and Vine Street; and Wheaton Avenue and Broad Street.

RT. 55 RAMPS

The City proposes two slip ramps to Rt. 55 that would provide better access to the South Millville and Gorton Road Industrial Parks. At the present, access to Rt. 55 occurs from E. Main Street which is congested with downtown traffic heading east and high school traffic heading south. New ramps would separate the heavy truck traffic generated by the two industrial parks from residential and school traffic. In addition to these being valuable for the development of new industry in the parks, the ramps would be the main access point for traffic to reach Rt. 55 from a fourth bridge crossing over the Maurice River.

WAWA TRACT COLLECTOR

The development of the Wawa Tract, on the east side of Union Lake, will require one or more access points directly to higher order streets because of the anticipated volume of traffic from its development. The Circulation Plan includes a loop minor collector road that utilizes access to Rt. 47 at Bluebird Lane and a second access from Sharp Street on the southwest side of Lakeside Middle School. The access driveway to the Genesis Eldercare Facility would be an ideal location for that to become a public right-of-way

that could provide better access to the facility, the Middle School, and the soccer complex.

OLD BEAVER DAM ROAD AND SMITH ROAD

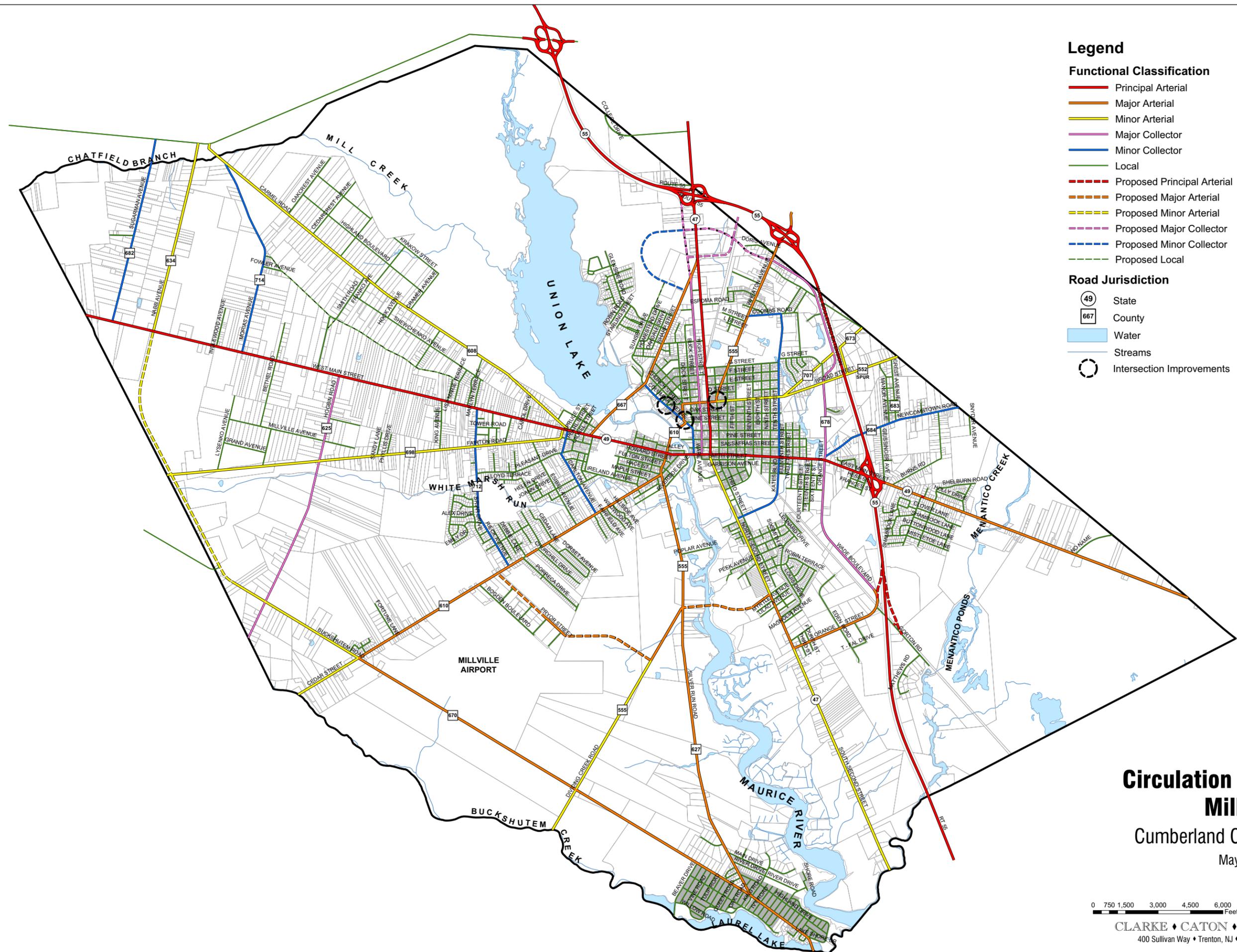
Much of western Millville was subdivided at the turn of the last century as part of a land speculation subdivision known as the European Colonization. This has resulted in narrow and deep lots where most of the rear portion of the lots is unused. An old dirt road, called Old Beaver Dam Road, originally ran from Morias Avenue eastward, in between Carmel Road and Bridgeton Pike. One of the purposes of the Land Use Plan is to encourage the development of these underutilized parcels to take development pressure off of land farther west that is intended for farmland preservation. The construction of a paved road would facilitate this goal. As proposed, the road would connect to Morias Avenue at its bend and travel eastward to Bel Aire Lane and if feasible, Lisa Marie Terrace. Smith Road, a residential access road that nearly connects Carmel Road and Bridgeton Pike, would be connected either through the development of Old Beaver Dam Road or if that is not feasible, through a direct link.

CIRCULATION PLAN POLICY RECOMMENDATIONS

The Circulation Element includes a wide ranging discussion on circulation problems and concerns in Millville. This analysis has resulted in a number of recommendations for the municipality and minor amendments to the City's land development regulations. Recommendations include:

- 1) Pursue the construction of a fourth bridge over the Maurice River outside of the federally designated Scenic and Recreation River corridor in a location that minimizes environmental impacts.
- 2) Continue efforts to have additional ramps to Rt. 55 constructed in the vicinity of Wade Boulevard/Orange St.
- 3) Extend High Street north to the relocated Blue Bird Lane as development occurs.
- 4) Extend Wade Boulevard westward from Wheaton Avenue to Rt. 47 at the intersection of Blue Bird Lane.
- 5) Extend Nabb Avenue south and east to Cedarville Road to create a western approach to the airport for better access.

- 6) Improve east/west travel in center city utilizing Broad Street and reconfigure its connection to the Brandriff Avenue bridge.
- 7) Negotiate with Cumberland County to take over jurisdiction of Broad Street for municipal jurisdiction of Crest Avenue.
- 8) Encourage the development of Old Beaver Dam Road as a means of providing access to the rear of lots with narrow frontages and very deep lots.
- 9) Improve traffic flow on Sharp Street but at the same time institute traffic measures to ensure speed control.
- 10) As economic development efforts bear fruit, examine the feasibility of public transportation service to the City's industrial parks and airports, as well as Traffic Demand Management for employees that drive.
- 11) Plan for adequate rights-of-way width in accordance with Table VI-8.
- 12) Consider traffic calming measures in center city and village node areas of the Land Use Plan.
- 13) Create and seek funding for a beautification plan on north Rt. 47.
- 14) Create additional standards for landscaping parking lots in commercial and industrial areas.
- 15) Amend the land development regulations to require public access to the waterfront in redevelopment projects and on Union Lake. Also require pedestrian connections between new residential neighborhoods and nearby shopping areas.
- 16) Create a promenade along the Maurice River on its eastern side from Sharp Street to Main Street. Extend a path system north and south to create a continuous system from Union Lake Park to the Peek Preserve. Ensure the completion of the circuit around the river that utilizes the Sharp Street and Main Street bridges.
- 17) Examine the feasibility of creating a recreational trail along White Marsh Run from the river to Rieck School.



Legend

Functional Classification

- Principal Arterial
- Major Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local
- - - Proposed Principal Arterial
- - - Proposed Major Arterial
- - - Proposed Minor Arterial
- - - Proposed Major Collector
- - - Proposed Minor Collector
- - - Proposed Local

Road Jurisdiction

- 49 State
- 667 County
- Water
- Streams
- Intersection Improvements

Circulation Plan
Millville
 Cumberland County
 May 9, 2005

0 750 1,500 3,000 4,500 6,000 Feet

CLARKE ♦ CATON ♦ HINTZ
 400 Sullivan Way ♦ Trenton, NJ ♦ 08628

VII. Historic Preservation Plan Element

ARCHAEOLOGICAL/HISTORIC RESOURCES

The most visible record of human experience is the pattern of land use and the artifacts that are left behind. This record has substantial societal and educational value. In addition, there are intrinsic, though often latent, economic values that accompany these resources. The body of knowledge that is inherent in historic resources provides insight, not only into the behavior and culture of people, but also into the natural environment in which they lived.

Historic resources can be defined as buildings, structures, objects, districts, or sites that are significant in the history of the culture of the nation, the state, region, county, or municipality. The use of the word “historic” is not meant to preclude resources related to “prehistoric” time periods prior to European settlement. Archaeological resources can be defined as those historic resources that are the “material remains of past human life or activities which...are at least 100 years of age and the physical site, location, or content in which they are found...if, through scientific study and analysis, information or knowledge can be obtained concerning human life or activities”. These remains include many kinds of “physical evidence of human habitation, occupation, use or activity”. (Rules for Archaeological Resources Protection Act of 1979)

PREHISTORIC ERA

The prehistoric history of the Millville area was recorded as part of the *Conservation Plan for the Manumuskin River Watershed*, by the New Jersey Conservation Foundation, 1987. The following are excerpts from that report.

During the cold, post-glacial period, the vegetation of the coastal plain of southern New Jersey was tundra-like open grassland. Approximately 11,000 years ago, grasslands gave way to pine forests, and by 10,000 years before the present, oaks had become the dominant component of the vegetation. (Sirkin, 1977)

A change in climate – namely warming temperatures – brought about these shifts in vegetation, which in turn affected animals adapted to the disappearing grassland and coniferous forest habitats. A wholesale extinction

of such large mammals as the mastodon, mammoth, moose-elk, giant beaver, ground sloth, saber-toothed tiger, dire wolf, and short-faced bear occurred about 10,000 years ago. Other cold-adapted species were able to follow the retreating ice sheet to the north, where mammals such as the musk-ox, caribou, elk, moose, walrus and Arctic hare are found today. (Kraft, 1986)

Small bands of people – aboriginal hunters and gatherers – appeared in the Delaware Valley region 10,000-12,000 years ago. At least one fluted Clovis projectile point (arrowhead), the earliest artifact left by these peoples, has been found along the shoreline of Delaware Bay near Fortescue (Jones, 1982), and a camp site continuously occupied over a period of 9,000 years has been identified on the west bank of the Maurice River at the Salem/Cumberland County line. (Mounier, 1975)

There were an estimated 2,000-10,000 Indians in New Jersey at the time of first contact with Europeans. Dutch, Swedish and English explorers entered Delaware Bay and River beginning in 1609, preparing the first written accounts and maps of the area. From their observations and those of other visitors along the Atlantic seaboard, some general statements can be made about the interactions of the native peoples with the local vegetation. Indians disturbed the natural vegetations by clearing areas for encampment – by cutting trees in order to obtain wood and bark for use in making utensils, weapons, canoes, shelters, and particularly for fuel - and by deliberately setting fires in order to improve the forest as a habitat for deer and other game, to make travel easier by removing undergrowth, and as a means of flushing out game animals during hunting. (Robichaud, 1973) These activities undoubtedly played an important part in modifying the native vegetation.

Continuous European settlement in the general region began in 1675, when the Englishman Mark Reeve settled along the Cohansey River in the vicinity of Greenwich (Elmer, 1869). It is likely that Europeans had established trade relations with the Indians at an earlier date, particularly in order to purchase furs. There may also have been periodic incursions into the area by Europeans for the harvest of other resources. For example; Gabriel Thomas, writing in 1698, refers to the “Prince Morise’s River (Maurice River), where the Swedes used to kill the geese in great numbers for their feathers only” (Myers, 1912). Snow Goose flocks numbering in the thousands still overwinter in the wetlands in this area.

A preliminary archaeological reconnaissance of this area adjacent to the Maurice River in southeastern Millville was undertaken by R. Alan Mounier.

The results of the archaeological survey are presented in Mounier's report entitled, "An Archaeological Survey of Schooner Landing Estates, City of Millville, Cumberland County, New Jersey," dated September 9, 1988. It should be noted that the developer chose to use the name "Schooner Landing Estates" even though the actual Schooner Landing site is located further south on the river.

A continuously occupied site, Fralinger Farm, that is at least 4,000-6,000 years old, has been discovered along the Maurice River in Maurice River Township about one mile north of the mouth of the Manumuskin. Projectile points, scrapers, pottery, smoking pipes, charcoal, animal bones, hickory nuts, and oyster and clam shells have been found in excavations here; providing a glimpse into the subsistence economy of the time period. The presence of objects made from non-local materials, such as argillite and quartzite, demonstrates that a trade relationship existed with people as far removed as the upper Delaware Valley. (Mounier, 1974)

Several archaeological sites containing Indian artifacts have been documented along the Maurice River and Menantico River in the vicinity of the Fralinger Farm. Although no documented archaeological resources are listed by the New Jersey State Museum for this property, two local sources and an on-site archaeological survey have confirmed the existence of Indian artifacts. According to Mr. Robert Francois of the Millville Historical Society and Mrs. Jean Jones, past president of the Maurice River Historical Society, the property was used extensively by native American Indians as evidenced by the amount of artifacts uncovered.

Remnants of historic era activity centered on the old house site and an area believed to have been a logging camp. The prehistoric features conform to the size and shape of aboriginal dwellings, or "longhouses" which are rarely recorded in coastal plain environments. According to the Mounier report, the prehistoric features are significant since they serve as potential sources of information about local prehistory. Furthermore, the study indicates that the prehistoric remains warrant inclusion into the National Register of Historic Places.

The Watson/Ackley farm was established in the 1860's adjacent to Delsea Drive near the Menantico River. Pottery and artifacts, primarily projectile points indicating middle to late woodland period utilization of the property have been documented (Jean Jones, personal communication). This farm was operational until the 1950's; what remains today are a silo and an outbuilding. The house was destroyed by fire.

Adjacent to this property is the circa 1865 Burcham farmhouse. The Burcham family owned and operated a brickyard from 1856 to 1942. Clay for the bricks was obtained on the Burcham property. The farmhouse is still maintained by the Burcham family, in addition to the only operational diked farm along Maurice River.

HISTORIC ERA

The earliest recorded settlement in what is now known as Millville occurred with the construction of the first bridge across the Maurice River in 1754. When the Union Company purchased some 14,563 acres in 1790, established mills along the river, and constructed a dam to create Union Lake, the City's industrial foundation was initiated.¹ In 1795, Colonel Joseph Buck purchased the Union Company Mill and much of the land within the City's boundaries. Colonel Buck designed the first plan for the City, but did not live to see its fruition.

Millville's chief industries have traditionally been the manufacture of glassware and textile goods. The City's first manufacturing facility was a glass factory built in 1806 by James Lee. The Millville Manufacturing Company purchased the Union Company Mill in 1822 and constructed a cotton mill in 1854. As industry developed and prospered, the City's population expanded from 150 in 1822 to 7,200 by 1880. Millville was incorporated in 1866.

In 1888, Dr. Theodore Wheaton, an established physician, purchased and established a glass factory out of an interest in scientific glassware. Wheaton Industries grew to become the largest family-owned glass container manufacturing company in the United States and Millville's economy has remained inextricably linked to the glass industry.

Millville's location along the Maurice River has also influenced the early development of the City. Water transportation was the exclusive method of shipping wood and timber from Millville to other markets along the east coast. The extensive amount of wood and timber shipped from the City led to the establishment of shipyards.

Transportation along the river was greatly augmented by the railroad system. The City's first railroad was built in 1859 and extended 22 miles to

¹ - The original dam was located upstream of the present-day dam.

Glassboro. A rail connection with Cape May was established in 1863. In 1879, several lines were merged into the West Jersey and Seashore Railroad Company, which was later joined with the Atlantic City Railroad Corporation to form the Pennsylvania Reading Seashore Lines. Passenger, mail, and freight service was provided to residents and industries.

HISTORIC STRUCTURES IN MILLVILLE

Millville has two buildings listed on the National Register of Historic Places: Millville's first bank building, the Millville National Bank, located at Second and Main Streets, and the Levoy Theatre on High Street. The bank building currently operates as the headquarters for the Millville Historical Society. It was placed on the National Register in 1980. The City of Millville owns, operates and maintains this building. In 2004, this building was the study location for students learning Computer Assisted Drawing (CAD) for historic preservation. The students from Cumberland County College took measurements and make accurate historic drawings of the site as part of their summer course of study.

The Levoy Theatre is located in the heart of the downtown and may one day be the cornerstone of the Arts District. This building, constructed in 1908, was first utilized as a vaudeville theatre and then as a premier movie theatre before closing and falling into disrepair in the mid 1970's. The Levoy is an integral part of the cultural history of Millville. The architectural significance of the building is found in its interior decorative features representative of the classical revival period.

The theatre is owned by a volunteer, non-profit organization, The Levoy Theatre Preservation Society. This organization is spearheading the effort to completely restore the theatre and had the building listed on the National Register of Historic Places in 2001. The plan is to restore the theatre reflective of its original architectural integrity and operate the facility as a community theatre and performing arts center.

Millville also has 17 additional structures and sites listed in the County Register of Historic Structures and Sites. This list was compiled by the County Planning Board. The sites on the County Register include:

Isaac Owen House (1854), 157 S. Second Street - This structure was the home of the builder of the Union Lake Dam, two brick fire houses, the original bank

building, and numerous other historic structures in Millville. Frame house of 2½ stories used as a private residence.

Millville Memorial School (1925), E. Broad Street - Since 1964, this building has been used as Millville's junior high school. Previously it was used as the high school from 1925 to 1964. The building is Millville's memorial to sons who lost their lives in WWI. The two-story gray brick building is owned by the Millville Board of Education

Wood Mansion (1804), 821 Columbia Avenue - Originally, Wood Mansion was the residence of the ironmaster of the Millville Furnace and Foundry and later for the manager of the Millville Manufacturing Co. The mansion was built of Cumberland County ironstone by David Cooper Wood in 1804. The mansion is owned by the Wawa Corporation (a subsequent business of the Wood family) and used for private offices.

Union Canal (1814 & 1851), eastern shore of Union Lake - Originally constructed in 1814, the canal ran from Union Mill Pond to David C. Wood's furnace. It was enlarged and straightened in 1851. The canal provided water power originally to operate the bellows for Wood's iron furnace. The original canal was 2½ miles long. The remaining section of the canal is owned by the Wawa Corporation.

Southeastern School (1872), 120 S. Fourth Street - Second oldest school structure still standing in Millville. It is a two-story, rectangular, red brick structure that is used as a church.

Site of the Millville Furnace and Foundry (1814), Columbia Ave. and Foundry Street - The iron furnace was built by David Wood in 1814 and was an early ironworks using local bog iron as ore. This is the second oldest industry in Millville. The two large foundry buildings remain as one-story warehouse structures.

Site of the James Lee Glass Factory (1806), Buck and Mulberry Streets - This commemorates the site where James Lee built the first glass factory in Millville. The present building on the site was once the Whitall Tatum Upper Works known as Glasstown. It is now the headquarters of the American Legion - Nabb Leslie Post. The building has exposed beam construction in the interior.

Smith, Garrison, Ware House (1865), 223 N. Second Street - Robert Pearsell Smith, manager of the Whitall Tatum Co., lived in this house in 1865. The

Rev. S. Olin Garrison used this home for the training of “feeble” minded children which became the nucleus of the Vineland Training School. The third owner, Dr. Vernon Ware, a physician and glass maker, used this building as his office and home. This is a three-story Second Empire style house characterized by its mansard roof.

Site of Millville’s First School, Northeast corner of Second and Sassafras Streets – The first school in Millville was located on this corner which is now the parking lot of the former Culver School. Just north of the school was the City’s first burial grounds.

Millville’s First Bank (1857), Northeast corner of Second and Main Sts. – Millville’s first bank opened for business in 1857, with a federal charter being issued in 1865. In 1908 the Millville National Bank moved into a larger building and the old building was sold to the Millville Public Library. The Millville Historical Society has occupied the building since 1977 when a new public library on Buck Street opened.

Edward C. Stokes House (1870?), 228 N. Second Street - Home of Edward Stokes who was governor of New Jersey in 1904, serving one term until 1908. The house has a Victorian style of architecture and is occupied as a private residence.

Site of Joseph Buck’s Home, Northeast corner of High and Main Streets - The founder of Millville lived at this location. The house has been demolished and the property is now used by the Millville Housing Authority.

Union House (1728), Head of Union Lake - The house is preserved, restored and owned privately by Mr. and Mrs. Richard Wood. It is located high on a bluff overlooking Union Lake. The house is open to the public upon request.

In addition to these historic sites, Millville also has an internationally known museum at Wheaton Village (1501 Glasstown Road) that depicts the history of the glass making industry and factory life in South Jersey in the 1880’s and 1890’s. It was opened to the public in 1971 and now houses one of the largest collections of American glass in the nation.

POTENTIAL HISTORIC DISTRICTS

DOWNTOWN/FOUNDRYVILLE

After a multi-year historic structures survey conducted by George Thomas, PhD, of the Clio Group, a preservation plan was developed for the broader downtown area in 1995. This survey was the result of a contract with the National Park Service. The end result of the study was a Preservation Plan and nominations for two distinct historic districts within the central portion of Millville. Over 3,000 survey cards of pre-1940 buildings resulted from the study, producing visual documentation of all buildings over 50 years of age in the City. National Register criteria were used in evaluating the City's structures.

The historic district approach of the study was utilized as a means of describing the historic evolution, ambitions, and social structure of early Millville. The two districts represent the functional and planning differences between the downtown commercial core and associated residential and institutional buildings as well as the separate factory district. In addition to these two identified districts, a handful of buildings were judged to be potential individual National Register listings. A map of this district is included in this plan element.

The two downtown districts suggested were:

- *The Village or Downtown District:* This includes the commercial and institutional district and housing that immediately surrounds Millville's downtown. It is centered on the intersection of High and Main Streets, extending west to the vicinity of the Maurice River, and east toward the railroad tracks. The north boundary reflects the changing architectural character of 20th century building types; the district includes a significant group of mill worker houses that once served the employees of the Whitall-Tatum Glass Company.
- *Foundryville:* The second smaller district is centered on the Millville Manufacturing Company headquarters on Columbia Avenue across from the plant site. To the north, east, and south are frame single and two-family houses as well as a few institutional buildings. The district incorporates examples of the unique Millville half-double and Millville double. Many of these buildings were built by the Millville Manufacturing Company for its workers.

The Preservation Plan includes a detailed listing of all structures contributing to the integrity of these two potential historic districts.

MILLVILLE AIRPORT HISTORIC DISTRICT

The Millville Army Air Field was established by the U.S. Army in 1941 as the first of a string of defensive airfields built at strategic locations across the country. Squadrons were marshaled and sent there for training in P-40 Warhawks and eventually in P-47 Thunderbolts. During the airfield's four-year existence, more than 10,000 personnel served there and 1,500 pilots received advanced fighter pilot training. The airport was returned to civilian use following the war, with many of the original buildings leased to aviation-related businesses.

A core of the original WWII buildings, representing most of the functions of the original facility, is still in existence. Two hangars are also still standing in proximity to the runways. These original buildings have been deemed eligible for listing on the National Register of Historic Places. An intensive historic survey will be completed in a triangular area bordered by the airfield, Taxiway K and Peterson Street. This area appears to be the boundary of the significant and sustainable historic resources. The survey itself will determine what portion of the site is historically significant and these areas would be nominated for listing on the national and state historic registers. Register status would allow the Millville Army Airfield Museum to apply for grants for buildings that are accessible to the public. The proposed district is shown on a map at the end of this section.

RESOURCES AVAILABLE FOR HISTORIC PRESERVATION PROJECTS

There are a variety of sources of funding for historic preservation projects. The stewardship and funding of historic resources in the State of New Jersey is entrusted to the State Office of Historic Preservation in Trenton (SHPO). This agency should be the first contact for any type of historic preservation funding project. SHPO is the agency that places a structure on the State Register of Historic Places and nominates them for the National Register.

The NJ Historic Trust in Trenton is the only nonprofit historic preservation organization in NJ created by state law. The NJ legislature gave the Trust broad powers to initiate and promote preservation programs, provide technical assistance and to operate grant programs. The Trust administers the Garden State Historic Preservation Trust Fund and the Historic Preservation Bond Program which provides matching grants to capital

preservation projects. The Trust also operates the Cultural Trust Capital Preservation Grant Program, the Emergency Grant and Loan Fund, the Revolving Loan Fund, the Preservation Easement Program and the New Jersey Legacies Program, financed by a State bond act.

The National Park Service works directly with the State Preservation Offices to conduct historic structure surveys, building elevations, and restoration funding. Federal tax credits are also administered through the Park Service.

There is also some limited funding for historic preservation activities through the Community Development Block Grant Program operated by the US Department of Housing and Urban Development. Historic preservation is one of the national objectives of this program with projects concentrated in rehabilitation, preservation and selective restoration.

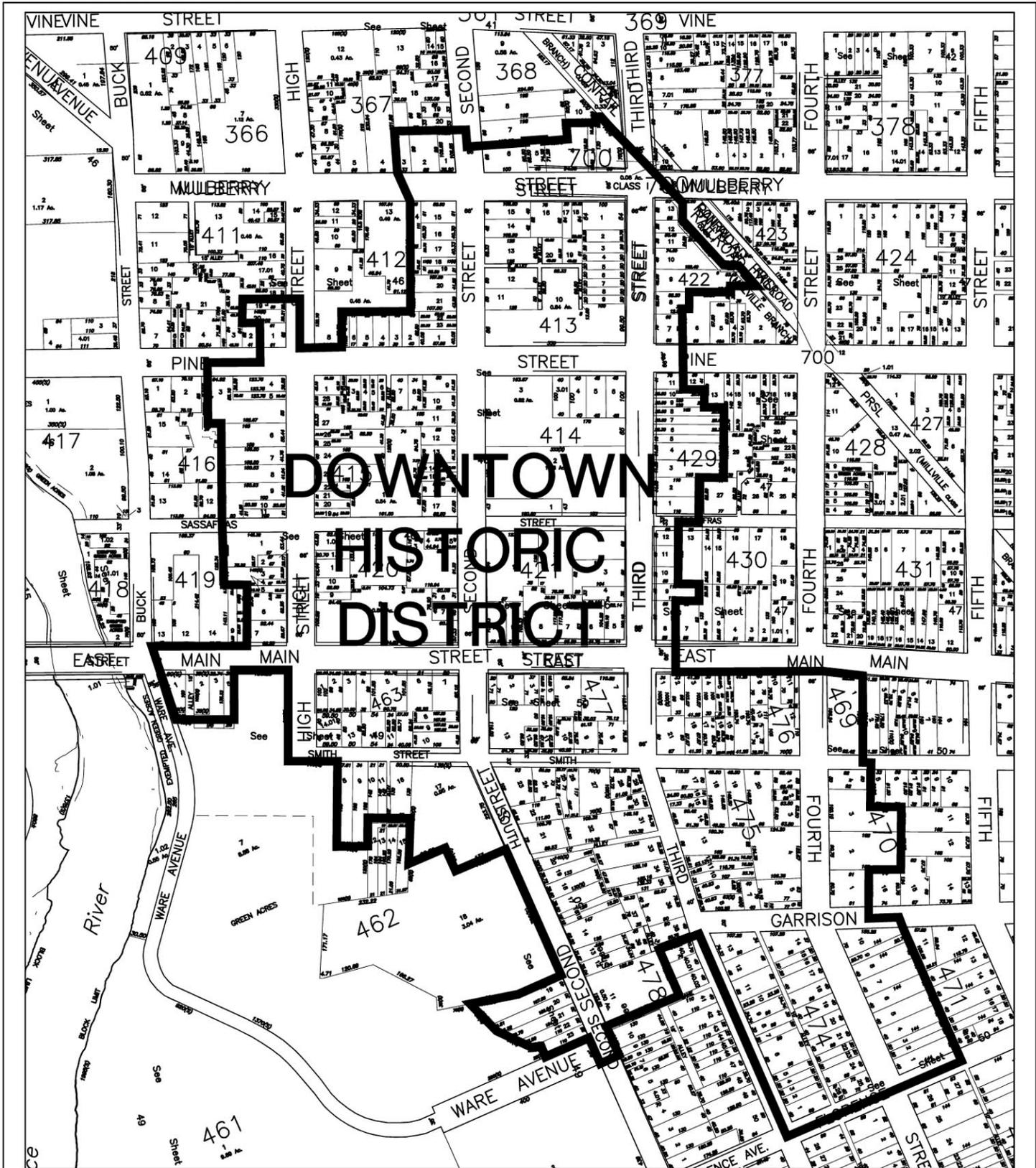
The National Trust for Historic Preservation in Washington, DC is a private nonprofit organization that supports the goals of historic preservation. This organization was chartered by Congress in 1949 and provides four sources of funding.

Preservation New Jersey in Perth Amboy is New Jersey's nonprofit membership organization promoting historic preservation. This organization provides a comprehensive directory of restoration firms and individuals.

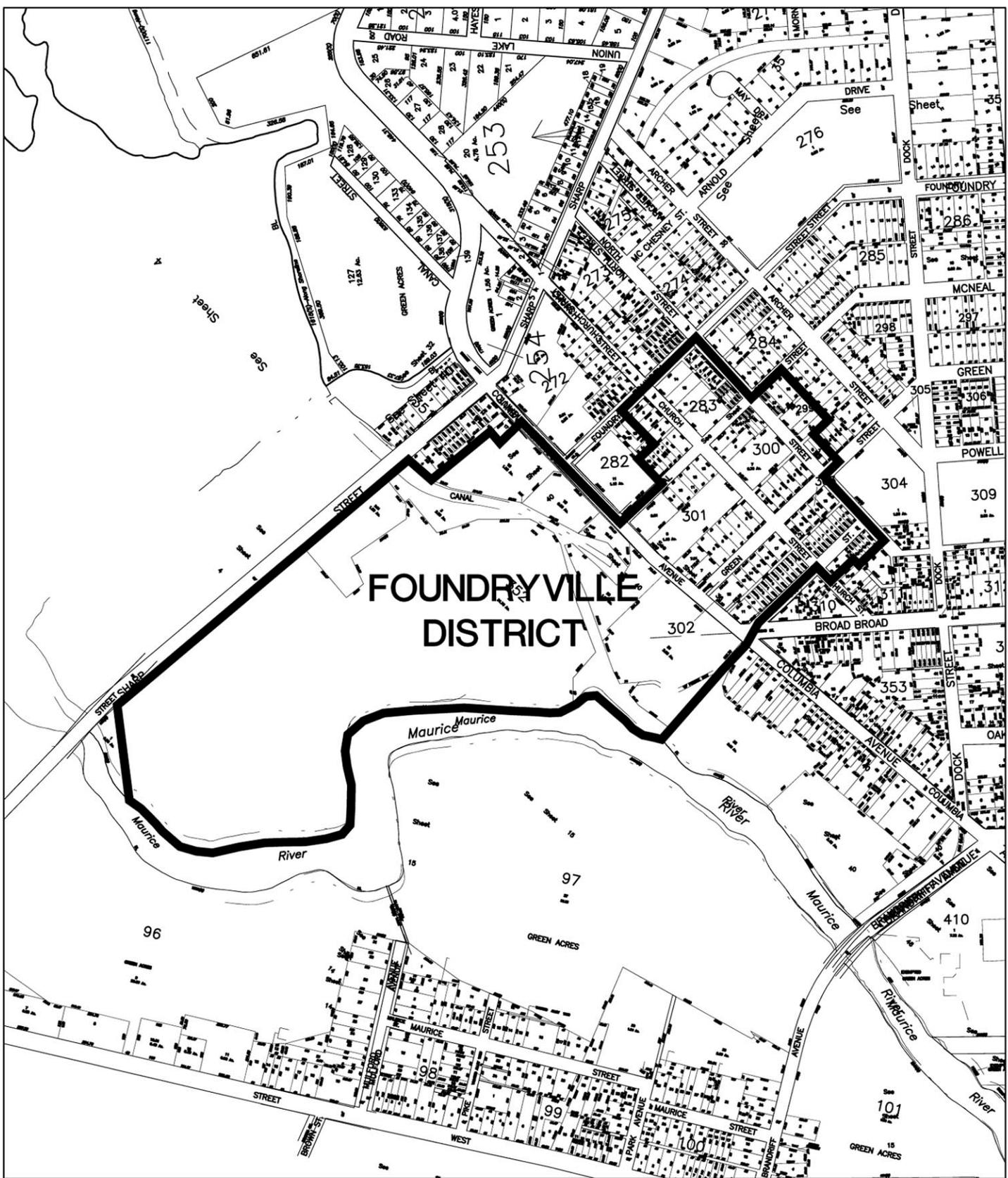
HISTORIC PRESERVATION POLICY RECOMMENDATIONS

- 1) The Planning Board should continue to educate the public about the value of historic and cultural resources; private owners should be encouraged to maintain significant resources as part of their shared community heritage.
- 2) The City should continue to utilize the survey of Historic Structures completed in 1993 and the Programmatic Agreement with the NJ State Office of Historic Preservation to determine historic significance when operating federally funded housing and economic development projects.
- 3) The City should enforce design guidelines for the downtown district established by the Millville Development Corporation as part of their façade improvement program or consider requiring rather than encouraging architectural standards for building rehabilitation.

- 4) The City should serve as a good example of historic preservation stewardship in protecting historic/cultural resources under its control or covered by state or federal regulations. The Levoy Theatre is an historic treasure that should be preserved and restored to its historic and cultural significance.
- 5) The City should promote historic/cultural tourism as a means of developing a greater appreciation for these resources.
- 6) Promote land use patterns that would not adversely affect historic sites.



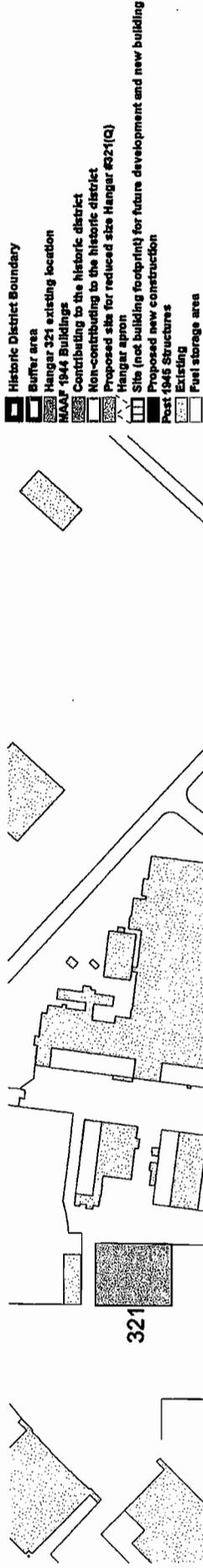
sheet	job no.	date	designed by	 <p>Engineering Department City of Millville Cumberland County, New Jersey 08332</p>	no. revisions	date
	date		drawn by			
	code	sheet title	checked by			



FOUNDRYVILLE DISTRICT

sheet	job no.	date	designed by		Engineering Department	no. revisions	date drawn
	date	sheet title	drawn by		City of Millville		
	made		checked by		Cumberland County, New Jersey 08332		

Proposed MAAF Historic District



Proposed MAAF Historic District
 Millville Municipal Airport

Watson & Henry Associates - 06 January 2004

VIII. Recreation Plan Element

The Recreation Element of Millville's Master Plan serves as the official policy document for the establishment and management of the City's recreation opportunities. The adoption of this element is a pro-active step to accommodate the growing and changing needs of Millville's citizens, workers, and visitors. This element contains a comprehensive listing of recreation and open space lands in Millville which total just over 23% of all land area in the City. The vast majority of land is owned by the State of New Jersey for wildlife conservation. According to tax records, the State of New Jersey, Department of Environmental Protection, owns 5,609.14 acres in the City or 20% of the City's total acreage. The Nature Conservancy owns an additional 895.9 acres, while the Natural Lands Trust owns 259.7 acres. All together, there are 6,764.9 acres of lands permanently held in open space.

Table VIII-1. Conserved Open Space, Millville, 2004.

Entity	Acres	Percent of Millville	Assessed Value
State of New Jersey	5,609.2	19.8%	\$5,246,500
Nature Conservancy	895.9	3.2%	1,517,400
Natural Lands Trust	259.8	0.9%	254,800
Total	6,764.9	23.9%	\$7,018,700

In terms of both active and passive recreation, and in particularly in regards to land preservation, the City exceeds even the most generous standards for land use.

CHANGES SINCE THE 1997 MASTER PLAN

The 1997, the Master Plan examined which sports had a high demand and related its findings to recommended facilities. The recommendations included:

- A new soccer complex of 27-43 acres to accommodate the growth in youth sports organizations;
- A multi-use recreation complex suitable for hosting regional competitions;

- An indoor recreation center or community center with a recreation component;
- The rehabilitation of boat slips on the Maurice River; and
- A new high school sports complex with field house and competition pool.

The City has implemented several of the recommendations. A soccer complex of five full-sized fields and one smaller field was developed in conjunction with the Board of Education behind Lakeside Middle School on Sharp Street. The Board of Education supplied the land and the City built the complex in cooperation with the Millville Soccer Association. While not occupying as much land as recommended, the development of the fields has greatly alleviated the shortage identified in the 1997 Master Plan.

The Maurice River Bikeway Trail system has been designed to extend from Waltman Park on Main Street approximately one mile to Sharp Street Park. There will be access points for the trail at Mulford Avenue and off of Main Street across from the Mount Pleasant Cemetery. The first phase includes six pedestrian bridges over marshes and wetlands. This bike trail will eventually be extended along the waterfront. Several state grants from the NJ Department of Transportation Local Aid Bikeway Program have enabled construction to start on this trail system.

An indoor community center was established with the purchase of the former YMCA building by the Millville Housing Authority. The Housing Authority leases part of the building to an affiliate, the Holly City Development Corporation, that includes the racquetball court building and indoor pool. The balance of the former YMCA building was converted to 30 accessible apartments for disabled residents by the Millville Housing Authority. Management is provided by the Cumberland/Cape May YMCA of Vineland. The cost of the operation is partially subsidized by the City and the Board of Education. Called the *Holly City Family Center*, this facility provides a low cost, year-round recreational facility for residents.

The City is in the process of constructing a 40 slip public marina across from the City Hall along Ware Avenue. This marina will provide transient boat slips for recreational boaters traveling on the Maurice River. The City hopes to tie the marina directly to the Glasstown Arts District adjacent to the marina site and to special public events held along the waterfront. This facility should be complete in 2005.

The development of a new high school sports complex may occur if the Board of Education decides to add classrooms and laboratories to the building as noted in the subsection in *Community Facilities: Education*.

In addition to these active recreation recommendations, the 1997 Report suggested planning for a trail network that would link the different open space parcels along stream corridors. Two specific links were recommended. First, a path along the Maurice River from the City's waterfront park to Union Lake was suggested. Second, a trail along White Marsh Branch to center city was proposed. Portions of these recommended trails will be developed through the aforementioned bike paths, including the future phases which could extend from Union Lake to Fowser Road.

Additional opportunities for extending trails are possible in collaboration with the Nature Conservancy. The Nature Conservancy, a private, non-profit conservation organization, has prioritized the acquisition of property along the Maurice River. This organization in 2004 purchased 300 acres of waterfront property to extend their Maurice River holdings on both sides of the river. The newly acquired property includes over 20 miles of trails and will be accessible to the public, including the 3.7 miles stretch accessible from the river.

MILLVILLE RECREATION FACILITIES

STATE-MANAGED WILDLIFE MANAGEMENT AREAS

Three Wildlife Management Areas (WMA) are located in Millville – Bevan, Menantico Ponds, and Union Lake. These were established for hunting, shore and boat fishing, and passive recreational uses, such as bird watching and walking. There is a major emphasis on protection and enhancement of waterfowl habitat for hunting and bird watching purposes. WMA's are managed by the State's Department of Environmental Protection (NJDEP) through its Division of Fish and Wildlife (F&W).

Edward G. Bevan Wildlife Management Area is comprised of over 12,000 acres in Millville and Commercial, Downe, and Lawrence Townships, and is one of the largest areas owned and managed by F&W. Of this total, about 700 acres are located in Millville. Bevan is managed primarily for upland game by planting annual food patches, cover crops and cooperative farming. The area currently supports deer, rabbit, quail, waterfowl, and grouse; pheasant are stocked seasonally by F&W. Shaw's Mill Pond, located in the

southwest corner of the site is one of the best bass waters in the area. The streams meandering through the tract provide good fishing.

The area offers additional recreational facilities to the public. Horseback riding is allowed with written permission. An area is available for the training of hunting dogs and F&W maintains areas for archery and shotgun training. Better Materials has permission for sand mining within the management area. A local Wildlife Management Area office is located on Buckshutem Road.

The Menantico Ponds Wildlife Management Area is comprised of about 297 acres of lake surface and land areas located wholly in the City of Millville. This area was purchased in 1961 using revenue from the sale of hunting and fishing licenses. The series of sand ponds, with depths of up to 40 feet, support a varied fish population which includes bass and pickerel. Car top boats, with electric motors only, are permitted. A new boat ramp was recently completed and can be reached from Route 49.

Union Lake Wildlife Management Area covers over 4,600 acres of open water, land adjacent to Union Lake, and land along the Maurice River, north of the lake. The lake itself covers 870 acres and is the largest lake in southern New Jersey. At one time, it was the largest manmade lake in the country. Maximum depth is approximately 25' with a mean depth of 9'. The lake was privately developed and sold in 1982 to the NJ DEP under the Green Acres program. The WMA includes land in Millville, Vineland, and Deerfield Township.

Union Lake is home to bass, perch, catfish, and bullheads and is considered to be one of the State's more popular fishing lakes. F&W stocks the lake with striped bass in an effort to reestablish that population. Boaters currently use the City-owned ramp on Union Lake Road to access the lake. A boat ramp and parking area constructed in 1994 on the west side is expected to become the principal access to the lake. Outboard motors of up to 10 horsepower are allowed at the lake. In addition, the area contains good upland game habitat.

The dam at the southern end of the lake was constructed in 1868, replacing an earlier upstream dam, and is the oldest in the State. In 1989, the state reconstructed and lowered the dam and built an emergency spillway and fish ladder.

In addition, there is a recently acquired non-contiguous area known informally as the ***Maurice River Watershed Management Area*** that

includes 182.4 acres of land in western Millville. These lands were deeded to the state by private landowners or the state has purchased conservation easements. There is one privately owned lot that separates much of the state acreage. There are also large lot, single family dwellings surrounding the property.

Additions to the existing WMA's usually come from private owners who offer the land for sale. A recommendation by F&W is then made to the Green Acres program staff to review the application and to subsequently release funds for the purchase, if warranted. No specific effort is made to identify possible acquisition areas.

The WMA's are open to the public. Some areas are heavily used for day trips not related to hunting and fishing. Bird watching and hiking are common, but picnicking is prohibited.

COUNTY-MANAGED RECREATION LANDS

The Mid-county Park lies at the northwest boundary of the City fronting both Carmel Road and Morias Avenue. The park was established in 1965 and now totals 168 acres. Because of a lack of water at the site, no improvements have been provided. Currently, 65 acres of the area are used annually as the County Fair Grounds; the remainder of the tract is considered as conservation area. Periodically, there are various equestrian and 4H events held at the park

CITY-MANAGED RECREATION LANDS

The City of Millville has over twenty developed or partially developed recreational areas of various sizes. In addition, the City owns four "unimproved" parks. In addition to the recreation areas directly managed by the Recreation Department, the public schools have recreational facilities at nine locations which are open to the public. The majority of the recreational facilities provided by the City are concentrated within a two-mile radius of center city. An inventory chart of the park land acreage is included in this element.

As previously noted, in addition to the facilities owned and operated by the City and Board of Education, the Millville Housing Authority created the Holly City Family Center in 2000 in a portion of the building that previously was the Millville YMCA. The Center is operated under contract by the

Cape/Cumberland YMCA. The Center has public membership and is a full service health center.

The City provides a full recreation program year round for young people. The recreation department has a “rolling recreation program” in which staff travels to various neighborhoods providing activities for young residents. The Glasstown Arts District also provides art-based programming for City youth in the downtown, including a 6 week Art Creates Excellence program during the summer.

Table VIII-2. Millville Recreation and Open Space Inventory, Improved Land.

Park Name	Area in Acres
Sharp Street Park	23.0
North Street Park/Hero's Park	0.1
Fourth Street Park	0.1
Corson Park	15.2
Union Lake Park	12.6
Cedarville Road Park Recreation Complex	16.4
Waltman Park	9.5
Springsteadah Park	2.4
Chiola Field/Babe Ruth Complex	5.8
Governor Stokes Park	1.0
Noble Street Park	1.0
Fowser Boat Ramp Area	45.0
Kates Boulevard Ball Fields	18.9
Fourth and F Streets Triangle	0.2
Dock and Green Street Mini-park	0.1
High and Broad Street Mini-park	1.0
Waterfront Park-Phases I and II	3.0
Delsea Village	3.8
Lakeside Soccer Fields	1.6
Scout Park	0.2
Wood School Triangle/Birds Nest	0.1
Second and Vine Triangle	0.1
Ware Avenue Public Docks	<u>0.6</u>
Total Improved Land	161.7

Source: Green Acres Recreation and Open Space Inventory

Table VIII-3. Millville Recreation and Open Space Inventory, Unimproved Land.

Park Name	Area in Acres
13 th and Mulberry Streets	2.8
Stewart Estate	32.3
Union Lake Beach	3.0
Carmel Road	83.9
Laurel Lake	<u>4.0</u>
Total Improved Land	126.0

Source: Green Acres Recreation and Open Space Inventory

In total, Millville has 287.7 acres of land for recreational purposes.

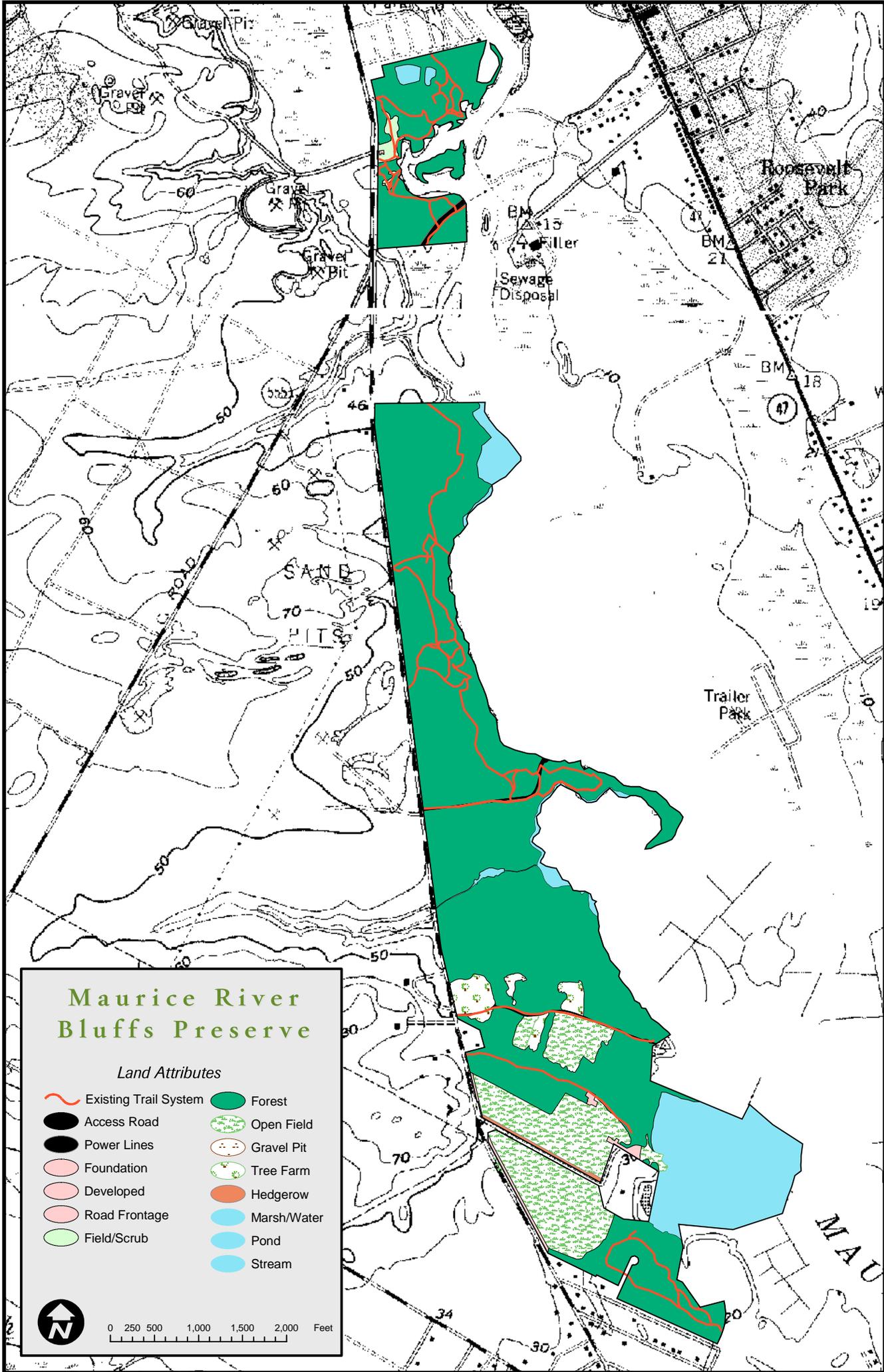
PRIVATELY-MANAGED OPEN SPACE LAND

The Peek Preserve is a 252 acre preserve along the Maurice River. This preserve was established in 1992 when the Natural Lands Trust purchased the property from the owner, Harold Peek. The preserve was expanded to its present acreage through the purchase of 51 acres adjacent to the site owned by the City of Millville. This area of the river is home to a healthy wild rice marsh as well as a wide variety of migratory birds including the bald eagle. There are also several plant communities on site such as the white cedar swamp, hardwood swamp, chestnut oak upland, ground pine and pine barrens. There are several trails on the property as well as a river overlook. Permission is required to access the property.

RIVERFRONT FACILITIES

Through the utilization of State Green Acres funds over the last several years, the City of Millville has successfully established a linear waterfront recreational system. The ultimate goal of these facilities is to provide increased opportunities for public access to and enjoyment of the riverfront, through an integrated system of recreational facilities. These projects have played an important role in the City's overall revitalization strategy.

The Maurice River is one block from the City's Central Business District and State Highways 49 and 47. For these reasons, the river can serve as a public amenity that complements the existing commercial district and dense residential neighborhoods.



Maurice River Bluffs Preserve

Land Attributes

-  Existing Trail System
-  Access Road
-  Power Lines
-  Foundation
-  Developed
-  Road Frontage
-  Field/Scrub
-  Forest
-  Open Field
-  Gravel Pit
-  Tree Farm
-  Hedgerow
-  Marsh/Water
-  Pond
-  Stream



0 250 500 1,000 1,500 2,000 Feet

Roosevelt Park

BM 15
Filler
Sewage Disposal

BM 21

BM 18

Trailer Park

MAU

SAND
PITS

ROAD

Gravel Pit

Gravel Pit

Gravel Pit

Gravel Pit

55

50

60

46

50

60

70

50

40

50

40

50

60

70

80

50

60

70

50

60

70

80

90

100

110

120

130

140

150

160

50

60

70

80

90

100

110

120

130

140

150

160

170

180

190

34

30

20

10

0

Millville's riverfront is home to seven park areas. At the foot of the Union Lake Dam is the *Sharp Street Park* or Maurice River Park. In 1986, a floating fishing pier was established. This aluminum pier has been heavily utilized since its installation. Green Acres funding supported this project and provided funds for new playground equipment, parking lot and drainage improvements, and lighting. Youth baseball fields are also located at the 23 acre park.

Between Brandriff Avenue and Main Street, on the west side of the river, is *Waltman Park*. This is Millville's oldest municipal park and the facilities found there include picnic areas, playground equipment, basketball, tennis, and hockey courts, on-site parking, comfort stations, and seating. Several of these facilities were updated since 2000.

Between Sharp Street Park and Waltman Park lies the *Steward Estate*. Plans were prepared in the early 1980's for development of this tract, but changes in the environmental regulations have caused these plans to be cancelled. Currently, the City is constructing a bike path through this site.

An ongoing Green Acres project is located along the Maurice River between Main and Vine Streets. This project includes three phases and is integrally linked to a major public-private mixed-use waterfront project. Phase I of the project was completed in 1989, and includes the beautifully landscaped passive park at Buck and Main Streets.

The second phase of development included a continuation of the general design theme of Phase I, with a wooden promenade along the riverfront, a plaza area, pavilions, parking facilities, amenities, and extensive landscaping. Green Acres funds remain reserved for continued implementation of future phases of this project, including an amphitheatre and pedestrian walkways.

Dock facilities are located along the Maurice River south of the Main Street Bridge. These antiquated facilities, a total of 25 slips, are accessible from Ware Avenue behind City Hall. These slips are leased by boat owners from the City at a minimal annual cost. In 1989, Millville received a Local Planning Grant from the NJDEP – Division of Coastal Resources to study the feasibility of establishing public marina facilities at the site of the existing docks. After obtaining state funding, the City is presently constructing 40 transient boat slips for a public marina at this site on Ware Avenue.

The City owns and maintains a boat ramp on Fowser Road. This is the only ramp within the City providing boat access to the Maurice River. This facility and the adjoining parking lot are extensively used by recreational boaters. There are no user fees associated with the boat ramp.

Across the river from the Ware Avenue docking facility is the *Springsteadah or Veterans Park*, which features a Veteran's Memorial. Fishing is also possible in this passive park area. A name change to Patriots Park is contemplated.

UNION LAKE PARK

Union Lake Park adjoins the Union Lake WMA and consists of two parts. The beach area is approximately 400 feet long fronting the water and 100 feet wide. Lifeguards are on duty during the summer months and area youth are offered swimming lessons. The ball field area includes a softball diamond, basketball court, play equipment, and picnic sites. The Union Lake Tennis and Sailing Club operates a private facility used by approximately 200 member families. A boat ramp was constructed by the State on the western shore of the lake. Boat activity is restricted to outboard motors of 10 horsepower.

COMMUNITY PARKS

Corson Park provides recreational facilities for the east side of the City. The facilities include tennis, picnic areas, playground equipment, on-site parking, a comfort station, bandstand, and seating. Ice skating is permitted during the winter months. There is also a ten acre area for nature study. The playground area was rehabilitated by the City in 1993. A paved parking facility was also added.

The southwestern section of Millville is serviced by the *Cedarville Recreation Area*, located at the site of a former City landfill. This area has several ball fields, soccer fields, open space, on-site parking, and a comfort station. This park is used extensively by youth softball, football and soccer associations.

The Babe Ruth Complex (formerly known as Chiola Field), a 5.8 acre park located in the center of the City, behind City Hall, has ball fields, on-street parking, and a comfort station. The oldest field, Chiola field, was established in the 1930's, and after a long hiatus is once again actively used. Severe drainage problems were addressed by the City enabling the field to be used once again. Adjoining Chiola is the primary Babe Ruth field which was

extensively renovated in 1989 to specifications required by the Babe Ruth League. Consequently, on two occasions the City was selected to host the World Series for 13-year olds. Since that time, the field has also been utilized for Babe Ruth Regional Tournaments and by the local Babe Ruth League. Additional renovations to the field include improved drainage, sod, and new grandstands.

The *High and Broad Mini-Park* was established in 1974, and is essentially a sitting area adjacent to the bus stop. The park area has been refurbished several times for passive use.

The *Millville Soccer Complex* is located behind Lakeside Middle School and was completed in 2001. The facility was designed by the City in conjunction with the Millville Soccer Association. The volunteer membership of the Soccer Association assisted in the construction, operation and maintenance of this site. Designed as a multi-use area, there are a total of five soccer fields, a concession area, walking/jobbing/skating trail, playground, picnic grove and City utilities. The soccer fields are designed for multiple uses and are the equivalent of three full size fields or two tournament fields. However, they can be configured to a number of smaller fields to accommodate different age groups.

National Bambino League baseball is played on two fields at the *Kates Boulevard Baseball Fields* located on S. Tenth Street. The fields were owned by Ball Foster Glass Company and were donated to the City when the glass plant closed its operations. In addition to the ball fields, there is a concession area and parking area for the youth baseball league.

NEIGHBORHOOD PARKS

Due to its location and configuration, *Delsea Village Park* although nearly four acres in size, is considered to be a neighborhood park. This park provides basketball, picnic tables, and play equipment to residents in the southeast section of Millville.

A smaller park, *Noble Street*, in the southeast section also provides play equipment and basketball, and has seating areas and on-site parking.

Governor Stokes Park was rehabilitated in 2004. This park had previously been destroyed by vandalism and was not utilized. New equipment was installed for use by South Millville neighborhood children.

Several smaller neighborhood parks are located in the downtown area. These provide close-to-home opportunities for socializing and playing. The smaller parks include *Fourth Street, North Street Park, and Dock and Green Mini-Park*. Each of these parks is less than one acre in size. Both North Street Park and Fourth Street Park have play equipment.

FUTURE RECREATION NEEDS

There are three outstanding needs in the City in terms of recreation facilities. A multi-use recreation complex/community center is desired by residents as a central location for organized sports as well as unstructured activities for youth. This will be one of the recommendations and goals of the Federal Weed and Seed grant application that will be submitted by the City in 2005. A community center would be a newly constructed or rehabbed building owned and operated by the City. The Weed and Seed grant application refers to such a center as a “safe haven” – a multi-service center where a variety of youth and adult services are coordinated in a highly visible accessible facility.

All of the existing indoor facilities, including the schools, are utilized to the maximum extent possible. Therefore, a community center would add capacity for indoor activities while serving as a meeting place or training facility. This facility could be pivotal in the transformation of our “at risk” youth to productive responsible members of society.

A second need, as mentioned previously under the Community Facilities Plan, is the need for a new high school sports complex. The Board of Education over the next several years will need to consider the creation of a high school sports complex in addition to locating a new high school site.

Finally, the physically handicapped residents of the City require specially designed equipment and facilities in order to enjoy the same degree of access to recreational opportunities. The City has been proactive in reviewing all parks to ensure they are as accessible as possible. In the coming months an all-access handicapped playground will be created in Waltman Park. Fifty percent of the cost of this playground will be provided by a grant from the Cumberland County Improvement Authority. The equipment in this park will be specially designed for wheelchair bound residents as well as other types of physically challenged residents.

RECREATION POLICY RECOMMENDATIONS

- 1) The City should strive to maintain, improve, and upgrade parks on a regular schedule, with special emphasis on creating handicapped accessible facilities.
- 2) Additional pocket parks or landscaped areas should be created within the densely populated central neighborhoods. The Recreation Department should seek properties that are foreclosed upon or abandoned for this purpose.
- 3) Additional opportunities to extend the riverwalk and provide further public access to the Maurice River should be explored.
- 4) The City should work in partnership with the Nature Conservancy to develop the proper types of public access to the “bluffs” site along the river, and emphasize the desire for some type of public accessibility when other private conservation groups obtain title to land.
- 5) The Recreation Department should continue to sponsor special events to provide opportunities for the entire city to enjoy the recreation facilities owned and operated by Millville.
- 6) Require accessible open space as part of the design standards for large subdivisions and planned unit developments.
- 7) Require private waterfront developers to continue the types of pedestrian access developed by the City, including the design theme and amenities.

IX. Conservation Element

INTRODUCTION

Millville's physical realm consists of the natural environment and the sometimes profound changes shaped by humankind. The Conservation Element of the Master Plan examines the natural environment and its relationship with the built environment of buildings, streets and structures. It includes a Natural Resource Inventory that describes these environmental characteristics. Based on the NRI, the Conservation Element identifies those areas of greatest ecological concern in Millville and outlines land use policies that are intended to balance the need for preservation and management of environmentally sensitive lands with economic development.

Natural Resource Inventory

The Natural Resource Inventory (NRI) identifies environmentally sensitive lands including stream corridors, open water, freshwater wetlands, flood plains, places with threatened and endangered species, soils with high water tables, and aquifer recharge lands. This information provides a geographic basis for assigning different levels of actual or potential development to various land areas; indicates what lands are best suited for agriculture, residential and commercial uses and not least, lands that should be retained in their natural state. Geologic formations are the oldest natural resource features that contribute to the environment and are the first described in this section.

GEOLOGY

Geologic formations provide the parent material for the production of soils. Their characteristics help determine the suitability of land for development. The primary role of geology in development is the supply of groundwater for public and private wells and as underlying strata to absorb rainwater percolating down from the surface, a process known as aquifer recharge. Geologic formations thus are an important factor in determining the suitability of land for development.

There are two basic types of geologic formations, surficial and bedrock. Millville is located in the Outer Coastal Plain, the largest of the five physiographic provinces of New Jersey, where surficial formations dominate the upper geology. In the Outer Coastal Plain, bedrock formations are very

deep and become deeper as one moves southeast towards Cape May. Since the bedrock is so deep, perhaps as much as 4,000 feet in Millville, these formations have no effect on land use policy at the surface of the earth.

Surficial formations cover the deep bedrock and consist of unconsolidated sands, gravels, silts and clays that formed as layers under the ocean. The rise and fall of the oceans, corresponding to ancient glacial periods, successively inundated the land and deposited the material. The deposits date from the Tertiary period, 65-1.8 million years ago. These Tertiary period strata are tilted so that the same layer is deeper on the west side of New Jersey in comparison to the east side. Just south of Millville there are much more recent deposits of the Quaternary period dating from the last ice age, only 11,000 years ago. Over geologic time scales, all of the sands and gravels in the layers would be subject to pressure and eventually would become consolidated into stone.

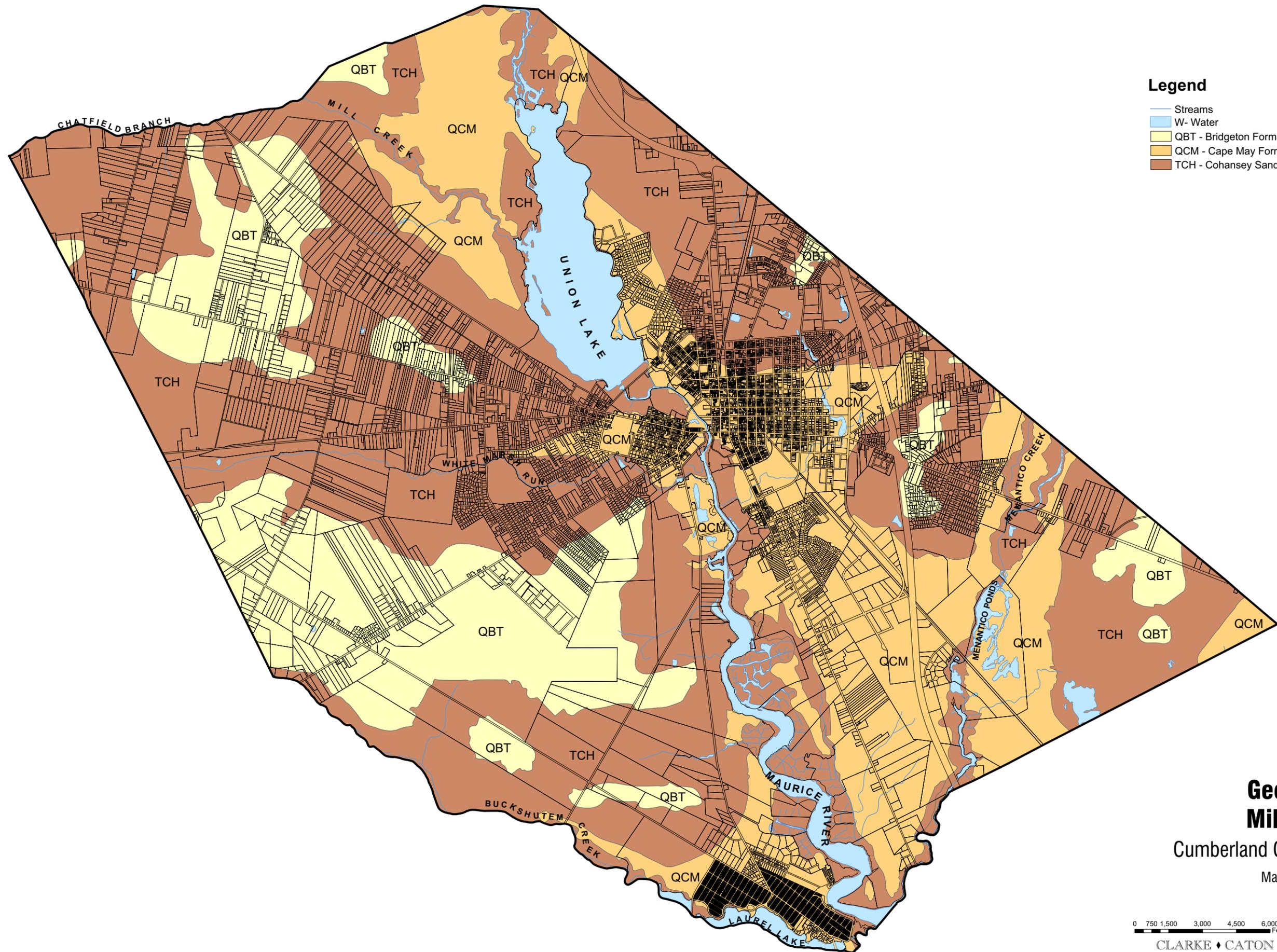
The surficial geology of the City includes three distinct formations: Bridgeton Formation, Cape May Formation and Cohansey Sands. The map on the following page depicts the location of these formations.

BRIDGETON FORMATION

The Bridgeton Formation is found underlying the higher parts of Millville, such as the airport. The Bridgeton, along with the Cape May and the Pensauken (not found in Millville), constitute the most recent geological formations in New Jersey (excluding the Holocene glaciation that formed the barrier islands in the state and Delaware Bay deposits). The Bridgeton formed at the edge of the ocean from material eroded from older upland deposits of the Tertiary Period. It consists of unconsolidated, heavily weathered sand, clay and gravel from 40 to 60 feet thick. Clay, which often makes up a large percentage of the formation, is the defining characteristic of the Bridgeton. While both the Cape May and Bridgeton Formations are useful for water supply, they are much less important than the Cohansey.

CAPE MAY FORMATION

The Cape May Formation lies mainly in a band from the Union Lake Wildlife Management Area that runs southeast through center city to the Menantico Ponds area and Rt. 55. This formation is a series of sands, typically coarse textured, and gravels deposited by an ancestor of the Delaware River (riverine deposits). The transition between riverine and marine deposits occurs partly in the City along the Maurice River corridor. The Cape May Formation is 20-40 feet thick and is up to 20 feet above sea level.



Legend

-  Streams
-  W- Water
-  QBT - Bridgeton Formation
-  QCM - Cape May Formation
-  TCH - Cohansey Sand

**Geology
Millville**

Cumberland County

May 9, 2005



CLARKE ♦ CATON ♦ HINTZ
400 Sullivan Way ♦ Trenton, NJ ♦ 08628

Source: New Jersey Department of Environmental Protection

COHANSEY SAND

This formation consists of quartz sand with lenses of gravels and light colored clay. Cohansey Sand underlies the great majority of the Pine Barrens as well as the more fertile farmlands of the Outer Coastal Plain. The Cohansey sand layer is from 100 to 250 feet thick. The Cohansey dates from an earlier period of the Tertiary and is hence older than the other two geologic formations found in Millville. The Cohansey Sands are an important water bearing formation. This formation outcrops either at the surface or just beneath a veneer of permeable soil and accounts for more recharge area than all other aquifers in the Outer Coastal Plain, combined.

AQUIFER RECHARGE AND STORMWATER MANAGEMENT

Aquifers are geologic material that can supply useful quantities of ground water to natural springs and water wells and that support stream flows for biological purposes. Aquifer recharge is part of the hydrologic cycle of evaporation, cloud formation, rain, and surface or groundwater that supports life on the planet. Specifically, it is the process by which rain seeps into the soil and into geologic formations that hold the water. There are many natural processes that determine how much rainwater actually reaches and replenishes an aquifer instead of being evaporated, consumed by plants and animals, or simply running off the ground surface into water bodies. The most important processes are the type of vegetative cover, amount of impervious surface and soil characteristics. In Millville, the sands and gravels that underlie the City are excellent water bearing strata; as previously noted, the Cohansey Sand is important in this regard, covering more than half of the surface area of Millville. All of the underlying aquifers have the ability to produce at least 100 gallons per minute at the wellhead and over 90% of the City can produce at least 250 gallons per minute.

The recharge of aquifers has gained more importance with recently adopted state storm water management rules that require a comprehensive approach to the control of stormwater by municipalities. Stormwater facilities are now intended to control the volume of stormwater, the quality of the water that is discharged and the percolation of water back into recharge areas. The amount of impervious coverage has a strong effect on the ability to meet these requirements. Aquifer recharge is essential for the replenishment of the underground water supply. The water that is drawn from the ground may have fallen as rain 10,000 years ago. Preventing the overuse of aquifers is an important environmental goal. This may occur from over pumping where more water is drawn from the aquifer than is available for replenishment by rainfall (water “mining”) or when impervious surfaces

prevent rainfall from percolating into the ground. Recently, the state Department of Environmental Protection has identified heavy agricultural use of groundwater in the Maurice River watershed as a potential future problem. With prudent use of water and land use policies that encourage aquifer recharge, adequate water supplies for the City will be maintained for the foreseeable future.

In addition to encouraging the conservation of water supplies and the replenishment of ground and surface waters, the City will be required to plan for and improve the quality of water discharging from storm water management systems. The new storm water management regulations will require the use of Best Management Practices (BMP's) in the site and subdivision design process as well as in the planning and design of the municipality's storm water management systems. This is currently encouraged through the application of the Residential Site Improvement Standards and will soon be required for non-residential development, too. Examples of BMP's for storm water management and non-point source pollution control include the following:

Development that mimics, as closely as possible, pre-development hydrological conditions (such as the peak discharge, run-off volume, infiltration capacity, base flow levels, ground water recharge and water quality) will have the lowest adverse environmental effect.

Concentrating residential development on uplands and eliminating stream crossings (if feasible) will avoid stream disturbance and grade changes in natural drainage ways. Development on soils with relatively steep slopes or, loose, sandy soils should be minimized.

The use of native or well-adapted non-native species in disturbed and open areas and limiting the use of turf will reduce the level of fertilizers, pesticides and watering that is needed to maintain landscaping. This lowers lawn chemical runoff into streams and through soils into aquifers. It also stretches water supplies farther by reducing reliance on irrigation.

By using stormwater management techniques that are appropriate to a site, pollutants from parking lots and landscaping can be adequately treated through passive techniques. Further, relatively clean water can be infiltrated back into the ground where the soil characteristics are favorable (which is most of Millville). Such methods include retention ponds, dual purpose/extended detention basins, infiltration

basins, underground sand beds, dry wells, vegetated swales, vegetative filter strips, and porous pavement (in small parking lots).

SOILS

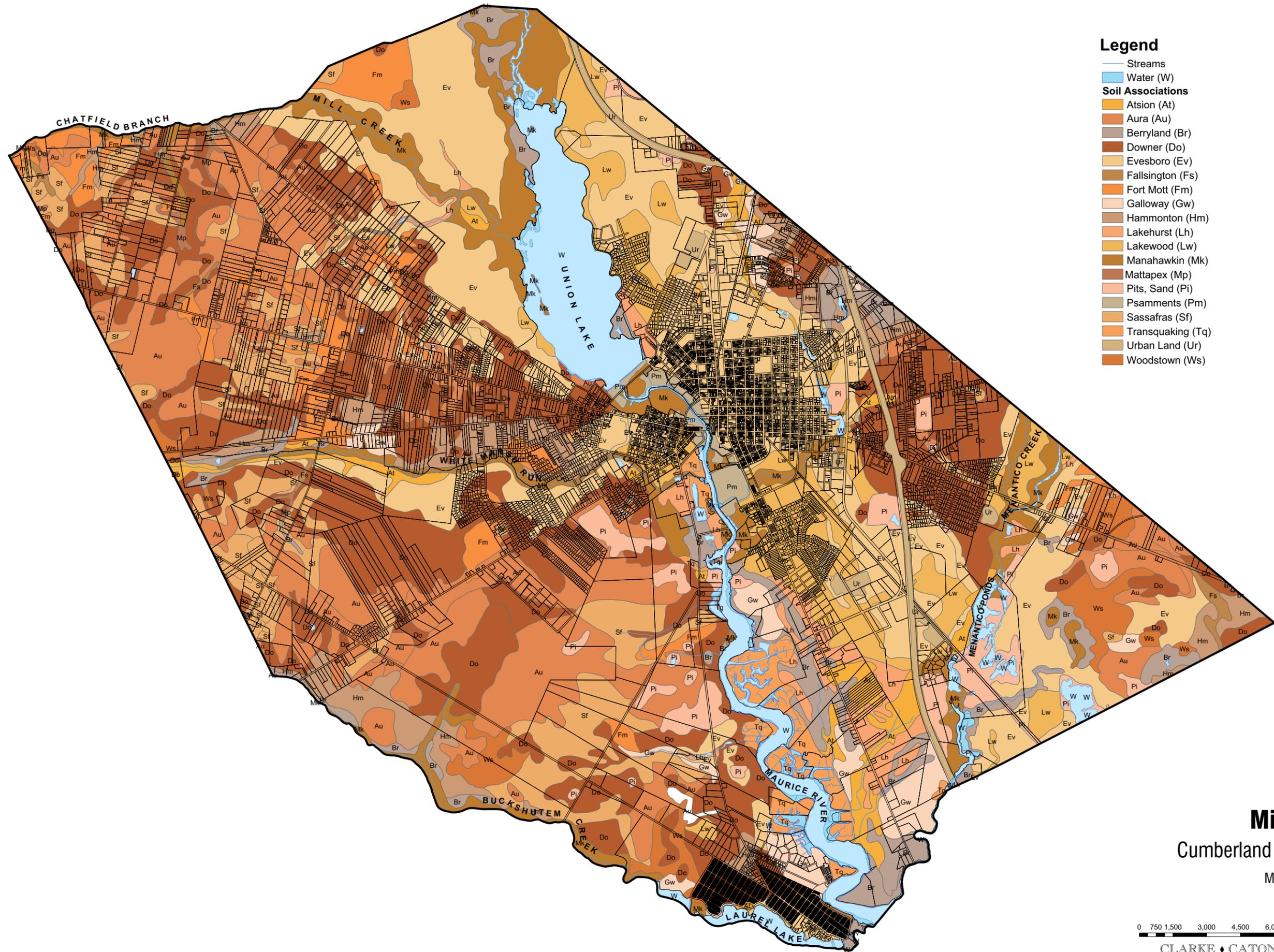
Soil is a mixture of organic and inorganic materials formed from the underlying geologic strata, the actions of weathering, organic material and biological processes. Without suitable soil, food cannot be grown and life becomes insupportable. Parent geologic formations, which are described above for Millville, play a major role in the development of different soil types. Soil types have specific characteristics that determine landforms, slopes, and drainage. In turn, these support various types of vegetation that provide animal habitats. Soil characteristics are an important factor in determining suitable land uses for a variety of human activities.

Soils are found in layers (the soil “horizon”) and are created as part of an environmental process. The topmost level is eroded by water or wind and deposited down slope, creating different soil characteristics over time. Soils are made up of varying amounts of clay, silt and sand – which are determined by particle size – plus organic matter. Clay particles are the smallest and sand particles the largest in diameter. A number of the soil classifications in Millville have similar characteristics at the surface but are different in the lower subsoil. These characteristics lead to the categorization of soils into different series.

The general soil series are depicted on the Soils map on the following page for Millville and are described beginning below.

ATSION

Atsion soils are also known as Leon soils in other parts of the State and are sandy throughout their soil horizon. These soils are highly acidic with high levels of organic materials in the substratum, which prevents rapid draining. This soil may be hydric. They occupy lower areas in relation to Lakehurst and Lakewood soils and higher than Berryland soils. They typically occur as broad flats, with occasional depressions. Atsion soils have a high depth to seasonal high water and are subject to flooding when near larger streams. Most of the vegetation consists of pitch pine, with a few scattered red maples and black gum. Typical understory vegetation is high bush blueberry, sheep laurel, sweet pepperbush, green briar and gallberry.



Legend

- Streams
- Water (W)
- Soil Associations**
- Atsion (At)
- Aura (Au)
- Berryland (Br)
- Downer (Do)
- Evesboro (Ev)
- Fallsington (Fs)
- Fort Mott (Fm)
- Galloway (Gw)
- Hammonton (Hm)
- Lakehurst (Lh)
- Lakewood (Lw)
- Manahawkin (Mk)
- Mattapex (Mp)
- Pits, Sand (Pi)
- Psammments (Pm)
- Sassafra (Sf)
- Transquaking (Tq)
- Urban Land (Ur)
- Woodstown (Ws)

Soils
Millville
 Cumberland County
 May 9, 2005



CLARKE ♦ CATON ♦ HINTZ
 400 Sullivan Way ♦ Trenton, NJ ♦ 08628

AURA

Aura is also known as the Pittsgrove soil series. Aura soils are found at the higher elevations of the municipality between stream corridors. They tend to be well-drained, sandy soils of a dark grayish-brown color of nearly level to gently sloped topography and are extremely acid. Typical native vegetation is a mixed oak forest. Aura soils are found extensively in western Millville and have been heavily used for agricultural purposes. Aura soils are identified as prime agricultural soils. Aura soils are usually found adjacent to Downer and Sassafras soils.

BERRYLAND

Berryland are very poorly drained soils located along the flats adjacent to streams. Also known as St. Johns soils in other parts of the State, they are typically black sands with a high organic content. Seasonal high water is at the surface. These soils typically host red maple wetlands with scattered pitch pine and understory blueberry bushes and in fact are used for high bush blueberry farming. Berryland soils are highly acid and hydric in nature. They are generally considered undevelopable. In Millville, Berryland soils are associated principally with the Maurice River, but are also found by Wheaton Village and the Conectiv site.

DOWNER

Downer soil is typically a dark grayish brown at the surface and tends to be sandier than Aura but with less quartz in its lower levels. Downer is nearly level to gently sloping. When found in association with Aura soils, it is down slope from them. Downer soils are extremely acid and where cultivated are usually heavily limed. Because Downer soil is rapidly permeable, it tends to have low fertility. The natural vegetation is a mixture of pine and oak. Steeper Downer soils tend to erode quickly, requiring good soil entrapment procedures during construction. Much of the Downer soils have been developed in Millville except around the airport.

EVESBORO

Rapid permeability characterizes Evesboro soils, which consist of deep, excessively drained and very sandy soils. Because of the rapid permeability, the soils are infertile. Much of the deposition of the soil has occurred because of wind or water erosion from other soils. The soil is coarse and deep, often exceeding ten feet, with ill-defined soil horizons. Its soil erosion hazard is high and increases with its slope. Natural vegetation is mixed pine and oak

woodland. Evesboro soils are concentrated in the Union Lake and Menantico Ponds Wildlife Management Areas as well as the Wawa tract.

FALLSINGTON

Fallsington soils occur only in the western half of the City in association with Downer and Aura soils. Slopes are less than one percent and are found in lower elevations. It consists of grayish-colored mottled sandy loams that drain poorly. Fallsington soils are hydric and support wetlands in many locations. Typical vegetation is pin oak, willow, swamp white oaks, and red maple with an understory of sheep laurel, blueberry, pepperbush, and gallberry. Fallsington soils are generally not suitable for development due to their poor drainage characteristics.

FORT MOTT

Fort Mott soil is a well-drained, moderately permeable soil that is associated with Downer, Sassafras and Aura soils and at one time was classified as Sassafras soil. Fort Mott are good agricultural soils, though in Millville they have generally been developed, except in the Union Lake Wildlife Management Area. Native vegetation includes white, red, scarlet and black oaks, Virginia and pitch pine, hickory, sassafras, low bush blueberry and mountain laurel.

GALLOWAY

Previously the Galloway soils were classified as the moderately well-drained Klej soils. In concert with its very rapid permeability, the soil's fertility is very low. The ground water fluctuates to a significant degree from 2 feet to more than 5 feet on a seasonal basis, generally requiring underdrains for both agriculture and deep foundations. Vegetation in its native state is mixed oak forest. This soil association constitutes less than 5% of soils in Millville.

HAMMONTON

Soils in this series tend to be moderately well-drained, nearly level loams and sands. Hammonton soils are extremely acid and support natural vegetation of white and black oaks, southern red oak, pitch pine and an understory of holly, laurel and low bush blueberry. Hammonton soil has a relatively high water table, typically requiring underdrains for normal farming and construction activities, even though the soil has relatively rapid permeability.

Hammonton soils are found primarily paralleling the White Marsh Run and Buckshetum Creek streams.

LAKEHURST

The Lakehurst and Lakewood soils derive from the Cohansey Sands geologic formation and are characterized by loose, well-drained sandy and highly acidic soils. Lakehurst soils in certain locations are poorly drained because of their proximity to marshy land, such as Atsion or Berryland. Lakehurst is lower in elevation than Lakewood soils and has a water table typically reaching to within 3 feet of the surface. Because of its sandy nature, the soil holds moisture poorly. Lakehurst supports pine trees (pitch, shortleaf and Virginia) and occasional black or white oaks. There are only slight limitations for development. The City has only small areas of Lakehurst soils found along the southern portion of Rt. 47.

LAKEWOOD

Lakewood soils are a sand and very similar to Lakeland soils (not found in Millville) but are typically deeper with a greater depth of bleached top soil. Lakewood soils are found above Lakehurst and Galloway soils. They are infertile and support only pitch pine, blackjack and scrub oaks, and low bush blueberry. Aside from isolated pockets, Lakewood soils are found east of the Maurice River and are indicative of pine barrens also found in the Pinelands. Much of the developed parts of south Millville are built on Lakewood soils. Those areas of the Wawa tract not in Evesboro soils are in the Lakewood series. Lakewood soils are typically found at lower elevations than Evesboro soils.

MANAHAWKIN

Manahawkin soils are a type of muck, with very high water tables coupled with a very high organic content and often found at the edges of tidal march lands. Those soils with the highest organic levels are peat-like in nature. The soils are highly to very highly acidic. Where the water table is highest, Atlantic white cedar dominates the vegetative community. In drier areas, red maple, black gum, and sweet bay magnolia are found. Manahawkin soils are considered hydric and indicative of wetlands. Most of this soil is found immediately adjacent to Mill Creek, White Marsh Run, Buckshetum Creek and Petticoat Creek and at the upper end of Union Lake.

MATTAPEX

Mattapex has a relatively higher water table and consequently, frost heaving can be a problem for infrastructure installation. Most agricultural fields have been underdrained to lower the water table. Septic field construction is also problematic. Mattapex soils are usually found in conjunction with Matapeake, Othello, Woodstown, Dragston and Fallsington soils. Some types of Mattapex soils have inclusions of glauconite (greensand) or clay that aggravate the high water table problem in construction.

PITS, SAND

As the name suggests, these areas indicate the creation of borrow pits where the topsoil has been removed, exposing the underlying geologic layers which are excavated for construction purposes.

PSAMMENTS

Psamments are not a soil series, *per se*, but part of a larger family of soils. They are sandy in all layers and formed in sands that were sorted by water and are on outwash plains, lake plains, natural levees, or beaches. The Psamments in Millville mainly consist of quartz sand deposited by the Maurice River in its geologic meanderings. The largest area is under the former Ball and Foster glass factory, probably sited for the quartz sand. Ground water typically is deeper than 24 inches and commonly much deeper. Psamments have a relatively low water-holding capacity. Psamments that dry out are subject to soil blowing and drifting and cannot easily support wheeled vehicles.

SASSAFRAS

Sassafras soils are found immediately down slope of Downer soils and are well-drained, loams over loose sand, gravelly sand or sandy loam. The soils are moderately permeable with low to moderate fertility. The sandier types of Sassafras have lower fertility than the loamier subtypes. The natural vegetation is mixed oak forest with occasional pine trees, though most of this land has been farmed. The eastern part of the airport complex has the largest area of Sassafras soils.

TRANSQUAKING

Transquaking soils are successively flooded by tidal waters in an estuarine environment. The water is brackish and has been classified in other areas as

tidal marsh. The soils contain a high level of organic material. The soils are very poorly drained, though the upper layers permeate water rapidly until the underlying mineral layer is met. Transquaking soils support only grasses and salt-adapted plants such as Olney three-square, salt marsh cord grass, and marsh hibiscus. This plant life supports productive wetlands wildlife habitats. Transquaking soils are found on the west bank of the Maurice River just south of the Silverton boat works and on the east bank roughly south of the extension of Orange Street.

URBAN LAND

Urban land is built up areas where the underlying soil characteristics have been mixed together from construction activities.

WOODSTOWN

The Woodstown soil found in Millville is characterized by its clayey substratum. The clay can lead to a perched water table 4 to 5 feet below the surface even when the seasonal high water table is lower. This clay severely restricts septic field use. In Millville, this soil series is generally outside of areas being served by sewer.

The majority of the soil series present only slight constraints to development. Many are agricultural soils of first and secondary importance, which also make them generally well suited for development.

FRESHWATER WETLANDS

Since 1994, the state has assumed full responsibility for the protection of wetlands from the federal government. As part of this process, the New Jersey Department of Environmental Protection has developed wetlands mapping that identifies wetlands based on one of three markers (*see* Freshwater Wetlands Map, next page). These identifiers of wetlands include: 1) the land at least periodically and predominantly supports hydrophytes (vegetation characteristically found in saturated soils); 2) the soil substrate is primarily undrained hydric soil characterized by at least long periods of oxygen starvation; and 3) the substrate is a non-soil and is saturated or covered by shallow water at some time during the growing season¹². In Millville, the Atsion, Berryland, Fallsington, Manahawkin, and Transquaking soils are all indicative of freshwater or brackish wetlands.

¹² - The three parameter approach to classifying wetlands is from the definition of a wetland by the U.S. Fish and Wildlife Service.

The New Jersey Department of Environmental Protection uses the U.S. Fish and Wildlife's classification system based on Cowardin, et al¹³ for the identification of wetlands areas. This consists of a hierarchical nomenclature encompassing a wide variety of wetlands' ecologies. Five systems are defined: Marine, Estuarine, Riverine, Lacustrine, and Palustrine (see Wetlands Illustration on the following page). The Marine system consists of the open ocean and its associated coastline. The Estuarine system includes salt and brackish marshes and the brackish waters of coastal rivers and bays. These two classifications are salt water wetlands. Freshwater wetlands and deep water habitats (water over 2 meters in depth) are either classified as river or stream based (Riverine); lake, reservoir or large pond wetlands (Lacustrine); or Palustrine encompassing forested wetlands, marshes, swamps, bogs, and small ponds¹⁴. In Millville, most of the wetlands are freshwater and classified as Palustrine. This is typical of Cumberland County and the state in general where the large majority of the wetlands acreage is Palustrine. The other classification found in Millville is Estuarine due to the tidal effects found along the lower Maurice River. In addition to these natural systems, there are other wetlands that have been disturbed by human actions, such as wetlands that have been drained and plowed for agriculture. These are considered modified wetlands.

Palustrine wetlands are the most diverse of the five classifications in terms of the type of vegetation found and of the amount of water saturation. Water saturation ranges from permanently flooded to seasonal and temporarily flooded. Palustrine wetlands also encompass some lands that are tidally flooded in the upper reaches of the Maurice River, but below Union Lake dam. There are three major undisturbed Palustrine types of wetlands that occur in Millville.

¹³ - L. M. Cowardin, V. Carter, F.C. Golet and E.T. La Roe, *Classification of Wetlands and Deep-water Habitats of the United States*, 1979, U. S. Fish and Wildlife Service.

¹⁴ - This description is based on *Wetlands of New Jersey*, by Ralph W. Tiner, Jr., U.S. Fish and Wildlife Service, U.S. Department of the Interior, July 1985.

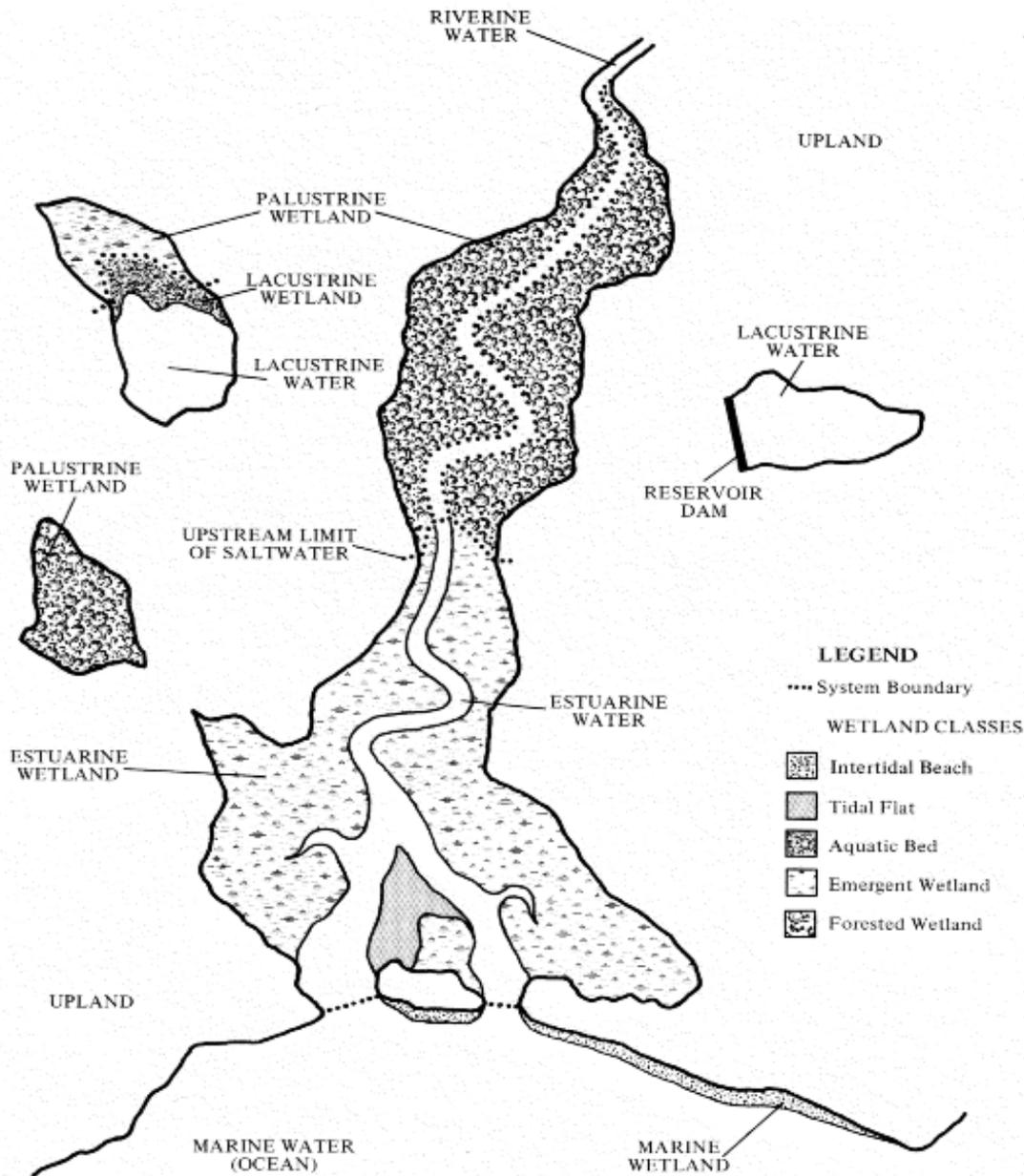


Figure 1. Illustration of the Major Wetlands Categories.

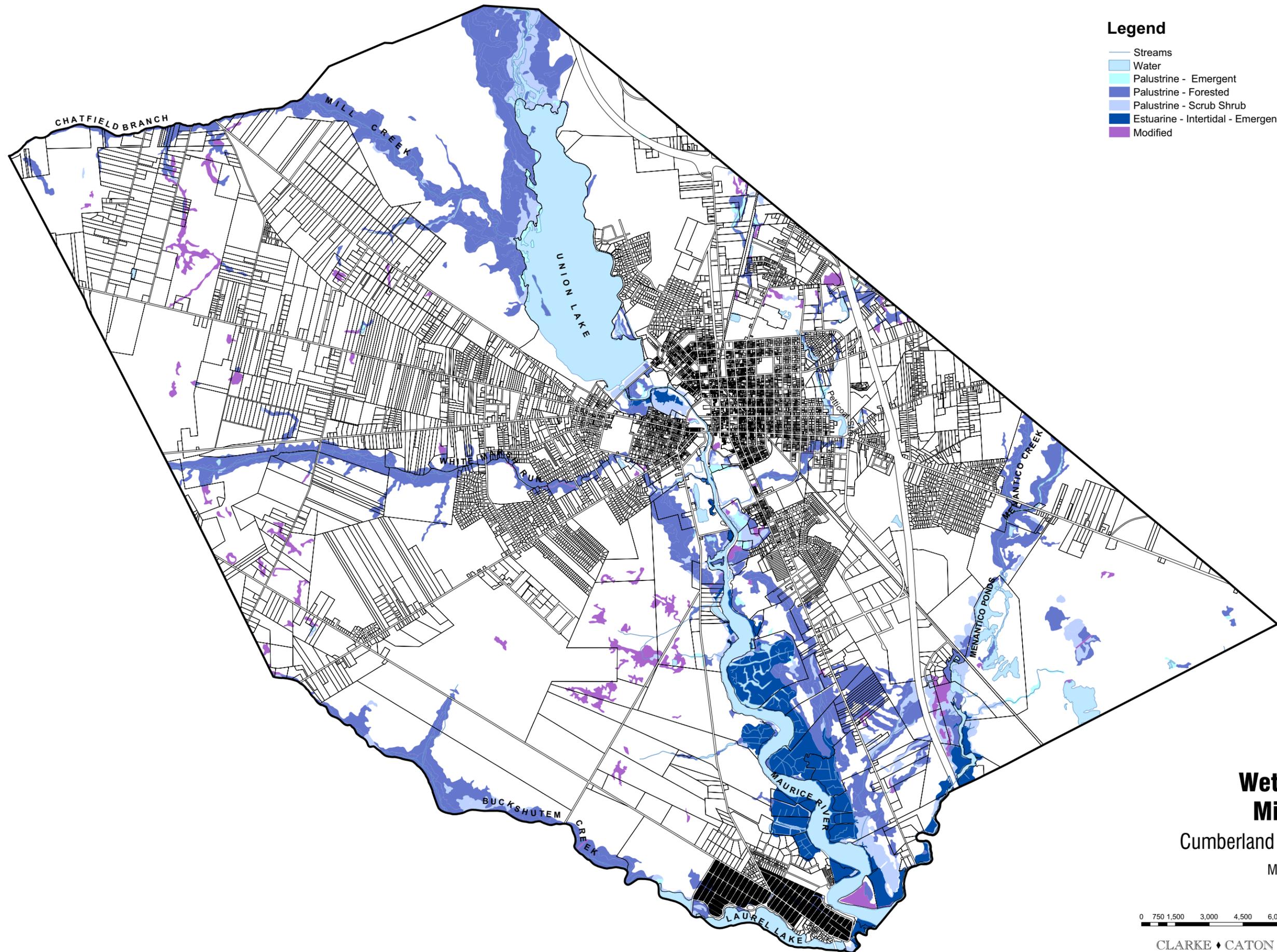
Source: *Wetlands of New Jersey*, *ibid.*

Palustrine Emergent – This category of wetlands are herbaceous in nature and are found immediately adjacent to flowing natural levees so inundation is occasional rather than constant. They are dominated by grasses, sedges, forbs and rushes. Scattered trees include red maple and willow depending on how often the land is inundated. The most extensive parts of this type are found on the western edge of Union Lake. On the Vegetative Cover map (p. IX- 20), these are identified as herbaceous and managed wetlands.

Palustrine Forested - This is the most common type of wetland in Millville and are found along all of the City's stream corridors: Mill Creek, White Marsh Run, Buckshetum Creek, Petticoat Stream and Menantico Creek and in the upper reaches of Union Lake. Mapping on the Vegetative Cover map indicates these wetlands as Deciduous Wooded Wetlands, Coniferous Wetlands and Atlantic White Cedar Swamp. These sub-classifications may be viewed as a continuum of forested wetlands dominated at one end by deciduous trees and at the other by cedars. Deciduous trees are commonly red maple, sweetgum, black gum (tupelo), and holly. Coniferous trees include Virginia and pitch pine, other evergreens require drier soil. The understory in forested wetlands typically includes pepperbush, high bush blueberry, swamp azalea, and arrowwood. The Atlantic White Cedar Swamp is populated with Atlantic white cedars, as its name suggests, and occasional pockets of red maple in drier portions of the wetlands.

Palustrine Scrub/Shrub - The Wetlands Map identifies these areas as Palustrine Scrub/Shrub and consist of similar species as the forested variety. Here, however, vegetation is less than 20 feet tall and is dominated by shrub species rather than trees. Aside from the shrubs also noted in the preceding paragraph, St. John's wort, sheep laurel, fetterbush, inkberry, and chokeberries are found. Saplings are typically red maple or Atlantic white cedar. Depending on subsequent conditions, these may accrete enough soil to become forested wetlands over time. The largest area of this type of wetland is found in the Menantico Creek watershed.

Estuarine Intertidal Emergent – The Estuarine system is both deepwater habitat and adjacent tidal wetlands partially enclosed by land. Since the land is inundated by the tides, it is called intertidal and the water is brackish. In Millville, these are tidal marshes dominated by sedges, rushes and forbs. These wetlands are almost exclusively located in the lower stretches of the Maurice River and Menantico Creek.



**Wetlands
Millville**
Cumberland County
May 9, 2005



CLARKE ♦ CATON ♦ HINTZ
400 Sullivan Way ♦ Trenton, NJ ♦ 08628

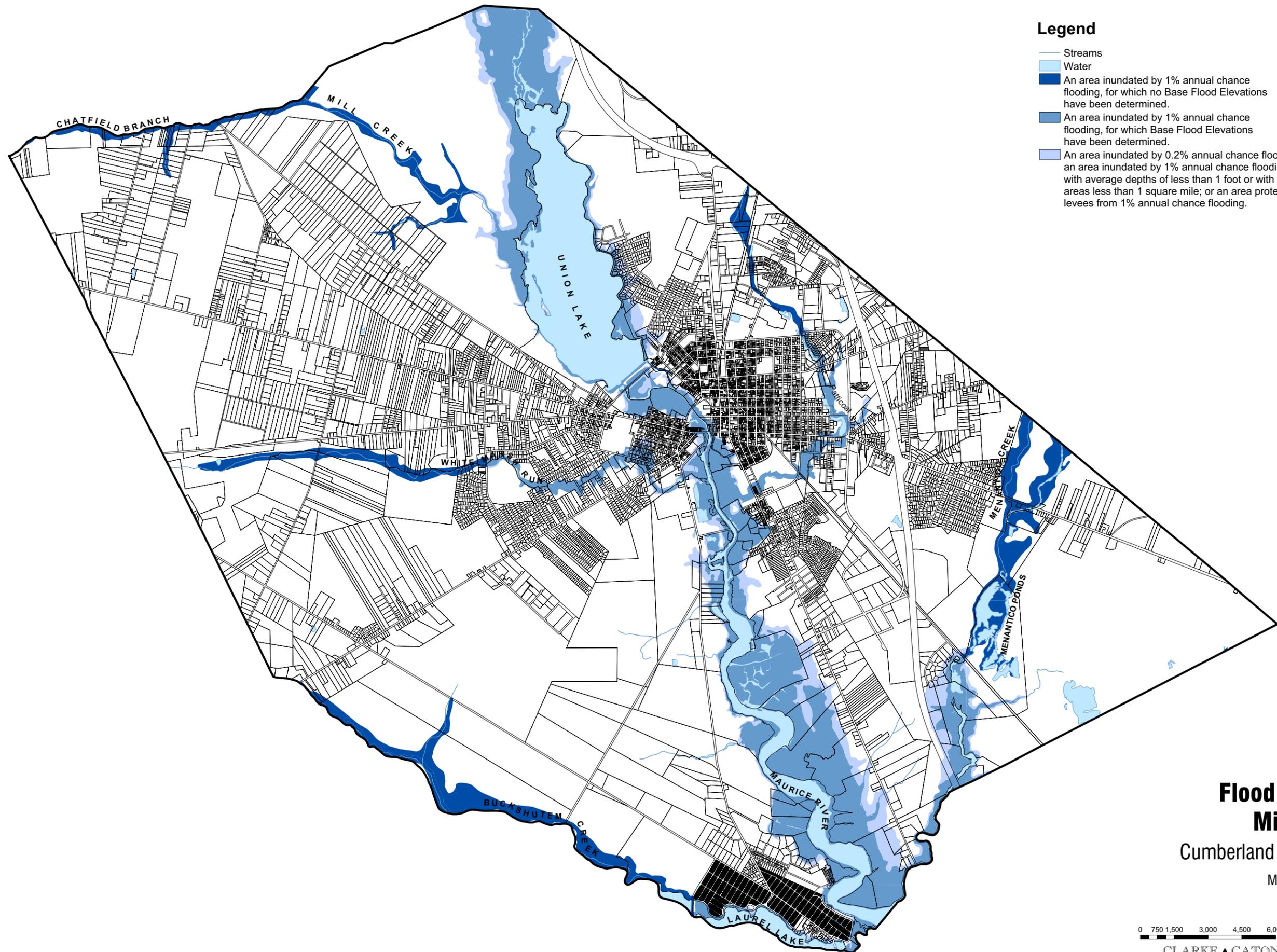
FLOOD PRONE AREAS

"Flood Prone" is a measurement of the danger or probability of flooding. This can result from the overflowing of a body of water onto adjacent land, but can also occur as the result of a rise in the water table, so that land becomes soaked at the subsurface level. The level or nearly level areas on either side of a water course or body created by successive and cyclical inundation and erosion is typically classified as a flood prone area. The state Department of Environmental Protection uses the "flood prone" description to include the flood plains that have been the subject of detailed engineering studies plus those areas outside of the study region that would likely flood based on aerial photography and topography. Flood prone areas in Millville are depicted on the Flood Area map on the following page.

For purposes of measuring hazards in flood prone areas, 100-year and 500-year flood plains are determined. The flood plains are based on a probability that a storm of a certain magnitude will occur once every 100 years or 500 years, respectively, and cover the land to the extent shown on the flood prone map. The delineation of these regulatory boundaries is based on the engineering studies noted above that examine the specific watershed. The study analyzes the land area of the drainage basin, the amount of impervious cover, slope, and the capacity of the stream channel. The flood hazard area is composed of three parts: 1) the stream channel, which is the bed of the stream and contains normal flows; 2) the floodway, which is the area on either side of the stream of fast moving water in a flood; and 3) the flood fringe or 500-year level which is slower water at the edges of the floodway. Since the floodway is intended to contain all of the fast moving water of a 100-year flood, state regulation seeks to keep this area free of obstructions.

The State has established a policy of limited construction in flood prone areas that requires permitting from NJDEP. Municipalities are required to adopt ordinances that enforce the state statutes, including engineering details to minimize flood damage and adhere to net fill requirements. Millville has adopted a flood damage prevention ordinance that also meets the criteria for inclusion in the federal flood insurance program.

In areas outside of flood prone areas, provision need only be made for adequate drainage of each site to prevent local flooding – technically called ponding. Flood prone areas are best suited for conservation and passive recreational purposes and many of these areas are identified as open space sites on the Land Use Plan map.



Legend

- Streams
- Water
- An area inundated by 1% annual chance flooding, for which no Base Flood Elevations have been determined.
- An area inundated by 1% annual chance flooding, for which Base Flood Elevations have been determined.
- An area inundated by 0.2% annual chance flooding; an area inundated by 1% annual chance flooding with average depths of less than 1 foot or with drainage areas less than 1 square mile; or an area protected by levees from 1% annual chance flooding.

**Flood Plain
Millville**
Cumberland County

May 9, 2005



CLARKE ♦ CATON ♦ HINTZ
400 Sullivan Way ♦ Trenton, NJ ♦ 08628

VEGETATIVE COVER

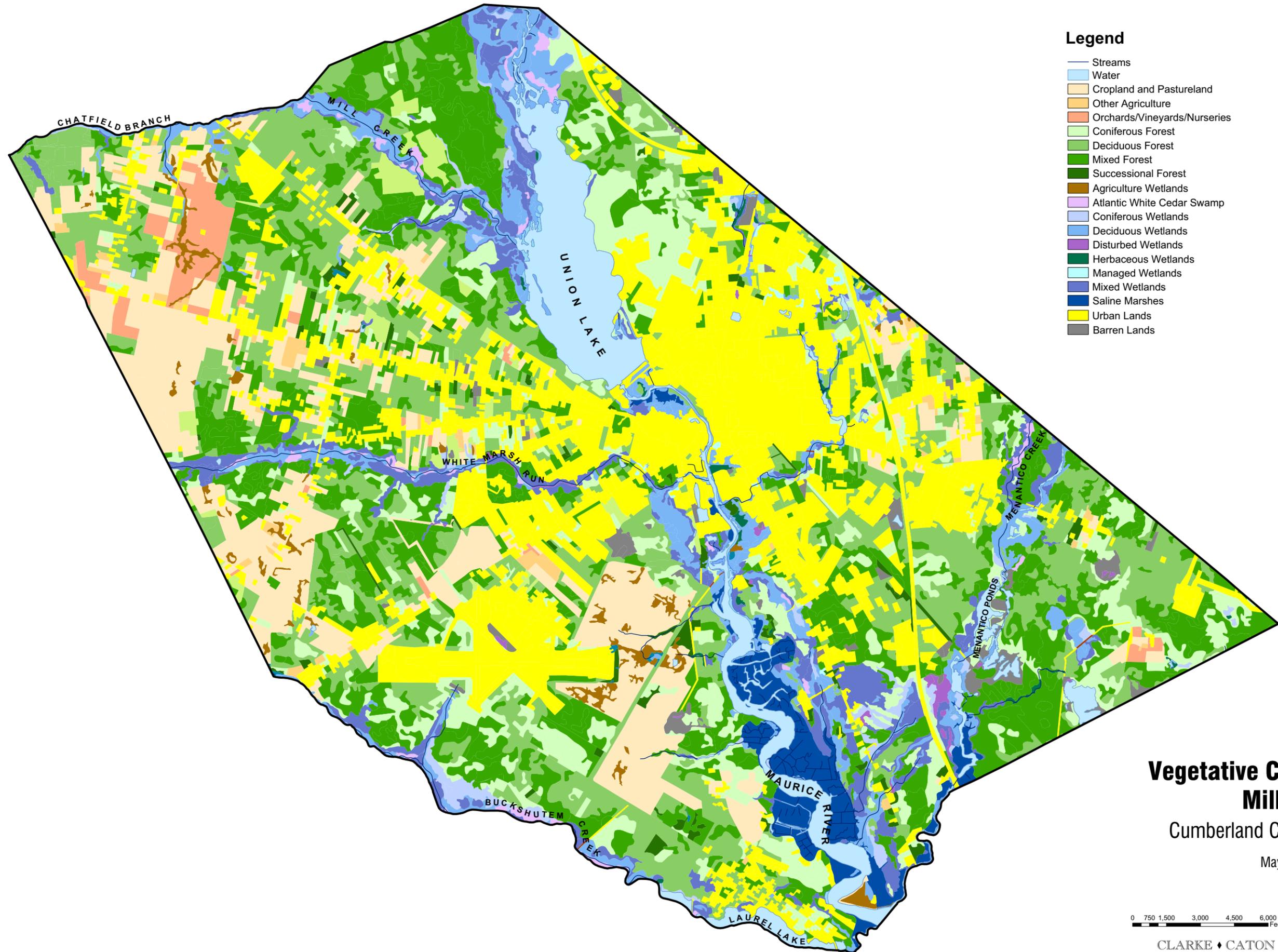
The types of vegetation in Millville vary widely depending on soil and groundwater conditions, extent of agricultural activities and intensity of development. Vegetative cover in the City, however, can be broadly divided into six categories. These six types plus urban land and open water account for all of the land area in the municipality, as indicated in the following table:

Table IX-1. Vegetation Categories in Millville.

Vegetative Cover Category	Percent of Total land area
Cropland, Orchards, Pastureland and Nurseries	12.0%
Deciduous Forest	21.8%
Coniferous Forest	9.7%
Mixed Forest	23.1%
Successional Forest	1.9%
Shrubs, Grasses and Reeds	3.4%
Urban Land	21.8%
Water	5.3%
Total	100.0%

Source: NJDEP and CCH Calculations.

This table differs from the examination of land cover in the Land Use Plan Element by classifying vegetation without regard for upland versus wetlands areas. The legend on the Vegetation Cover Map provides a greater level of detail than indicated in the table. These types of vegetation are important in the analysis of threatened and endangered species. Animal and plant populations prefer certain types of habitat that is usually related to types of vegetation and water conditions available.



**Vegetative Cover
Millville**

Cumberland County

May 9, 2005



CLARKE ♦ CATON ♦ HINTZ
400 Sullivan Way ♦ Trenton, NJ ♦ 08628

Source: New Jersey Department of Environmental Protection

Policy Issues

TREE MANAGEMENT

The Vegetative Cover Map in the previous section includes an urban land category that implies an area of no vegetation. However, the quality of the landscape in urban lands has a strong influence on the physical attractiveness of a place. Trees located along streets and within parks and yard areas create an “urban forest” in the City, which can be viewed as an important natural resource and aesthetic benefit. The environmental, aesthetic, financial and social benefits of an urban forest have been well established. Studies have consistently shown that a well-established street tree canopy supports property values and positive perceptions of a City’s quality of life.

Urban trees have a positive influence on climate. Trees help reduce global warming and they modify local climate by reducing urban “heat island” temperatures in summer, while admitting sunlight for heating in the cooler months. Urban trees also provide significant benefits by improving air quality and reducing noise. Urban-adapted species typically use the tree cover as their habitat.

These factors suggest the establishment of a stronger program of tree planting in the City, as well as more specific requirements for the protection and retention of trees during the site construction process and for tree planting.

GREENWAYS AND STREAM CORRIDORS

In Millville, there is an emphasis by land trusts on the acquisition of land along stream corridors. While greenways are often stream corridors, they may also have other meanings as defined below:

- 1) A linear open space established along either a natural corridor, such as a river front, stream valley, or ridge line;
- 2) An open space connector linking parks, natural reserves, cultural features, or historic sites with each other and with populated areas;
- 3) Any natural or landscaped course for pedestrian or bicycle passage, or overland along a railroad right-of-way converted to recreational use, a canal, a scenic road, or other route; or

4) Locally, strip or linear parks designated as a parkway or greenbelt.¹⁵

The Conservation Element primarily concerns itself with the first two types of greenway and particularly the first item where a greenway or stream corridor can follow a natural pathway and link wildlife habitats. The third and fourth types are discussed in the Circulation Element and pertains to the White Marsh Run trail and downtown promenade, respectively. Stream corridors include the water course or body, flood plain and flood fringe area. Typically including Millville, the stream corridor also includes freshwater and tidally influenced wetlands as well as associated uplands. Establishing greenways along stream corridors allows the creation of an interconnected open space system, provides filtering of urban runoff and allows wildlife movement.

Even though the regulation of much environmentally sensitive land is preempted by state law, separating buildings from stream corridors also has benefits that form the basis to support regulation at the local level through zoning and site development regulations. Setback requirements from a stream or pond can be used to regulate the relationship between buildings and natural resources. This is important because a purchaser of residential property, for example, has certain expectations about the use of the parcel which include outdoor household activities. A usable yard area that is free of wetlands, wetlands transition areas and flood plain will lower the potential for encroachments into regulated land, thus helping to preserve its ecological and habitat function.

Horizontal distance from a stream permits filtering of storm water that may carry sediment and pollutants from urbanization and farming. This is the theory behind the recent establishment by NJDEP rule of a 300 foot wide buffer for Category 1 streams, also commonly called trout production streams. Category 1 designation, “targets water bodies that provide drinking water, habitat for Endangered and Threatened species, and popular recreational and/or commercial species, such as trout or shellfish. Waterways can be designated Category One because of exceptional ecological significance, exceptional water supply significance, exceptional recreational significance, exceptional shellfish resource, or exceptional fisheries resource.”¹⁶

¹⁵ - From *Greenways for America*, Charles E. Little, The John Hopkins University Press, Baltimore, 1990.

¹⁶ - <http://www.state.nj.us/dep/cleanwater/c1.html>

At the present time, there are no streams that have been officially designated as Category 1 in Millville, primarily because the criteria for inclusion require a level of oxygen that is not present in slow moving South Jersey streams. However, the intent of NJD EP is to broaden the definition to include additional streams that do not technically meet the existing criteria but that serve ecologically important functions. Towards that end, NJDEP has nominated additional streams for Category 1 status. Adding streams to the Category 1 list requires the normal state rule making process of adoption, comment period and rule publication. In Millville, portions of the Maurice River and its tributaries have been nominated. These include the Chatfield Branch of Mill Creek, the Berryman Branch of the Menantico Creek, Petticoat Creek, White Marsh Run and Buckshetum Creek. The Chatfield Branch is the portion within the Union Lake WMA, Petticoat Creek is the area within the floodplain of the Maurice River, and White Marsh Run and Buckshetum Creek those portions within the Edward Bevan WMA. State mapping suggests that the Maurice River stream corridor nominated for Category 1 status extends northward to the mouth of White Marsh Run, just below Rt. 49. If that is the case, the City's ability to utilize the river for recreational purposes may be compromised. Category 1 for the lower Maurice River (encompassing the federal Scenic and Recreational area) could become costly for the City. The City's sewage treatment plant discharges to the Maurice River just north of the federal designation. While the plant is currently compliant with NJDEP regulations, assigning it Category 1 status raises it to an anti-degradation standard that may not be able to be met technically and in any event would be expensive. It may also make any future expansion of plant capacity impossible. Continued monitoring of Category 1 status in the rule-making process is essential to ensure the feasibility of implementing the Master Plan's policies for riverfront development as well as other development or redevelopment in the City.

Except for the Maurice River in the center city area and the Petticoat Stream, stream corridors in Millville are relatively intact. Thus establishing greenways as a swath of land to be preserved is viable in many locations. The Conservation Plan (at the end of the element) follows this philosophy by indicating areas where development is to be avoided and land conserved to the degree feasible. (The full intent of the Conservation Plan is discussed in a later section.) The greenways can encompass many of the functions necessary for healthy streams. What constitutes a healthy stream has changed over time through reductions in the allowable pollutant and nutrient loads (dissolved solids, dilution of liquids and amount of particles) in the water. The State Planning Commission examined the distance requirements for various stream

functions as part of its technical background for the first State Plan¹⁷. A review of research reports resulted in these recommended guidelines:

Table IX-2. Buffer Widths for Different Stream Functions.

<u>Stream Function</u>	<u>Buffer Width</u>
Stream bank stabilization	25-50 feet
Sediment control	65-150 feet
Nutrient removal	65-150 feet
Food energy	25-50 feet
Temperature control	50-80 feet
Fish cover	25-50 feet
Wildlife habitat	100-330 feet

Over time, because of additional research and a tightening of allowed stream loading, the recommended widths for sediment control and nutrient removal have been increased to 300 feet (at least for Category 1 streams and as wetlands buffers in the Pinelands). Clearly, if there had been a 300 foot setback requirement for streams since the earliest days of New Jersey, stream water quality would be substantially better. However, given the level of development along streams that exists today, more mechanical means of handling storm water runoff and effluent from sewage treatment plants is indicated, rather than 300 foot buffers that would render useless the opportunity to reuse existing buildings and allow infill development to absorb growth and relieve pressure to develop greenfield sites.

The City's land development regulations could be revised in a common sense way to set back structures from the top of stream banks and retain vegetative edges in order to gain most of the benefits of sediment control, bank stabilization and nutrient removal. A discussion on buffers for wildlife is found in the Habitat Protection section.

As noted, greenways can also function as an open space amenity for recreational trails. However, by definition greenways frequently encompass environmentally sensitive lands. The institution of any trail system must be designed to minimize disturbance to animal and plant habitats and avoid erodible soils. If the construction of a trail system entails crossing wetlands, a state permit is required. When this occurs, the criteria for the issuance of a permit limits a path to 6 feet constructed of gravel or wood chips or a boardwalk

¹⁷ - *The New Jersey Freshwater Wetlands Protection Act As It Relates to Stream Corridor Buffer Considerations in the State Development and Redevelopment Plan*, January 11, 1988, Rogers, Golden & Halpern, Philadelphia, PA.

to elevate the path above the ground. The trail alignment is also inspected for any endangered or threatened species. A clearly marked and maintained trail is best for confining human impacts to the pathway so that the “zone of disturbance” affecting wildlife is limited. This also allows animals to be habituated to periodic human activity in the same location.

HABITAT PROTECTION

The Division of Fish and Wildlife in the NJ Department of Environmental Protection have mapped the location of sightings of threatened and endangered species in Millville as part of their “Landscape” project. In the discussion of habitat protection there is an important distinction to be made over policies appropriate to the scale of “Landscape” mapping in comparison to more site specific discovery and protection of important animal and plant species. “Landscape” is a regional land area consisting of multiple square miles that is more expansive than the boundaries of a municipality. The Maurice River watershed is a good example of a Landscape region. Within the Landscape area, there are different characteristics of vegetation, soil and water that create a mosaic suitable for particular species. Where these characteristics create a geographically defined habitat - such as where grassland meets a deciduous forest - they are called patches. Different species can overlap in their use of patches or be complementary in how they are used, creating a wildlife or vegetative community. These patches and communities are replicated in the Landscape in different places where the proper environmental conditions exist. Habitat patches may occur commonly within the Landscape (or conglomerations of Landscapes) or may be rare. The size of patches depends on the species to be protected and the ability of flora and fauna to adapt to human activities. Development can lead to the fragmentation of habitat by changing the vegetative cover of an area and by introducing human activities into a new area. Since development occurs incrementally at a smaller scale than the many square miles of the Landscape, a different set of policies is needed to address habitat protection at the local level. In contrast to the coarse scale of the Landscape project, “Site” management policies are at a much finer scale. It is inappropriate to apply Landscape strategies for species protection at the Site management level. The Conservation Element can be viewed as being intermediate between these two methods of examining habitat protection.

Millville has been the focus of substantial efforts by the State of New Jersey and non-governmental organizations to acquire land for conservation purposes. Examining the regional Landscape picture, Millville is in between the New Jersey Pine Barrens under the jurisdiction of the Pinelands Commission and the Delaware Bay Estuary where state regulations strictly control development. Land acquisitions and land use policy have been used at a broad

scale to protect habitat at the Landscape level in these areas. Many of these efforts have come together through the desire to protect threatened and endangered species. Elected officials from the federal to the local level, government agencies and non-governmental groups worked together to obtain a federal designation of the lower Maurice River (below the sanitary sewage treatment plant) as a Scenic and Recreational River in 1993. The National Park Service considers the Maurice River corridor, "...an unusually pristine Atlantic Coastal river with national and internationally important resources" as well as, "a critical link between the Pinelands National Reserve and the Delaware Estuary."¹⁸ It is thus important to recognize Millville's place within the larger Landscape picture but equally important to understand the limits of what can be achieved given the long settled nature of the City, its existing development and the legislative framework within which it operates.

Millville's urbanized area is about 22% of its land area. Even though the City has a concentration of developed land in center city, urbanized areas have expanded out along arterial roads throughout much of Millville. An additional 12% or so of the land area is in active farming use which also affects wildlife. Transportation systems, such as the airport, roads and railroad contribute about 3% of the total land area. This dispersion of man-made activities throughout most of Millville has created fragmented habitats. The areas most removed from human activity are likely to have the most intact habitats and the largest biodiversity (range of different species). In general, these are located around the perimeter of Millville, except for its northern boundary with Vineland. The fragmentation of habitats occurs not only from the actual loss of habitat but by the disturbance zone, or the distance from the new development to the habitat. In areas with forest cover between houses, for example, certain birds used to human activity will remain but others will avoid the area. Most of the land area in Millville, perhaps two-thirds, has fragmented habitat due to human/wildlife conflicts.

Given the discontinuity of habitat in Millville, several measures should be emphasized. The first is to ensure that patches of similar habitat remain to bridge the distance between the larger preserved (or core) areas at the Landscape scale. Examples of core areas are the Union Lake and Edward Bevan Wildlife Management Areas. This is most important where threatened or endangered species are known to exist. The second is to implement a number of principles designed to preserve habitat at the Site scale. The third, since it is not possible to preserve or protect all sites, is to emphasize the

¹⁸ - <http://www.nps.gov/rivers/wsr-maurice.html>

protection of particular lands that serve the most species or that are rare within the whole Landscape environment.

Patches of similar habitat may be feasibly linked through greenways and stream corridors. High value corridors have continuous or nearly continuous connections. For example, the lower Maurice River corridor provides a jumping off point to reach the Union Lake Wildlife Management Area for bird species and even for night movements of mammals. The river corridor has similar vegetative cover, except that the lower Maurice River also has tidally influenced emergent wetlands in addition to forested areas. The Conservation Plan utilizes this idea in depicting stream corridors as continuous ribbons of areas of special concern for habitat protection.

The need for habitat protection is strongest for threatened and endangered species. The NJ Department of Environmental Protection, consistent with federal statute, defines non-game species in the following manner:

- *Endangered* - Applies to a species whose prospects for survival within the state are in immediate danger due to one or several factors, such as loss or degradation of habitat, over-exploitation, predation, competition, disease or environmental pollution. An endangered species likely requires immediate action to avoid extinction within New Jersey.
- *Threatened* - Applies to species that may become Endangered if conditions surrounding it begin to or continue to deteriorate. Thus, a Threatened species is one that is already vulnerable as a result of, for example, small population size, restricted range, narrow habitat affinities, and significant population decline.
- *Special Concern* - Applies to species that warrant special attention because of some evidence of decline, inherent vulnerability to environmental deterioration, or habitat modification that would result in their becoming Threatened. This category would also be applied to species that meet the foregoing criteria and for which there is little understanding of their current population status in the state.
- *Stable* - Applies to species that appear to be secure in New Jersey and not in danger of falling into any of the preceding the categories in the near future.
- *Undetermined* - A species about which there is not enough information available to determine the status.

The categories of Threatened and Endangered are listed through the administrative rule making process whereas the other categories do not have statutory protection.

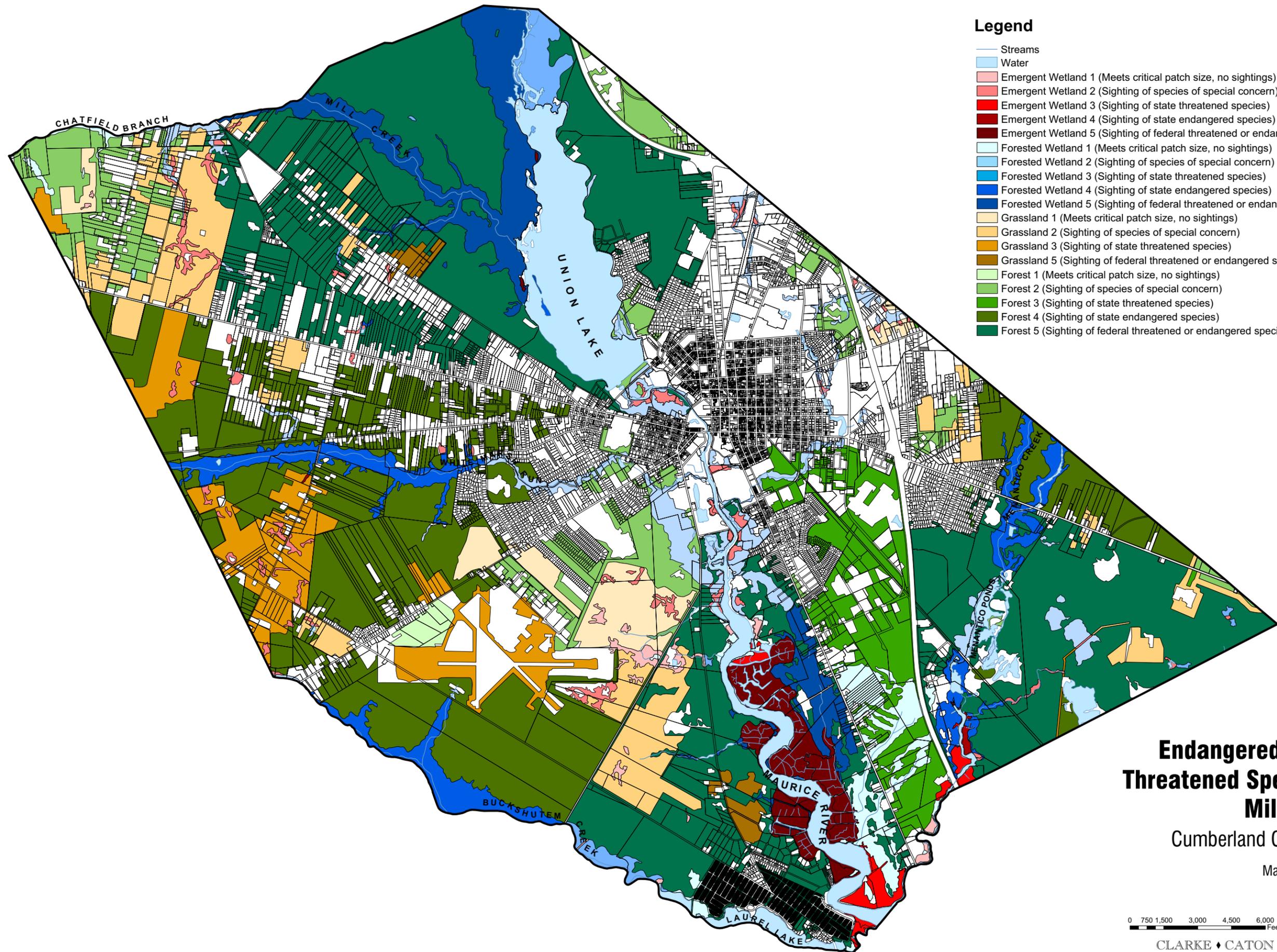
On the following page is a map based on NJDEP criteria that classifies threatened and endangered species habitat by four broad vegetative types: emergent wetlands (grasses and sedges), forested wetland (typically deciduous trees and cedars), grassland (cleared areas in ground cover) and forest (deciduous or evergreen).

Within the broad vegetative classes depicted on the Threatened and Endangered Species map, there are five levels that depend on the sightings of species. These include: 1), a patch of habitat of the necessary size (e.g. critical size) where there has been no sightings; 2), a sighting of a species of special concern; 3), a sighting of a state threatened species; 4), a sighting of state endangered species; and 5), a sighting of a federally listed threatened or endangered species.

The map necessarily paints a broad brush of the species that are listed. If one sighting is made in the Union Lake Wildlife Management Area, for example, the entire 5,000 acres is included. The imprecision of the mapping is deliberate so that important habitat is not disturbed by human beings. While the real extent of endangered and threatened species is not known, it is clear that Millville provides habitat to many species. The list of threatened and endangered species maintained by the state is listed in the appendix.

Maintenance of habitat for threatened and endangered species at the Landscape level is best addressed by the state that has the personnel and resources to conduct studies, plan and implement land acquisition or conservation easements for important habitats, and promulgate regulations. Clearly, non-governmental organizations can and have supplemented these efforts. From a land use perspective, land intended for conservation purposes should have limited development potential consistent with well-established property rights.

Protecting Habitat at the Site level is appropriate for the municipality to address since its organizational structure lends itself to examining site specific issues and concerns. At this level, the main question to be answered is, How can wildlife habitat be maintained alongside development for human use? The goal is to achieve a balance between the needs of people living in the community and the needs of wildlife. In Millville, while there is general knowledge that threatened and endangered species exist in certain areas, there is a lack of site specific information.

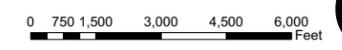


Legend

- Streams
- Water
- Emergent Wetland 1 (Meets critical patch size, no sightings)
- Emergent Wetland 2 (Sighting of species of special concern)
- Emergent Wetland 3 (Sighting of state threatened species)
- Emergent Wetland 4 (Sighting of state endangered species)
- Emergent Wetland 5 (Sighting of federal threatened or endangered species)
- Forested Wetland 1 (Meets critical patch size, no sightings)
- Forested Wetland 2 (Sighting of species of special concern)
- Forested Wetland 3 (Sighting of state threatened species)
- Forested Wetland 4 (Sighting of state endangered species)
- Forested Wetland 5 (Sighting of federal threatened or endangered species)
- Grassland 1 (Meets critical patch size, no sightings)
- Grassland 2 (Sighting of species of special concern)
- Grassland 3 (Sighting of state threatened species)
- Grassland 5 (Sighting of federal threatened or endangered species)
- Forest 1 (Meets critical patch size, no sightings)
- Forest 2 (Sighting of species of special concern)
- Forest 3 (Sighting of state threatened species)
- Forest 4 (Sighting of state endangered species)
- Forest 5 (Sighting of federal threatened or endangered species)

**Endangered and
Threatened Species
Millville**
Cumberland County

May 9, 2005



CLARKE ♦ CATON ♦ HINTZ
400 Sullivan Way ♦ Trenton, NJ ♦ 08628

Source: New Jersey Department of Environmental Protection

Proposals for large developments should be accompanied by a habitat conservation plan that studies an area for all species of special concern and if found, include recommendations for habitat preservation. A habitat conservation plan should be designed based on the following objectives:

- 1) Establishment and maintenance of buffers between areas dominated by human activities and core areas of wildlife habitat.
- 2) Facilitation of wildlife movement across areas dominated by human activities.
- 3) Minimizing human contact with large native predators (e.g., black bear).
- 4) Controlling the numbers of predator pets (e.g. cats and dogs) and other species common to human-dominated areas.
- 5) Mimicking features of the natural landscape in developed areas¹⁹.

The objectives that are noted above provide a means of evaluating the effectiveness of the habitat conservation plan. Where needed, they should be incorporated into revisions to the City's land development regulations. The habitat conservation plan should first seek to address what species should be protected. Locations with rare habitat and endangered species should be the first priority in preservation. Development should be steered to locations within a site that have locally or regionally common habitat and no threatened or endangered species. Between these two extremes, choices will need to be made about the species that should be protected and the means to accomplish it based on accepted scientific criteria. Further, there is no perfect plan that will equally protect species and still allow normal human activities – compromise will be required. Buffers for habitat protection will vary depending on the species to be protected. Road placement will need to be carefully undertaken and the means of allowing wildlife movement, if the roads affect it, designed into the development project.

The habitat conservation plan will function most effectively in the large scale planning that occurs in the planned unit or planned residential development review process. In Millville, these tend to be cluster developments that can be designed around areas of a specific site that should be preserved habitat. Opportunities for the restoration of habitat should also be explored where areas have been cleared as part of prior human activities before site development.

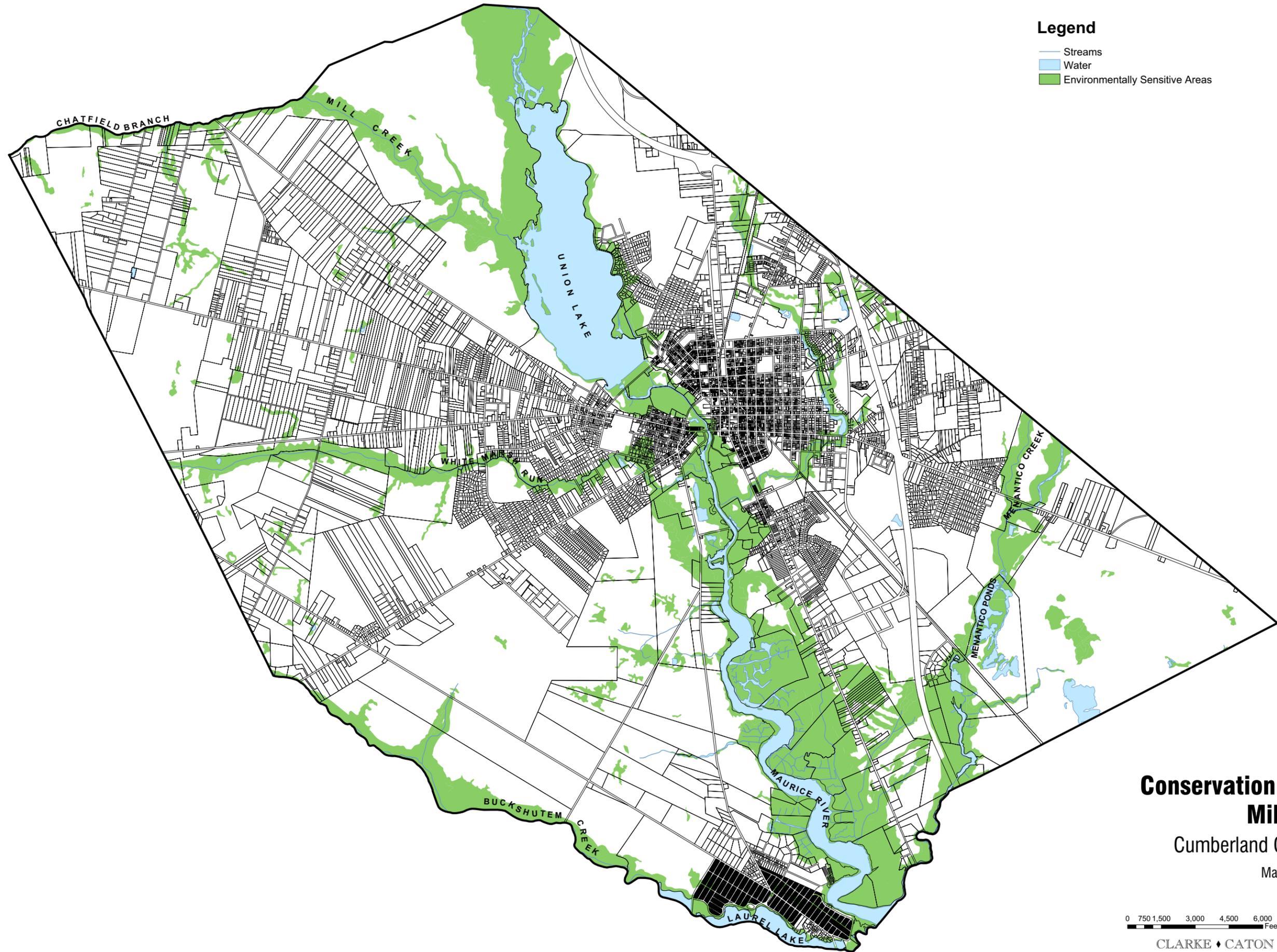
¹⁹ - Adapted from *Habitat Protection Planning: Where the Wild Things Are*, Duerksen, et al., 1997, American Planning Association, Chicago.

USE OF COMMON OPEN SPACE

Planned residential development under a number of the City's zoning districts typically require a substantial amount of land in open space. This open space is usually held in common by the owners residing in the development. Land that is being developed for housing is usually built either on agricultural land or in woodland. Maintaining agriculture as a viable economic use is increasing difficult and notwithstanding right-to-farm legislation, conflicts occur between urbanizing areas and farm operations. Based on this rationale, common open space should generally be planted with native tree and understory vegetation as opposed to lawn or maintaining the land in agriculture. Over time, woodland will be established that will also provide future habitat to wildlife.

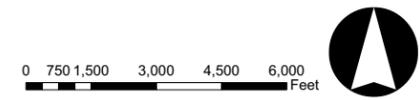
CONSERVATION POLICY RECOMMENDATIONS SUMMARY

- 1) Implement a stronger street tree planting program, tree protection standards, and improved site landscaping requirements.
- 2) Examine the feasibility of establishing setbacks from stream banks for buildings and impervious surfaces. Determine if minimal disturbance paths can be created as recommended in the Circulation Element.
- 3) Closely monitor developments with the designation of Category 1 streams as they affect Millville.
- 4) Require habitat protection plans for large scale development.
- 5) Encourage woodland rather than lawn or agriculture for open space held in common by a homeowner's or condominium association.



- Legend**
- Streams
 - Water
 - Environmentally Sensitive Areas

**Conservation Plan
Millville**
Cumberland County
May 9, 2005



CLARKE ♦ CATON ♦ HINTZ
400 Sullivan Way ♦ Trenton, NJ ♦ 08628

X. Economic Development Element

INTRODUCTION

The vitality and health of a community are integrally linked to its economic structure and function. Historically, the fundamental basis for the existence of cities and regions was economic – the production and exchange of goods and services with other regions to generate an income flow. The potential for growth in a community is therefore directly correlated to the specialized economic activities occurring within its physical boundaries. The day-to-day reality of local economic development are efforts to attract new employers, create opportunities for existing businesses to expand, deliver public services and supporting infrastructure efficiently, provide a sound education, and coordinate housing policies and programs for an expanding population.

The potential for future growth and development can be enhanced by a well-formulated economic development program based on public-private partnerships. With well-defined goals and objectives, this element updates the Master Plan by outlining and approach to community and economic development that is rooted in economic reality and a balanced approach to growth and conservation. This strategy is designed to marshal and expend available resources in an effective and coordinated manner, directing development to areas targeted for infrastructure improvements. As the competition for new jobs and investment becomes increasingly vigorous, it is critical for a community to have a strategic plan that meets challenges head-on and allocates resources based on established priorities and well-defined goals. Such a plan encourages expanded economic opportunities for the purpose of improving the quality of life for local residents.

Since the writing of the 1997 Master Plan, the pace, scope, and scale of economic development has reached unprecedented levels. The City is now in the unfamiliar position of being very selective about the types and locations of commercial and industrial development. Nationally recognized developers have proposed large-scale projects in the City's commercial corridors and industrial parks. These developers have been attracted to the affordable cost of land, a variety of financial incentives, regional access via three state highways, an available labor force, and the state's second largest general aviation airport.

This unprecedented level of economic development activity ironically has come at a time of increasing state regulation through new environmental initiatives and the "Smart Growth" principles of the State Planning

Commission. During the term of this Master Plan, Millville will have to adapt to new water allocation and stormwater regulations, the landscape project and new threatened and endangered species regulations, designation of Category One waterways, and State Plan designated planning areas. In 2004-2005, the City will proceed through the State Plan Cross Acceptance process as well as Plan Endorsement Process of the State Planning Commission, in which the Master Plan will be reviewed for consistency with the State planning objectives and policies. All of these pending and recently enacted regulations factor into the debate between economic development and preservation of resources. As stated in the other elements of the Master Plan, the City recognizes the environmental sensitivity of certain lands, particularly in the Maurice River corridor, and has taken measures or in other ways supported the permanent preservation of these lands. Nearly one-quarter of all land in Millville is presently permanently preserved by NJDEP or private conservation organizations. At the same time, the City feels economic growth can be encouraged while simultaneously preserving sensitive parcels. In brief, this is the City's definition of "smart" or "balanced growth".

This Economic Development Element will serve a number of purposes. First, the policies of this element provide the supporting material for zoning designations and land use decisions. Secondly, the economic development goals and policies are essential for strategic planning documents required by regional, State and federal agencies, including NJ Economic Development Administration, US Economic Development Authority, the Cumberland Empowerment Zone and the Vineland-Millville Urban Enterprise Zone. This element provides the background and policy framework that many of these agencies require to be referenced in their applications or grant reports. Finally, this element serves as a guide to the private sector by establishing clearly the areas designated for public infrastructure investment and future growth.

NEW DEVELOPMENTS SINCE THE 1997 MASTER PLAN

Since the completion of the last Master Plan in 1997, several significant projects have been completed and represent new or expanded development activity in the City.

EXPANSION OF MILLVILLE AIRPORT

In 1999, the City of Millville entered into a 30-year lease agreement with the Delaware River and Bay Authority to operate the Millville Airport. This agreement is renewable for two additional 30-year terms. With its vast

economic development resources from the operation of the ferry system and Delaware Memorial Bridge, the DRBA will run the daily operations and maintenance of the airport, while working in partnership with the City and the county to expand the number of air-related industries at the facility and to improve infrastructure. As part of the DRBA takeover, the agency assumed all of the City's long-term airport debt.

The Cumberland Empowerment Zone and US Economic Development Administration contributed a significant amount of funding for the construction of two multi-tenant hangars and new access road to the airport. Thunderbolt Drive provides direct airport access from Cedarville Road. One multi-tenant hangar, 34,000 sf. constructed at a cost of \$9 million is the home of Air Castle, one of the nation's largest aviation charter companies. The second hangar is 40,000 sf. and is available for aviation-related businesses.

In 2003, the City of Millville purchased 820 acres of undeveloped land adjacent to the airport, with frontage on Dividing Creek Road. This land was purchased from Better Materials as additional land for airport industrial development. The City plans to develop a second airport industrial park with access from both Bogden Boulevard and Dividing Creek Roads. The first phase of this project, estimated to cost \$5 million, includes the construction of a road system and extension of water and sewer services.

One of the primary constraints to future development at the airport is direct access utilizing existing roadways. In 2003, the county authorized a study of airport access circulation. This study provided several different recommendations for improved access. These recommendations are discussed in the circulation element.

Finally, one of the recommendations of the 1997 Master Plan was to demolish some of the dilapidated, original barracks buildings on the airport. These buildings have had a number of uses over the years and are in very poor condition. The DRBA had a preliminary historic assessment done for the original area of army operations. This study recommended a specific area for an historic district which will allow many of the substandard buildings to be demolished.

REDEVELOPMENT AREAS

In 1991, the State legislature overhauled a number of blight, housing, redevelopment and tax abatement statutes and combined them into one comprehensive law called the Local Redevelopment and Housing Law. This new approach made it simpler to use redevelopment procedures to address

blighting influences before they become overwhelming, offer tax abatement to qualified redevelopers, and relate the goals of redevelopment to the overall goals and objectives of the Master Plan.

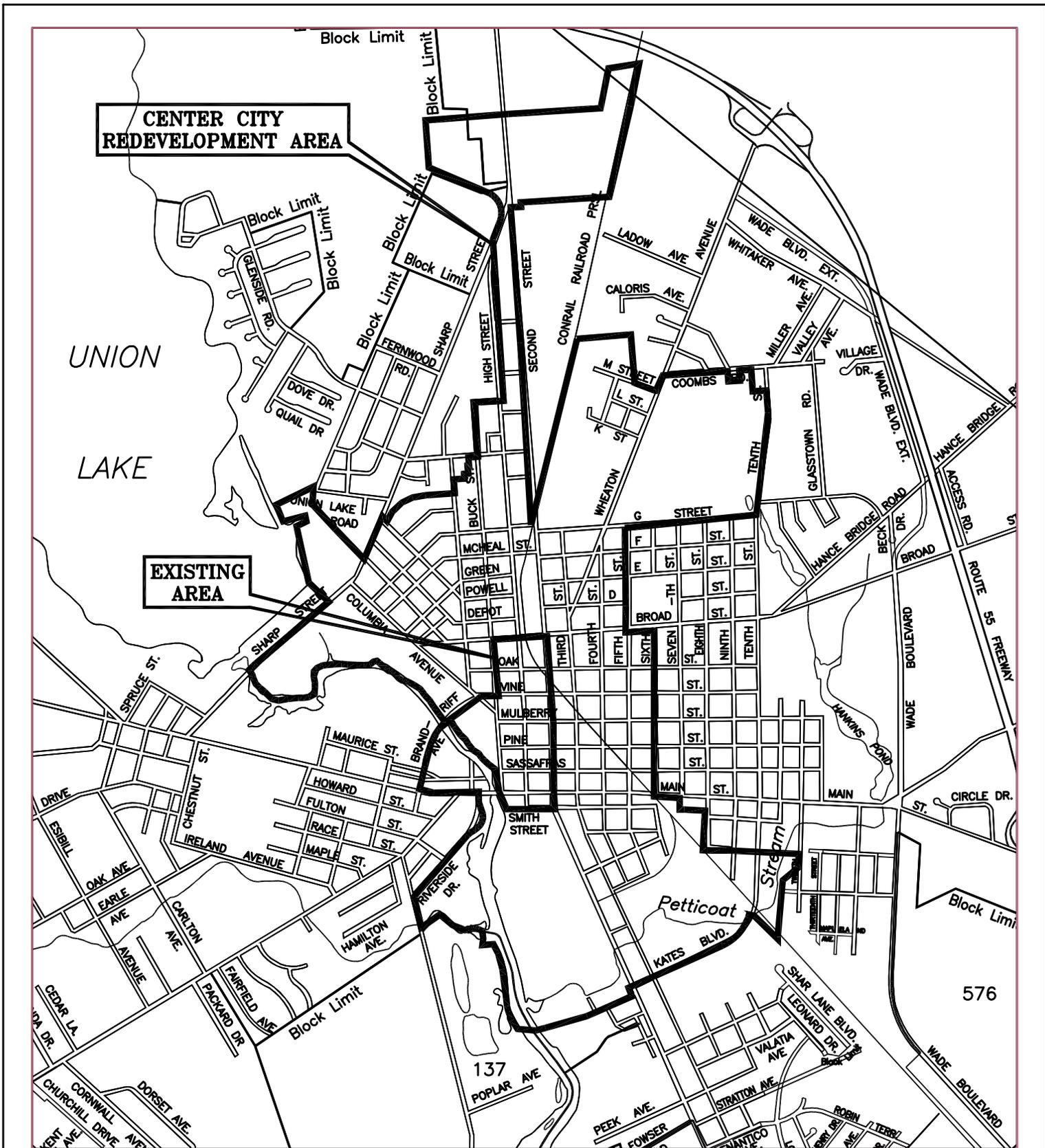
In January 2002, the State legislature passed the Redevelopment Area Bond Financing Law and the Revenue Allocation District Financing Act (P.L. 2001, c. 310). These laws added new tools, such as tax increment financing, to the ability of municipalities to finance their redevelopment plans. Millville is in the process of using the 1991 law in creating a Revenue Allocation District.

The City has already established a Redevelopment Area to the north of City Hall encompassing Brandriff Avenue east of the river, to Vine Street, north to Broad Street, extending to Second Street (Rt. 47), south to Smith Street, west to the Maurice River and north to the Brandriff Avenue Bridge. This area encompasses most of the traditional downtown area and is the focus of efforts by the Millville Development Corporation and the Glasstown Arts District. This redevelopment area was established in 1995.

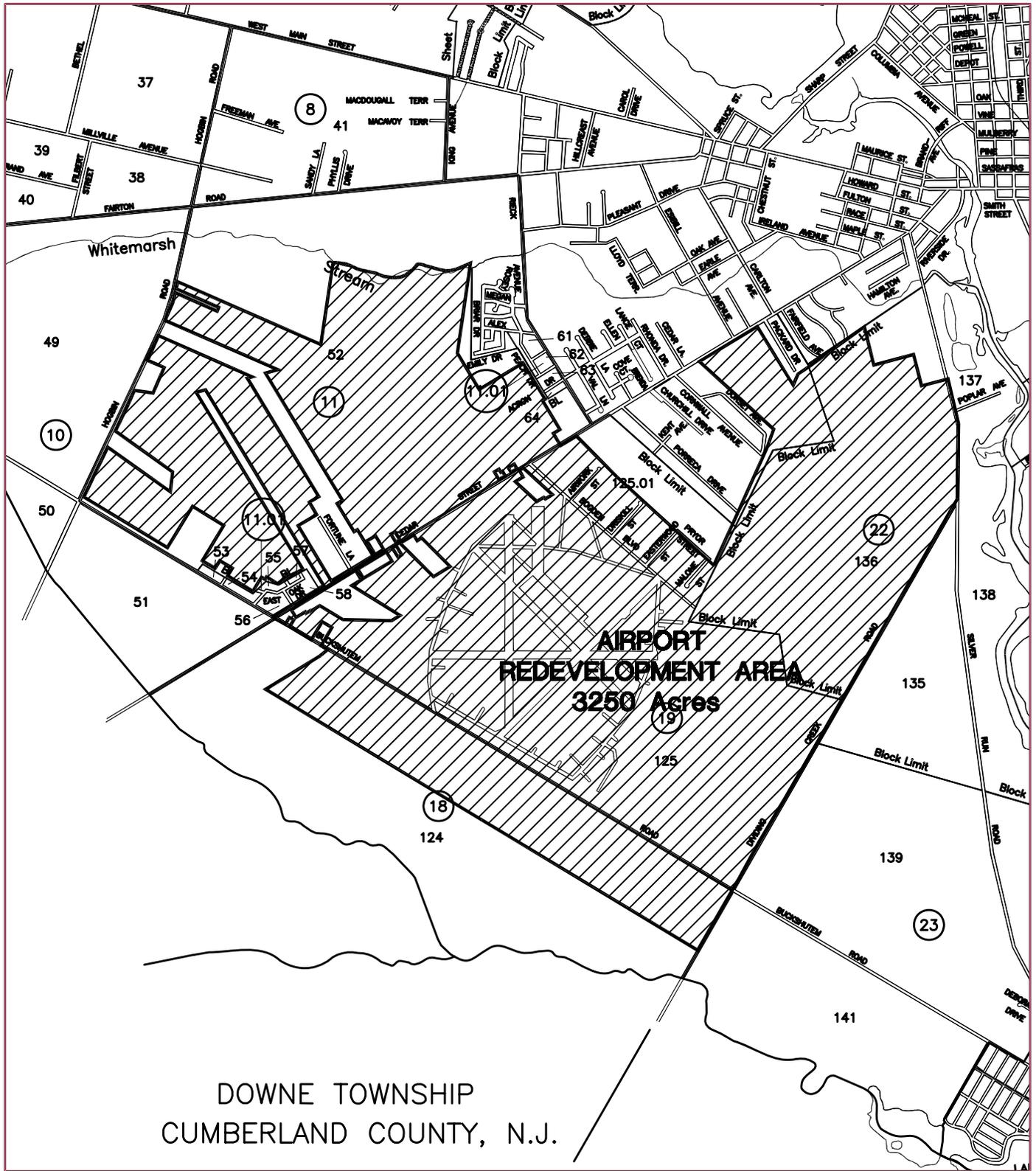
One redevelopment area was established at the Millville Airport. In 2003, the Planning Board conducted a study to determine if the airport met the criteria for designation as an area in need of redevelopment. The Board concluded the airport did in fact meet the criteria and recommended designation by the City Commission.

The Airport Redevelopment Area consists of approximately 3,250 acres of which 216 are on the airport proper. The designated area includes the land recently purchased from Better Materials Corporation. Approximately 63% of the redevelopment area is vacant or unimproved farmland.

The Center City Redevelopment Area consists of 884 acres and encompasses portions of the Third Ward, Center City, and South Millville neighborhoods. It is envisioned that several different developers as well as nonprofit organizations will be interested in the redevelopment of several blocks as specific projects. This redevelopment area includes the existing target areas for AHOME, Inc., the Millville Housing Authority, the CDBG program and the Neighborhood Preservation Program, as well as the 1995 Redevelopment Area.



sheet 1 1	job no.	REDEVELOPMENT AREA MAP #2	designed by	JAC	Engineering Department City of Millville Cumberland County, New Jersey 08062	date FEBRUARY 2005 scale	date scale
	date	FEBRUARY 2005	drawn by	HEP			
	scale		checked by	JAC			
		CENTER CITY REDEVELOPMENT AREA					



DOWNE TOWNSHIP
CUMBERLAND COUNTY, N.J.

<p>1 1</p>	sheet	job no.	REDEVELOPMENT AREA MAP #2	designed by	JAC	<p>Engineering Department City of Millville Cumberland County, New Jersey 08882</p>	no. revisions	date
	date	FEBRUARY 2002	center city REDEVELOPMENT AREA	drawn by	MBT			
	code			checked by	JAC			

In addition to designating redevelopment areas, the City is proposing the combination of both of these redevelopment areas into one overall Revenue Allocation District. The City is currently going through the application process with the New Jersey Economic Development Authority and vying to be the first municipality in the state with this designation. The Revenue Allocation District would allow new revenues generated from new development at the airport to help finance comprehensive improvements to the Center City District. Thus, the Revenue Allocation District will permit the leveraging of existing resources with new tax revenue to complete the large scale projects that will create significant improvement in the City's central core.

DOWNTOWN – THE GLASSTOWN ARTS DISTRICT

In 1999, the City began to research the feasibility of establishing an arts district in the downtown as a means of redevelopment. The downtown was suffering from numerous deteriorated vacant stores. Even though the City had invested significant public funds to improve buildings and parking lots, clean up the waterfront and replace sidewalks, there was very little commerce or pedestrian activity.

An arts district was envisioned due to the compact nature of Millville's downtown, the existence of Wheaton Village as a bone fide half day tourism attraction, an active supportive arts community, and the readymade market created by the hundreds of thousands of Jersey shore visitors passing through Millville. These advantages provided a solid foundation for the success of the district.

A feasibility study by Hamilton, Rabinovitz and Alshuler of New York confirmed that an arts district could be a viable redevelopment tool in Millville. Community meetings, surveys of artists and focus groups confirmed legitimate interest in establishing an arts district. The Millville Development District took the lead in complementing this strategy. The six block district was created as a zoning overlay in the downtown and was called the Glasstown Arts District. It was named to reflect the historic location of the Glasstown Works, Millville's first glass plant which was located on the waterfront.

With a theme, recently completed public improvements and streetscapes and a restored riverfront, the arts district began to trigger a renaissance in Millville's central business district. The City Commission passed a \$1.2 million bond which enabled several key properties to be purchased and improved, including the establishment of the City's public art center. The

Riverfront Renaissance Center for the Arts was completed in 2001 and represented the City's long-term commitment to the arts district.

Today the Glasstown Arts District is thriving. There are many new galleries and restaurants, dozens of rehabilitated buildings, and most importantly a newfound sense of pride by local residents. Property values have quadrupled in the downtown. Special events are held year round and every Third Friday stores and galleries stay open for a special night of hospitality and interaction.

The public improvements made possible by Urban Enterprise Zone funds have become essential infrastructure supporting this form of urban renewal. The City recently completed a public plaza on the corner of High and Sassafras Streets using several different sources of State funds, and complementing the design theme established on the waterfront.

In the fall of 2004, the downtown arts district became the 19th Main Street Community in the State of New Jersey. This designation will be critically important as the City seeks to maintain the viability of the district and to create an area that will be exciting and interesting to residents as well as visitors. The Main Street program provides an wide array of technical assistance and networking opportunities for merchants and planning professionals.

The art district has enabled a renaissance of the downtown as both a center for commerce and as a regional cultural center. The central business district has been renewed while preserving the historic character and pedestrian scale. The renewal of the downtown is an excellent example of the Smart Growth principles advocated by the State Plan. It's a walkable area of compact, mixed-use development, with street networks extending outward and a harmonious streetscape. The Glasstown Arts District has created a real "sense of place" that has reconnected residents with the downtown.

WATERFRONT IMPROVEMENTS

Beginning in the mid-1980s, the City began to focus its attention on the Maurice River as a community asset. With 9 acres of riverfront in the heart of the downtown, the City began a long-term strategy to increase public access to the riverfront through a series of waterfront improvements, recreational enhancements, and direct linkages to the downtown district. A linear waterfront park system began with the construction of the Fowser Road boat ramp at the southern end of the river and the Sharp Street floating fishing pier and ball field enhancements at the opposite end across

from the Union Lake Dam. The demolition of a vacant gas station and purchase of several remaining parcels on the river between Buck and Pine Streets gave the City the ability to open up the river for public view and access, remediate environmental degradation and to plan numerous improvements along the water's edge.

State Green Acres, UEZ, Local Aid for Centers and federal Transportation Enhancement funds have provided leveraged resources to construct pedestrian walkways, a boardwalk extending over the water, bulkheading, lighting, landscaping, and public art. A pedestrian bridge extending from Sassafras Street to Waltman Park was designed and constructed in the fall of 2004. Future phases of waterfront improvements that are funded are an extension of the pedestrian walkway along the river to Brandriff Avenue, a plaza on the Captain Buck park area, and an amphitheatre for public performances.

The waterfront has become a special area for public and special events and provides a natural linkage for pedestrians and shoppers to the downtown. The parking lots established and improved nearly a decade ago provide convenient public access to both the downtown and waterfront. The Maurice River has returned to a place of prominence in shaping the character and image of the City.

MILLVILLE'S ECONOMIC BASE

The City of Millville was born, as its name clearly indicates, as an industrial mill town. In the late 1700s, the Union Company established several mills along the Maurice River, building a dam to power mill wheels through a series of races. In 1806, the first glass factory was built. Through the nation's period of rapid industrialization, Millville became a major center for the glass industry and textile production. The founding of glass and textile mills on the river initiated an industrial dominance that provided the foundation for the City's growth and prosperity. Increased river trade and the shipping of wood and timber from the region led to the growth of shipbuilding as a major industry. By 1859, rail connected the City through Glassboro to points north and to Cape May in the South.

From these historic roots, the core of Millville's economic base has been and continues to be in the manufacturing sector. Unlike most areas of the State, industry continues to dominate Millville's economy to the present day; even through the primary use of the river is now for recreational and not industrial purposes. Millville's central industries were initially the manufacture of glassware, textile goods, and shipbuilding. Presently, the

glass industry remains as the lifeblood of the community, although successful economic development initiatives have resulted in a diversification of the industrial base and an expansion of other sectors of the economy over the last three decades.

The glass industry in Millville suffered a blow in 1999 when the Ball Foster Glass Plant on South Second Street along the Maurice River closed. This facility, up until the time it closed, was the oldest continuously operating glass plant in the United States. Over 300 residents lost their jobs when this plant closed. Millville's remaining glass manufacturers are dependent upon foreign and plastics competition and national economic conditions.

In addition to the glass industry, the City's primary economic engine is the air-related businesses at the Millville Airport. The airport is targeted for future industrial development, including warehousing, light manufacturing, and aviation related services. A multi-use hangar building was constructed in 2001 with several sources of public funds and in 2003; the City purchased 881 acres surrounding the airport for future expansion. A \$100 million motorsports/entertainment complex is planned on 707 acres of the airport. The first phase of this project should be complete in 2006.

OVERALL ECONOMIC DEVELOPMENT GOALS

The foundation of an economic development strategy is the set of overall goals guiding decision-making and policy formation and implementation. The goals represent the economic development mission of the City and the framework for future initiatives. The goals contained in this Economic Development Element have been realistically grounded, based on the City's assets and resources, and analyzed for their long-term impacts on the City's future. All of the goals are designed to enhance and improve the quality of life for Millville residents, businesses and employees. These goals include the following:

- 1) Strengthen and diversify the economic base to locate new long-term employment opportunities and to expand the tax ratable base.
- 2) Develop orderly, well-planned capital improvement projects and public facilities.
- 3) Encourage public and private sector partnerships to facilitate economic development projects, including the leveraging of public dollars to stimulate private investment (UEZ, EZ, CDBG).

- 4) Encourage and promote the vitality and viability of the Central Business District and riverfront development area through Main Street designation.
- 5) Expand the Glasstown Arts District to include Third Street and begin infrastructure improvements on side streets.
- 6) Coordinate and leverage all available State, local and federal economic and community development resources in designated redevelopment areas for maximum impact; recapitalize loan programs as needed.
- 7) Balance future growth and the location of new development with the preservation of environmentally sensitive lands.
- 8) Market and promote the locational advantages of Millville.
- 9) Develop a business retention strategy to assist existing businesses and industries.
- 10) Coordinate economic development initiatives with the balance of the county and the region; link the City's economic development efforts to regional plans and initiatives (ecotourism, Cumberland Development Corp., marketing, etc).
- 11) Create a new airport industrial park, utilizing federal, state, and local economic development funds for airpark industries, warehousing, distribution and light manufacturing operations.
- 12) Improve access and circulation in and around the Millville airport.
- 13) Facilitate the development of a motorsports/entertainment facility at the Millville airport; link this development to tourism and redevelopment efforts citywide and regionally.
- 14) Promote the adaptive reuse of older, industrial sites and brownfields sites.
- 15) Assist existing businesses in receiving customized training to increase the skill levels of employees; coordinate these efforts with the State Dept. of Labor, Cumberland County One Stop, and Cumberland County College.

- 16) Encourage cultural, ecological, and historic tourism.
- 17) Analyze, review, and recommend action regarding state and federal regulations and tax structure relative to any constraints to growth and development.
- 18) Encourage the redevelopment of the City's central neighborhoods through the tools available from redevelopment area designation and the City's existing neighborhood-based planning philosophy.
- 19) Utilize the Community Development Block Grant program to address public service and housing rehabilitation needs in areas with high concentrations of low and moderate income residents.
- 20) Use the Millville Industrial Commission as an advisory board for future development projects and development initiatives.

INDICATORS OF ECONOMIC DEVELOPMENT

Tables X-1 through X-7 provide a few indicators of the economic development activity in Millville over the past several years. These indicators will demonstrate an increasing amount of construction activity and employment in Millville since 1994.

Table X-1. Building Permits in Millville, 1994-2003.

Year	Single Family	Multi-Family	Total Units	Total Value
1994	39	0	39	\$2,448,300
1995	62	0	62	\$4,462,718
1996	89	0	89	\$6,156,626
1997	171	0	171	\$11,239,921
1998	66	0	66	\$5,023,609
1999	63	0	63	\$3,843,212
2000	41	0	41	\$1,714,534
2001	37	0	37	\$2,417,269
2002	41	2	43	\$2,121,610
2003	85	0	85	\$6,477,061
Total '94-'03	694	2	696	\$45,904,860

Source: NJ State Data Center.

Table X-2. Labor Market

	2000	2001	2002	2003
Labor Force	12,886	12,666	12,816	13,112
Employment	12,092	11,853	11,874	12,130
Unemployment	794	813	942	982
Unemployment Rate	6.2%	6.4%	7.4%	7.5%
County Unemployment Rate	7.1%	7.4%	8.5%	8.6%

Source: New Jersey Labor Force Estimates (not seasonally adjusted)

Table X-3. 1999 Money Income.

	Median Household Income	Median Family Income	Median Non-family Income	Per Capita Income 1999	Per Capita Income Rank ⁽¹⁾
Millville	\$40,378	\$46,093	\$23,636	\$18,632	506

Source: 2000 Census of Population & Housing, Summary File 3.

(1) – Out of 566 municipalities.

Table X-1 demonstrates residential building permits issued in Millville by the Construction Office. This table demonstrates that residential construction activity is approaching the level last seen in 1996 and 1997 when several major subdivisions were constructed. Since 2000, the number of building permits has increased 107%, while the value of that construction has increased 278%.

Table X-2 demonstrates that while the labor force and employment are growing in terms of absolute numbers, so is the number of residents who are unemployed. The unemployment rate has consistently been below the county unemployment rate, but it has exceeded the state unemployment rate. The level of unemployment is directly related to the City's dependence on manufacturing as its economic base. As new jobs are created through expanding businesses or the location of new industry, to date it has simply been replacing jobs lost by plant closings or downsizing. The new jobs have not yet outpaced those lost through economic restructuring.

The level of income for households in Millville is shown in Table X-3. Cumberland County has consistently ranked 21st out of the 21 counties in the state in terms of per capita income. According to the NJ Department of Labor, the median household income in Millville in 1999 was \$40,378. This number was \$29,985 in 1989 and \$19,780 in 1979.

Table X-4. Sex by Employment Status - Population 16 Years and Over, 2000.

Millville City, New Jersey	
Total	20,155
Male:	9,319
In Labor Force	6,641
In Armed Forces	12
Civilian	6,629
Employed	6,079
Unemployed	553
Not in Labor Force	2,678
Female:	10,836
In Labor Force	6,374
In Armed Forces	0
Civilian	6,374
Employed	5,715
Unemployed	659
Not in Labor Force	4,462

Note: Occupational data include estimates of self-employed and unpaid family workers and are not directly comparable to the industry employment total. Totals may not add due to rounding. Employment data are rounded to the nearest hundred and, job openings are rounded to the nearest ten.

Source: NJ Department of Labor – Labor Market and Demographic Research Occupational and Demographic, May 2003.

Table X-5. Cumberland County Estimated and Projected Employment By Major Occupational Group, 2000-2010.

Occupation	2000 Estimate	Percent	2010 Forecast	Percent
Management, Business, and Financial Occupations	4,150	6.4	4,350	6.3
Professional and Related Occupations	11,400	17.6	13,850	20.1
Service Occupations	12,100	18.7	13,850	20.1
Sales and Related Occupations	6,600	10.2	7,050	10.3
Office and Administrative Support Occupations	10,900	16.8	10,950	15.9
Farming, Fishing, and Forestry Occupations	350	0.5	350	0.5
Construction and Extraction Occupations	2,450	3.8	2,600	3.8
Installation, Maintenance, and Repair Occupations	2,750	4.3	2,800	4.1

Occupation	2000 Estimate	Percent	2010 Forecast	Percent
Production Occupations	6,750	10.4	5,850	8.5
Transportation and Material Moving Occupations	7,200	11.1	7,100	10.3
Total, All Occupations	64,650	100.0	68,700	100.0

Notes: Average Annual New Jobs will not equal annualized "Employment Change" since, for declining occupations; new jobs are tabulated as zero since no net job growth is projected, while the employment change is based solely on the difference between 2000 and 2010 employment totals.

Occupational data include estimates of self-employed and unpaid family workers and are not directly comparable to the industry employment total. Totals may not add due to rounding. Employment data are rounded to the nearest hundred and, job openings are rounded to the nearest ten. Percentages and percent changes are based on unrounded data.

Source: NJ Department of Labor, Labor Market and Demographic Research, Occupational and Demographic, May 2003

Table X-6. Largest Private Employers, Millville, New Jersey, 2004.

Employer	Industry	No. of Employees
ARC/Durand Glass	Glass Manufacturing	802
Alcan Packaging	Glass and Plastics	749
Glass Group, Inc.	Glass Manufacturing	552
Silverton Yacht	Boat Manufacturing	389
Bayada Nurses	Health Care	250
Wal Mart	Retail Goods	241
Meridian Healthcare	Geriatric health care	188
Cumberland Cnty. Homemakers	Nursing	183
T-Fal Corp.	Cookware/appliances	172
Pathmark	Groceries	133
Prudential	Mailing services	105

Source: Vineland/Millville Urban Enterprise Zone.

Table X-7. Public Employment, Millville, New Jersey, 2004.

Employer	Full Time Employees	Part Time Employees	Total Employees
Millville Board of Education	986	54	1,040
Millville City Government	225	35	260
Millville Housing Authority	38	3	41
Cumberland County Guidance Center	160	0	160

Employer	Full Time Employees	Part Time Employees	Total Employees
Cumberland County Social Services	54	0	54
Cumberland County Improvement Authority	15	0	15

Source: Vineland/Millville Urban Enterprise Zone.

TARGETED ECONOMIC DEVELOPMENT AREAS

INDUSTRIAL PARKS

The City has several industrial parks in which the majority of industries are located. The *South Millville Industrial Park* includes 205 acres of privately owned land. This park is serviced by City water and sewer as well as electric, gas, telephone, and a rail siding. Easy access is provided from State Highways Routes 47, 49, and 55. Vacant ground and existing buildings are available in this park, which is part of the Urban Enterprise Zone.

The *Eden Road Industrial Park* is privately owned and includes lots ranging in size from 2 to 10 acres. This industrial area, totaling 43 acres, is fully serviced by municipal utilities, electric, and gas. This land is also located within the Urban Enterprise Zone.

Adjacent to the South Millville Industrial Park is the 88-acre *Gorton Road Industrial Park*. This park was constructed as a joint venture with the New Jersey Economic Development Authority and the U S Economic Development Administration. City-owned land was converted to a full-service, 21-lot industrial park within minutes of State Highways 47, 49, and 55. Approximately 50% of the lots have been sold. This park is in the Urban Enterprise Zone and is fully serviced by municipal utilities.

The City has been working with the New Jersey Department of Transportation to study ways of providing a more direct route of access to this park. NJDOT has completed a study with options ranging from traffic improvements to the intersection of Wade Boulevard and Route 49 to several proposals for ramp access from Route 55. The city would like to see one of the ramp designs implemented for truck traffic.

MILLVILLE AIRPORT

The Millville Municipal Airport is a public-use airport owned by the City of Millville and operated by the Delaware River and Bay Authority. This is the second largest general aviation airport in the State, covering some 916 acres and containing two industrial areas. The airport has historically served a wide variety of general aviation and military aircraft and is the only improved aviation facility with paved and lighted runways in Cumberland County. The airport is currently home to over 100 aircraft and houses the only fully automated FAA flight service station on the East Coast. There are approximately 100,000 take-offs and landings at the airport annually.

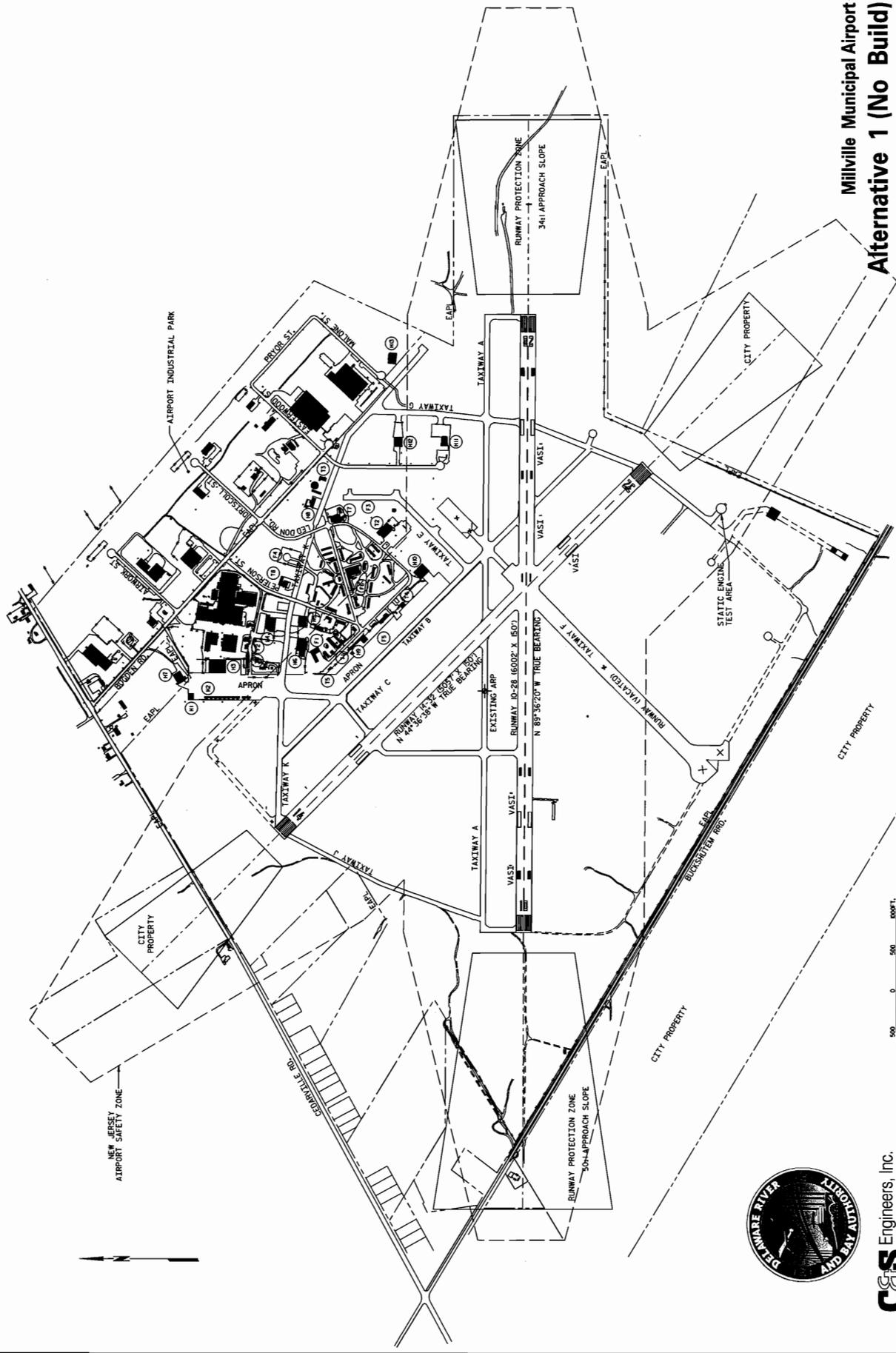
The airport was acquired by the City after the end of World War II as surplus military property. The US Army had established the airport as the first Army defense airport in the nation. The air base was utilized for fighter pilot training, using the P40 Warhawk and later the P47 Thunderbolt aircraft. After the war, barracks buildings were converted to apartments for veterans and their families. In the mid-1950s, the structures were occupied by various small industrial uses.

Millville Airport presently has two active runways, eight taxiways, and associated lighting. The primary use Runway 10-28 is presently 6,000 feet long and 150 feet wide, enabling its use by a wide range of jet aircraft. Runway end 10 is equipped with a full instrument Landing System (ILS) and a Medium Intensity Approach Lighting System with Sequenced Flashing Lights (MALSR). Both ends of the runway include a four box Visual Approach Slope Indicator (VASI) to assist in visual approaches. High Intensity Runway Lighting (HIRL) is also provided. The runway was reconstructed in 1992 and is in excellent condition.

Runway 14-32 is the crosswind runway. It is 5,057 feet long and 150 feet wide. The runway is equipped with Medium Intensity Runway Lights (MIRL), a VASI on the Runway 32 end, and a Precision Approach Path Indicator (PAPI) on the Runway 14 end.

The third runway, Runway 1-19, is 5,096 feet long and 150 feet wide. This runway was closed in 1996. Runway 1-19 has no lighting and has been restricted to small piston powered aircraft. Due to trees in the approach path, the Runway 1-19 threshold is displaced 500 feet.

Aviation services are not provided directly by the City, but by two fixed base operators. Also available are rescue and fire equipment, maintenance facilities, a heliport, aviation gasoline, and jet fuel services.



Millville Municipal Airport
Alternative 1 (No Build)
 Figure 7-2

Copyright ©



CBS Engineers, Inc.
 SPYGLASS • BUFFALO • WASHINGTON • MILLVILLE, NJ



The airport also includes an industrial park that offers both airside and landside parcels. This industrial park was developed with \$1.3 million in Federal Economic Development Administration funds. Approximately 53 acres of airside land is available for lease, resulting in 15 parcels. All 19 land-based parcels have been sold for industrial development, covering some 100 acres. All sites have City water, sewer, drainage, electric, gas, and telephone services. The industrial land is located within the Urban Enterprise Zone, a Foreign Trade Zone, and a Federal Empowerment Zone. These programs provide a unique set of financial incentives for industries to locate or expand at the airport.

In 2003 the City purchased over 800 acres of land contiguous to the Millville Airport. This land is designated for development as a second major industrial park at the airport. The City is completing predevelopment studies with the intention of seeking Federal funding for the development of necessary infrastructure, including water, sewer, drainage, and roadways. Light manufacturing, warehousing, distribution, and aircraft-related industries are proposed for this new park.

The southeastern corner of the Millville Airport has been designated as a site for a motorsports/entertainment facility that will link directly with regional tourism efforts as well as automotive-related businesses. The motorsports park will essentially be developed as a broad-based sports, business, and entertainment district. This facility will include a 4.1 mile road circuit raceway, oval, all terrain vehicle and go-cart tracks, a Motorsports Academy, specialty garages and galleries, a country club and clubhouse, multiple restaurants, condos or villas, hotels, and a conference center. The total acreage for the development is 707 acres, and includes a City-owned track on the south side of Buckshutem Road.

INDUSTRIAL PARK POLICY RECOMMENDATIONS

- 1) Demolish existing vacant, deteriorated buildings outside the historic district within the airport area to provide additional land area for industrial expansion and improve the appearance of the airport.
- 2) Expand water and sewer utility mains and develop new roads to create an additional industrial area at the airport.
- 3) Support the continued expansion and maintenance of the airport and its facilities as a central element of the City's resources.
- 4) Insulate the airport from future residential development for public safety and to avoid nuisance problems.

- 5) Utilize available state monies to remediate and reuse brownfields.
- 6) Enforce property maintenance codes on all industrial properties.
- 7) Review landscaping plans as part of the site plan review process.
- 8) Develop direct access to South Millville industrial lands via an on/ off ramp from Route 55.
- 9) Support partnership efforts to expand Millville Airport as an airpark industrial area with emphasis on air-related businesses.

INDUSTRIAL REDEVELOPMENT: BROWNFIELDS

A brownfield is defined under New Jersey statute (*NJSA 58: 10B-23.d*) as “any former or current commercial or industrial site that is currently vacant or underutilized and on which there has been, or there is suspected to have been, a discharge of a contaminant.” Generally, brownfields are properties that are abandoned or underutilized because of either real or perceived contamination.

In older urban or industrial areas, there are an abundance of brownfields sites. In recent years, the redevelopment of contaminated former industrial sites has become an important specialized area within the field of redevelopment. These sites are no longer considered wastelands – rather they are being reclaimed and redeveloped as productive properties. Federal and state brownfield initiatives have been adopted that encourage the redevelopment of these sites and have eliminated some of the obstacles that previously discouraged private investment. The new statutes provide financial incentives for investigation and cleanup of brownfields, bring some level of predictability to the remediation process, and limit liability for property purchasers.

Because of its history as a manufacturing city, Millville has numerous brownfields sites that can be redeveloped with the assistance of the NJ Department of Environmental Protection. The City has utilized various forms of technical and financial assistance provided by brownfields programs to study and remediate several sites which are then available for private purchase. In the past these sites would have been considered liabilities for the City’s redevelopment efforts. With the state’s emphasis on redeveloping these contaminated parcels, brownfields now provide affordable sites for new industry, businesses and open spaces.

The NJDEP works with the NJ Economic Development Authority (NJEDA) in the implementation of the Hazardous Discharge Site Remediation Fund (HDSRF). The legislature created this law in 1993 to provide loans and grants to municipal governmental entities, the NJ Redevelopment Authority,

and private parties. HDSRF funding is devoted to remediating discharges of hazardous substances. The City of Millville has utilized this funding source to determine the extent of contamination on several sites.

This form of funding is available to private parties or municipalities that own contaminated sites in need of reuse and to market such properties to potential developers or businesses. Properties that are owned, foreclosed upon, or where the municipality holds a tax sale certificate are eligible for this assistance. Preliminary assessments are completed to determine if contamination exists. If contamination is present, a remedial investigation is completed to define the problem and quantify cleanup costs. Finally the appropriate remedial action is selected to permit site reuse. In this way, properties can then be marketed for private purchase.

In addition, local government entities that acquire property through foreclosure, condemnation, or similar means are not liable under the New Jersey Spill Compensation and Control Act for past contamination. This provision provides incentive to the City to take title to abandoned, derelict properties and then proceed through the remediation process. In this way, lending institutions are also freed of liability for contamination when providing financial support to industrial redevelopment projects.

Under the Brownfields and Contaminated Site Remediation Act, a developer that enters into a redevelopment agreement may potentially recoup up to 75% of his or her cleanup costs.

The City has identified several potential properties as brownfields priorities:

Table X-8. Potential Brownfield Remediation and Reuse Sites.

Block	Lot	Address	Facility/Use
341	30	Third Street/Wheaton Ave.	abandoned gas station/ vacant lot
352	2	Sharp Street	injection molding plant
352	22 & 54	Rear Columbia Avenue	vacant property
358	5	Second and Broad Streets	abandoned gas station/ vacant lot
576	6	1201-1219 Wade Blvd	abandoned trucking facility

All contaminated sites known in Millville are listed in the Known Contaminated Site List maintained by NJDEP. This information is accessible from the NJDEP website (www.nj.gov/dep/srp/brownfields/faq/.)

This list includes sites that are available for development and those in the remediation process.

COMMERCIAL DEVELOPMENT AREAS

Unlike most central cities, the core of the Millville urbanized area includes both an older downtown and a suburban-style office and commercial area near the Route 55 interchange.

There is a corridor of professional and commercial uses linking the downtown to the highway interchange area. Residents on both the eastern and western sections of the City must travel to the central core of Millville in order to access either the downtown or the highway commercial district.

Both the downtown central business district and the highway interchange area have seen extensive development interest since the completion of the last Master Plan. The core area of the downtown has been redeveloped as the Glasstown Arts District and is enjoying regional recognition as a cultural center. Property values have increased significantly. There are a few vacancies, and numerous buildings have been significantly rehabilitated. There are City-owned parcels in the downtown and along the riverfront that are part of the redevelopment area and vacant prime locations for new mixed-use projects.

The commercial corridor adjacent to the Routes 55/47 interchange has undergone significant transportation improvements to accommodate the new development under construction and proposed in 2005. The State of New Jersey Department of Transportation completed an \$11 million reconstruction of Route 47 that includes changes to the Route 55 ramp system. A 160,000 sf. Lowe's Home Improvement Store was recently completed, with plans for additional commercial construction of some 100,000 sf. in this same shopping center already approved. As part of this project, Bluebird Lane was relocated and reconstructed.

Adjacent to the Lowe's site, a 500,000 sf. commercial center is proposed for construction in 2005. This site is located on approximately 44 acres. This shopping center will include several "big box" retailers and a supermarket.

The remaining commercial areas are neighborhood plazas or shopping centers with convenience type stores and small scale retail storefronts. There are few neighborhood shopping centers on the west side of Millville and the Planning Board may consider permitting limited commercial in this locations.

COMMERCIAL DEVELOPMENT POLICY RECOMMENDATIONS

- 1) Require large scale commercial projects to finance the extension of City services, roads and infrastructure to project sites and to provide analyses of transportation, environmental and fiscal impacts.
- 2) Continue the design theme established in the Glasstown Arts District for future public improvements and expand the boundaries of the district.
- 3) Consider traffic calming techniques on High Street.
- 4) Amend zoning to permit neighborhood commercial centers at key intersections on the west side along Route 49.

PRIORITY DEVELOPMENT PROJECTS

The following lists provides an outline of some of the priority projects being reviewed and implemented by the Economic Development Office.

Table X-9. Recent Millville Priority Projects (New Development).

I. MILLVILLE AIRPORT

- a) **NJ Motorsports Park:** \$100 million project; 1,500 jobs, 707 acres
Phase I: construction of 4.1 mile road course, clubhouse, garages, concessions, VIP suites; Phase II includes driving school, 2 motels, 2 hotels, restaurants, raceplex industrial center; Phase III training facility, hotel/conference center, college prep school
- b) **Millville Hydroponics:** \$80 million project; 160 jobs, 100 acres
2.7 million sf greenhouse complex for tomatoes/produce grown hydroponically (\$50 million); also includes gas-fired cogeneration plant (\$30 million)
- c) **Industrial Park Expansion:** \$5 million project to expand municipal services (water, sewer, electric, gas, drainage) to recently purchased land contiguous with the airport (800 acres); develop roads for industrial sites. Seeking \$1.5 million USEDA grant. Includes water and sewer to the adjacent NJMP project.

II. ROUTES 47/55 COMMERCIAL CORRIDOR

- a) **Goodmill Properties:** proposed 500,000 sf shopping center with numerous major national retail tenants; \$45 million project will connect to 200,000 sf Lowe's shopping center under construction. Land assembly in process; estimated jobs: 1,000 full and part-time. Anchors are Target, Kohl's, and Shop Rite.

III. RESIDENTIAL DEVELOPMENTS

- a) **Wawa Tract:** Numerous developers considering designing a mix of residential uses on 450+ acres surrounding Union Lake. Active adult units and upscale estate homes are being considered.
- b) **Preserve at Holly Ridge:** GDP approval granted for active adult community (903 homes), golf course and clubhouse, and permanently preserved open space, 1,350 acres total; 970 acres preserved. Total project value: \$200 million
- c) **Nabb Avenue:** planned unit development including some commercial along Route 49; urban village type of design

IV. DOWNTOWN and WATERFRONT DEVELOPMENT (Sharp St. to Main St.)

- a) **Industrial Reuse – North:** conversion of 100+ year old cotton mill to mixed-use project; adjacent to 100 residential condo project already approved; approximately 50 acres. Conceptual plan being developed.
- b) **Downtown/waterfront Redevelopment Site:** 9 acres of City-owned vacant land; interest from several developers in a commercial/professional office facility, with direct linkage to downtown/Levoy Theatre and public library.
- c) **Industrial Reuse-South:** conversion of 60-acre, 170-year old vacant glass manufacturing plant to a mixed-use project including residential, recreation, restaurant, marina, and specialty retail uses.

ECONOMIC DEVELOPMENT DESIGNATIONS

URBAN ENTERPRISE ZONE

In November 1985 the City of Millville and the City of Vineland were designated as a joint Urban Enterprise Zone – the first joint zone established in the state, and the tenth zone approved under the State’s enabling legislation. This program has been labeled the single most important economic development incentive for this region. Designation as an Urban Enterprise Zone (UEZ) provides advantages to the City and to individual participating businesses. Essentially, the UEZ is a job-creation tool in which qualified businesses receive tax advantages in exchange for the creation of new, full-time employment opportunities and/or capital investment. Approximately 1,900 full-time jobs have been created since the program’s inception accompanied by over \$1.4 million in additional capital investments by qualified businesses. Businesses must generate new employment annually in order to continue to take the most advantage of the tax benefits from this program, ensuring that employment growth within the zone will continue.

The benefits of participating as a UEZ business include an exemption from sales tax for material, equipment, or supplies utilized at the zone location. Furniture, equipment, office supplies, and construction materials are all eligible for this exemption. The City also provides a five-year tax abatement program for new construction within the UEZ. Real estate taxes are phased in at 20% annual intervals, with full taxes assessed in the sixth year. Other advantages to local businesses include credits against corporate business tax for new hires and unemployment insurance tax awards for certain new employees.

Retail businesses participating in the program are eligible to charge their customers a State sales tax of 3%, rather than the standard 6%. This reduced sales tax provides an incentive to shop within the UEZ. The State Treasury places the collected funds into a special account for economic development projects within the City of Millville. These funds have provided the resources necessary for over 75 public improvement projects with no direct impact on the local budget.

CUMBERLAND EMPOWERMENT ZONE

In 1998, portions of Cumberland County were designated a Federal Empowerment Zone (EZ). The goal of this federal program is to create economic opportunity and to build community capacity in economically depressed areas.

Millville was a partner in this county-wide effort in that the Millville Airport was eligible to receive empowerment zone benefits as a development site. Other areas of the county that were designated as part of the Empowerment Zone include Bridgeton, Vineland and Port Norris.

The Empowerment Zone program was designed to revitalize urban and rural communities with the investment of federal dollars and tax incentives. There are numerous employment tax incentives for businesses that hire Empowerment Zone residents, including a wage credit, a work opportunity tax credit, and a welfare-to-work credit. Businesses locating in an Empowerment Zone are also granted substantial additional deductions on depreciable property, have no capital gains on the sale of EZ assets and have a partial exclusion of the gain on the sale of a small business stock of a C corporation. Growth and profitability are encouraged through several financial incentives, including direct assistance through local loans, and the ability to issue tax-exempt bonds to finance qualified zone property.

The Cumberland Empowerment Zone has focused its efforts on three key goals:

- Creating new jobs and expanding economic opportunity
- Strengthening families and promoting self-sufficiency
- Affirming long-term community and environmental viability

In Millville, all Empowerment Zone funds (approximately \$100,000 annually) must be used at the Millville Airport. To date, the City has leveraged Empowerment Zone dollars with resources from the Delaware River and Bay Authority to construct a multi-tenant hangar building.

FOREIGN TRADE ZONE

In 1987, the City received approval from the US Department of Commerce as a Foreign Trade Zone (FTZ) in conjunction with the Port of Salem, New Jersey. The Millville Airport is the physical site for the FTZ. Users of the zone can avoid or delay the payment of duties and fees on goods produced, processed, and/or stored in the trade zone. Several existing businesses

involved in exporting and importing products and materials have expressed an interest in expanding upon the FTZ designation.

The principle uses of zone status are threefold:

- 1) Importers may receive a shipment of convenient size for shipping purposes; but delays paying the import duties until the materials are actually used. In this way, a company may more closely manage its cash flow.
- 2) Firms manufacturing or assembling using imported materials or parts as part of the process may elect to pay any duties based upon the finished good rather than the imported inputs. This is often a way to reduce the total duties owed for the process. In effect, the manufacturing operation is occurring outside of the custom boundary of the United States, even though it is using local labor and is located in the heart of the one of the wealthiest and most populated markets in the world.
- 3) Firms that are manufacturing or assembling for export may avoid duties altogether. In short, if the inputs are imported for re-export, with or without additional processing, the importation duties on the inputs are not charged.

An FTZ is a very valuable tool for firms involved in import and export oriented operations and the Salem/Millville Zone is one of only four such zones in the State.

STATE DEVELOPMENT AND REDEVELOPMENT PLAN: REGIONAL CENTER

On May 20, 1994, the Cities of Millville and Vineland achieved the designation of a large portion of their respective land areas as a Regional Center under the *New Jersey State Development and Redevelopment Plan* ("State Plan"). This has several implications for the City and its resident firms.

The Center includes three distinct areas of the City. First, the historic core provides its central focus. The second area is the connecting link between the core of Millville and the Vineland's urban center to the north. This central corridor includes an emerging center of development activity astride the Route 55/Route 47 interchange. Within this area, new commercial development as well as residential development at higher densities is anticipated and encouraged. The final component of the center within Millville are older "suburban" areas extending outward from the core. These

are neighborhoods that are in increasing danger of decay over time, but that have not yet become “problem” areas.

The City’s designation as a Regional Center within Planning Area 1 creates a strong priority for the City in the distribution of State-level benefits. All State programs, whether regulatory in nature or direct lending or grant programs, are required to reflect the priority system created under the State Plan. Millville’s designation places it at the top of the priority system, behind only the State’s largest and poorest cities (Newark and Camden for example). In addition, there are few high priority areas within South Jersey that have the requisite talent in the local government and a high priority ranking, so that the State’s desire for geographic diversity in the provision of loans and grants often allows the City of Millville to succeed for a particular grant or loan, when another location in the State may have failed. For a business depending upon State funding programs, a location in Millville is a good choice.

CITYWIDE PROGRAMS AND INITIATIVES

COMMUNITY DEVELOPMENT AS ECONOMIC DEVELOPMENT

In Millville, building community is every bit as important as building the economy. This philosophy may very well be what sets Millville and its quality of life apart from surrounding communities. Community development is prioritized on an equal footing with economic development. Both are considered intricately connected and necessary prerequisites for a vital community. In fact, most companies relocating to a new region base their final decision on the quality of life available for their employees.

Community building starts in a municipality’s building blocks; its neighborhoods. Millville has recognized a neighborhood based planning philosophy for nearly a decade. The neighborhoods have specific strategic plans that are adopted by reference as part of this Master Plan. Utilizing a smart growth planning grant, Metro Company developed strategic plans, which included demographic information on the South Millville and Center City neighborhoods. These two neighborhoods are part of a citywide coalition of grass-roots resident’s organizations. The Third Ward and Eastside neighborhoods both have active resident associations designed to represent neighbors’ interests in increased public safety, leadership development and physical improvements.

In addition to the individual neighborhood associations, the City has a 15-member Neighborhood Council. Each neighborhood group has two members

on the Council with additional members from City staff, redevelopment partners, and nonprofit organizations. The Neighborhood Council affords the neighborhood associations an opportunity to meet bimonthly and discuss pressing issues, solutions, funding opportunities and leadership strategies that are working citywide. This networking has increased communication across all groups and helped resolve common problems. The Neighborhood Council sponsors an annual Neighborhood Summit every fall.

NEIGHBORHOOD REDEVELOPMENT GOALS

As part of a comprehensive neighborhood strategy prepared when the Center City area was designated as a Redevelopment Area, the City established a set of neighborhood goals and a mission statement.

Overall Neighborhood Redevelopment Goals **City of Millville Redevelopment Plan**

- 1) *Public Safety* - Traffic, drugs, nuisance control, code enforcement, trash, community police, substations;
- 2) *Economic Stability and Revitalization* - Commercial development, housing, job training, literacy, transportation, entrepreneurship;
- 3) *Physical Appearance/Beautification* - Clean ups, recycling, trash collection, flowers and gardens, parks;
- 4) *Organizational Leadership and Development* - Community building, leadership workshops, best practices;
- 5) *Arts and Culture* - Public art, art-based programs for youth and adults;
- 6) *Public Improvements* - Water, sewer, curbs, drainage, sidewalks, roadways, street lighting; and
- 7) *Accessible Government* - Participate in planning, the Neighborhood Council, partnerships.

Additionally, the City developed the following mission statement:

Program Mission Statement

The Redevelopment Plan will provide the plans, programs, and resources to improve the quality of life for Center City neighborhood residents. The Plan will be based upon the ideas, needs, and desires of residents and will be implemented through an ongoing, participatory process that will empower residents. As a result of the Redevelopment Plan, Millville neighborhoods will be economically stable, physically appealing, infused with arts and culture, and safe, livable communities.

These goals and the entire neighborhood redevelopment strategy were reviewed by the Neighborhood Council and each individual neighborhood association. The continuous dialogue between City staff and these organizations provides meaningful feedback in developing programs and policies and in allocating resources. This type of dialogue is viewed as a critical component in establishing redevelopment priorities.

The document *Comprehensive Neighborhood Strategy*, prepared with assistance from the Center for Leadership, Community, and Neighborhood Development at Cumberland County College, is adopted by reference as part of this Master Plan.

NEIGHBORHOOD PARTNERS AND RESOURCES

The City is fortunate to have several nonprofit and quasi-government partners in our neighborhood restoration efforts. Affordable Housing of Millville Ecumenical, Inc. (AHOME) has targeted its affordable housing homeownership and financial counseling programs in the Center City neighborhood. To date, AHOME has rehabilitated or constructed 22 new homes for first time homebuyers.

Similarly, the Millville Housing Authority, through its nonprofit development arm, the Holly City Development Corporation, has targeted several homeownership programs in center city and the Third Ward. Most recently, the Holly City Development Corporation was granted a \$2 million grant from the State's Market Oriented Neighborhood Investment (MONI) program. This grant will enable the rehabilitation or new construction of 17 homes that will be new homeownership opportunities in the Third Ward.

The City also has a strong partnership with the Millville Board of Education. The Board offers their school facilities for use by the City's neighborhood

associations, has provided financial support for a neighborhood coordinator, and has work cooperatively in seeking grants and other technical resources to support revitalization.

Additionally, the City has four organized *neighborhood associations* that meet monthly to develop ideas and programs to improve the living conditions in their individual neighborhoods. These associations are led by neighborhood residents with the City providing liaisons for assistance. The Millville Police Department is also involved in the monthly meetings of these associations to improve community-wide dialogue, promote crime prevention and citizen involvement and assist in deterring crime through special operations and programs. The four neighborhood organizations are: The Third Ward Neighborhood Group, The Center City Neighborhood Group, the Eastside Neighborhood Group and the South Millville Neighborhood Group.

FUNDING OF NEIGHBORHOOD INITIATIVES

The primary source of community development funding is the federal Community Development Block Grant (CDBG). The US Department of Housing and Urban Development (HUD) has provided annual CDBG funding to the City since 1974. This funding is a categorical grant, meaning the City can decide how to expend these funds within the context of large categories of eligible activities. Included in the list of eligible activities are public services, historic preservation, housing, economic development, planning, and public facilities targeted towards low and moderate income neighborhoods.

Since initially receiving CDBG funding some 30 years ago, the City has traditionally utilized at least 50% of the funds for various types of housing rehabilitation. All participants must be income eligible. Funds have been provided for paint, security, replacing roofs, heating and plumbing systems, windows, siding, and energy conservation items. Approximately 30 homes are rehabilitated annually.

Some of the public social services offered within the community are also partially funded by the CDBG program. Day care, health services, art therapy, handicapped accessibility and programming, bilingual information, homeless prevention services and disabled transportation services have all been funded. Generally, the need for these services far outpaces the available resources.

The CDBG funds have also been utilized to eliminate some of the blighting influences in the downtown and surrounding neighborhoods. A commercial

rehabilitation or façade improvement program has been operational for over 15 years, providing matching grant assistance to center city businesses.

The City has supplemented CDBG funding with numerous types of financial assistance from the NJ Department of Community Affairs. Neighborhood Preservation Program (NPP) funds, Balanced Housing funds and Rental Rehabilitation funds have all contributed to the revitalization of affordable housing. Currently, the Neighborhood Preservation Program is operating in the Third Ward neighborhood.

This designation includes annual resources for a full time neighborhood coordinator as well as several neighborhood improvement activities, such as housing rehabilitation and neighborhood clean-ups. The NPP designation is for a five year time frame and operates with the assistance of a neighborhood advisory group.

XI. Housing Plan

INTRODUCTION

The Mount Laurel II decision²⁰, handed down by the New Jersey Supreme Court in January 1983, requires all municipalities to provide a realistic opportunity for the construction of housing affordable to those households of lower income. In response to the Mt. Laurel II decision, the Fair Housing Act was adopted in 1985 and signed by the Governor (Chapter 222, Laws of New Jersey, 1985). The Act established a Council on Affordable Housing (COAH) to insure that the mandate of Mt. Laurel II would be implemented by all New Jersey municipalities.

The Fair Housing Act also required municipalities in the state to include an adopted housing element in all master plans. The principal purpose of the housing element is to provide for methods of achieving the goal of access to affordable housing to meet the municipality's present and prospective low and moderate-income housing needs. Low-income households are defined as those with an income no greater than 50 percent of the median household income adjusted for household size of the housing region in which the municipality is based. Moderate-income are those households with incomes no greater than 80 percent of the median household income, adjusted for household size of the housing region. The Council (COAH) is directed to review the municipal housing element and fair share plan and is empowered to grant the municipality substantive certification.

Millville City is located in the central part of Cumberland County and is located in the South – Southwest Housing Region (Region 6) which consists of Cumberland, Atlantic, Cape May and Salem counties.

Until the presentation of the new substantive rules in 2004²¹, The Council, through a complicated formula, developed municipal fair share housing need numbers for two defined periods or rounds, and assigned those housing need numbers to the municipalities. The need assigned to each municipality took into consideration the geographic regions, census data, and estimates for future growth and development.

The new rules adopted November 22, 2004, include a third round methodology for the period 1999 to 2014 which represents a substantial change in the way estimated need is calculated. The new methodology for

²⁰ - *South Burlington County NAACP v. Mt. Laurel Township*, 92 NJ 158, 456 A.2d 390 (1983).

²¹ - *The Re-Proposed New Rules*, N.J.A.C. 5:94, where adopted on November 22, 2004 and became effective on December 20, 2004.

estimating housing need represents a substantial overhaul from previous methodologies. It adopts a “growth share methodology” which bases need upon a municipality’s actual level of growth in jobs and building activity. Under the new rules, the definition of “creating a realistic opportunity” is tightened to require municipalities to actually construct or otherwise provide for affordable housing. It is no longer sufficient to simply zone for the growth to occur. Instead a one unit affordable housing obligation will be generated for every eight market-rate units created. Similarly, a one unit affordable housing obligation will be created for every 25 jobs as measured by new or expanded non-residential construction.

The Municipal Land Use Law and the existing COAH regulations requires that the housing element include the municipality’s strategies for addressing its present and prospective housing needs and shall at least contain the following:

- 1) An inventory of the municipality’s housing stock by age, condition, purchase or rental value, occupancy characteristics, and type, including the number of units affordable to low and moderate income household and substandard housing capable of being rehabilitated;
- 2) A projection of the municipality’s housing stock, including the probable future construction of low and moderate income housing, for the next ten years subsequent to the adoption of a housing element, taking into account, but not necessarily limited to, construction permits issued, approvals of applications for development and probable residential development of lands;
- 3) An analysis of the municipality’s demographic characteristics, including but not limited to household size, income level and age;
- 4) An analysis of the existing and probable future employment characteristics of the municipality;
- 5) A determination of the City’s present and prospective fair share for low and moderate income housing and its capacity to accommodate its present and prospective housing needs, including its fair share for low and moderate income housing;
- 6) A consideration of the lands that are most appropriate for construction of low and moderate income housing and of the existing structures most appropriate for conversion to, or rehabilitation for, low and moderate income housing, including a consideration of land of developers who have expressed a commitment to provide low and moderate income housing;

- 7) A map of all sites designated by the City for the production of low and moderate income housing and a listing of each site that includes its owner, acreage, lot and block;
- 8) The location and capacities of existing and proposed water and sewer lines and facilities relevant to the designated sites;
- 9) Copies of necessary applications for sewer service and proposed water quality management plans submitted pursuant to Sections 201 and 208 of the Federal Clean Water Act, 33 U.S.C. S1251, et seq.;
- 10) A copy of the most recently adopted City Master Plan and, where required, the immediately preceding, adopted Master Plan;
- 11) For each designated site, a copy of the New Jersey Freshwater Wetlands maps where available.
- 12) A copy of appropriate United States Geological Survey Topographic Quadrangles for designated sites; and
- 13) Any other documentation pertaining to the review of the City Housing Element as may be required by COAH.

SUMMARY OF FAIR SHARE PLAN

In June 1991, the City of Millville received substantive certification for their Housing Element and Fair Share Plan. The Plan, which addressed a pre-credited need of 703 housing units, received credit for rehabilitating 300 housing units (before 1990) and building 150 new affordable units. The remaining new construction obligation of 253 units was provided through inclusionary zoning in Western Millville.

The second round obligation, which was issued in 1993, established Millville's housing obligation at zero (0) as a result of their classification as an "Urban Aid Municipality." The City, however, has identified a strong need for housing rehabilitation in its 2000 – 2005 Consolidated Plan.

The third round obligation (2004-2014), is based on a "growth share" methodology, and includes the following three components:

- 1) The rehabilitation share which is the number of substandard units which the municipality is responsible for rehabilitating.²²
- 2) The remaining new construction obligation or net prior round obligation, which is the municipality's past obligation from rounds one and two,²³ if any; and

²² - Council on Affordable Housing (COAH) 2004-2014 Rehabilitation Share Numbers, July 13, 2004 Appendix C, lists 75 units as Millville City's rehabilitation obligation.

- 3) Growth share or prospective need, which is a portion of municipally-determined growth.

COAH'S proposed new rules defines "Growth Share" as the affordable housing obligation generated by both residential and non-residential development from 2004 through 2014 and is represented by a ratio of one affordable housing unit for every eight market rate housing units constructed plus one affordable housing unit for every twenty-five newly created jobs as measured by new or expanded non-residential construction within the municipality. Millville has a rehabilitation share of 75 units based upon the new regulations and a new prior round obligation of 0 units. The prospective need will be projected in the Fair Share Plan based upon projected development.

GOALS AND OBJECTIVES

The goals of the Millville City Housing Element are based on the housing goals and objectives adopted as part of the City's 1997 Master Plan; 2000-2005 Consolidated Plan; 2003 Master Plan Re-Examination; 2003 Center City Redevelopment Plan; and this document.

These goals are as follows:

- 1) Conserve and renew older neighborhoods and improve local citizen's living environment;
- 2) Promote increased private investment in community development activities;
- 3) Conserve and expand the local affordable housing stock,
- 4) Restore and preserve properties of special value for historic; and architectural or aesthetic reasons.
- 5) Encourage public private partnerships to produce affordable housing.

DEMOGRAPHIC, HOUSING AND EMPLOYMENT ANALYSIS

REGIONAL AND DEMOGRAPHICAL DATA

The City of Millville is located in central Cumberland County about 10.7 miles (downtown to downtown) east of Bridgeton, the county seat. The county is located in south central New Jersey. Regionally, Millville is 40 miles from Philadelphia, Pennsylvania, 36 miles from Wilmington, Delaware and 111 miles from New York City. The City is surrounded by municipalities

²³ - Millville has a zero prior round obligation.

of Vineland to the north, Maurice River to the east, Commercial, Downe and Lawrence to the south, and Fairfield and Deerfield to the west. The City comprises 44.54 square miles of which 42.35 sq. miles is land and 2.19 sq. miles is water.

POPULATION

Millville is a growing city that has continued to increase in population over the past 70 years, as shown in Table XI-1. As of 2000, the City population has peaked at 26,847 residents. In 2004 based on Census Data estimates, the population change reflected a 1.11% decrease. The greatest percentage increase in population occurred between 1950 and 1960, when the City's population increased by almost 20 percent. The rate of growth has slowed down significantly over the past twenty years, increasing by 4.7 percent between 1980 and 1990 and 3.3 percent between 1990 and 2000 and has begun a slight decrease from 2000 to 2004. Additional decrease in population is anticipated from 2004 to 2009 (1.45%).

The population trends experienced by the City are somewhat similar to those of Cumberland County, as shown in Table XI-1. The County experienced its greatest rate of increase in population between 1940 and 1950 (21.1 percent) and a similarly high percentage increase between 1950 and 1960 (20.6 percent). The rate of growth in the County has also slowed down in the last 20 years, increasing by 3.9 percent between 1980 and 1990 and 6.1 percent between 1990 and 2000 although as of July, 2003, almost 2 percent increase has occurred.

Table XI-1. Population Change, 1930 to 2000, 2004 Estimate,
City of Millville.

Year	Population	Population Change	
		Number Changed	Percent
1930	14,705	-	-
1940	14,806	101	0.7
1950	16,041	1,235	8.3
1960	19,096	3,055	19.0
1970	21,366	2,270	11.9
1980	24,815	3,449	16.1
1990	25,992	1,177	4.7
2000	26,847	855	3.3
2004 ⁽¹⁾	26,548	-299	-1.1

(1) – Estimate as of July 1, 2004.

Sources: U.S. Decennial Census, NJ State Data Center

Table XI-2. Population Change, 1930 to 2000, 2003 Estimate,
Cumberland County.

Year	Population	Population Change	
		Number Changed	Percent
1930	69,895	-	-
1940	73,184	3,289	4.7
1950	88,597	15,413	21.1
1960	106,850	18,253	20.6
1970	121,374	14,524	13.6
1980	132,866	11,492	9.5
1990	138,053	5,187	3.9
2000	146,438	8,385	6.1
2003 ⁽¹⁾	149,306	2,568	1.8

(1) – Estimate as of July 1, 2004.

Sources: U.S. Decennial Census, NJ State Data Center

The South Jersey Transportation Planning Organization (SJTPO) has developed future population estimates for Millville. The SJTPO estimates the population of the City will increase at a rate that exceeds the growth experienced from 1980 to 2000. From 2000 to 2010, the City is projected to grow to 29,014 persons, or an increase of 8.1%. From 2010 to 2020, the population is projected to grow to 32,216, for increase of 10.7%. The final projected population in 2025, 33,445 persons would be an increase of 24.6% from the 2000 population of 26,847.

POPULATION COMPOSITION BY AGE

Table XI-3 illustrates the 1990 and 2000 population by age groups for the City of Millville and Cumberland County. Over the ten-year period, there were significant shifts in many of the age cohorts. The most significant shift occurred in the 45 to 54 age category, which increased by 948 persons or 36.5 percent. This age group now constitutes 13.2 percent of the City's population compared to 10.0 percent in 1990. The increase represents the aging of the baby boom generation - those born between 1946 and 1964. As this group passes through the age pyramid, it will constitute a more affluent, stable market as most will be married, with children. Millville is attractive to this age group as it provides a good environment to live and raise a family.

There was also a dramatic increase in the number of residents under the age of 18 over the past ten years. The number of residents under the age of 18 increased by 3,584 between 1990 and 2000. This represents a 51 percent increase. This represents the mini-baby boom caused by the large number of

baby boomer's having children. The increase in the number of residents under 18 by over 51 percent should be of importance to education officials, as this trend portends increasing school enrollments.

While there was a significant increase in the 55 to 59 age category, which increased by 15.5 percent over the decade, there was a decline in the number of younger senior citizens (60 to 74) and an increase in the number of older senior citizens (75 and over) in the City. Between 1990 and 2000, the number of residents between 60 and 74 decreased by over 500 persons, while the number of residents over the age of 75 increased by approximately 350 persons. "Younger" senior citizens moving out of Millville to retirement communities located in warmer climates may cause this trend. The increase in the number of "older" senior citizens may be attributable to the need for older, frail and/or disabled senior citizens to return to their families for support and care.

Table XI-3. Population by Age, 1990 & 2000, City of Millville.

Age Cohort	1990		2000		Change, 1990-2000	
	No. of Persons	Percent	No. of Persons	Percent	Number	Percent
Under 5	1,978	7.6	1,871	7.0	-107	-5.4
5 – 24	7,631	29.4	7,949	29.6	318	4.2
25 – 44	8,054	31.0	7,737	28.8	-317	-3.9
45 – 54	2,594	10.0	3,542	13.2	948	36.5
55 – 59	1,121	4.3	1,295	4.8	174	15.5
60-64	1,135	4.4	993	3.7	-142	-12.5
65-74	2,126	8.2	1,749	6.5	-377	-17.7
75-84	1,078	4.1	1,318	4.9	240	22.3
85 +	275	1.1	393	1.5	118	42.9
Total	25,992	100.0	26,847	100.0	855	100.0
Under 18	6,914	26.6	10,498	39.1	3,584	51.8
Over 65	3,479	13.4	3,460	12.9	-19	-0.5

Source: U.S. Bureau of the Census, 1990 and 2000

Table XI-3 compares the age group distribution for the City and Cumberland County in 1990 and 2000. Both the County and the City have similar population distributions, with the exception of the younger age categories. While the percentage of the population under the age of 24 stayed approximately the same in Millville, the percentage at the County-level declined 2.2 percent.

Table XI-4. Population Distribution, 1990 and 2000
City of Millville and Cumberland County.

Age Cohort	1990		200	
	City (percent)	County (percent)	City (percent)	County (percent)
Under 5	7.6	7.3	7.0	6.3
5 – 24	29.4	28.9	29.6	27.7
25 – 44	31.0	31.1	28.8	31.2
45 – 54	10.0	10.3	13.2	13.2
55 – 59	4.3	4.4	4.8	4.8
60-64	4.4	4.5	3.7	3.9
65-74	8.2	7.9	6.5	6.6
75-84	4.1	4.4	4.9	4.8
85 and over	1.1	1.2	1.5	1.6
Total	100.0	100.0	100.0	100.0
Under 18	29.6	26.0	39.1	25.4
Over 65	13.4	13.5	12.9	13.0

Source: U.S. Bureau of the Census, 1990 and 2000

RACIAL COMPOSITION

Millville's racial and ethnic composition differs somewhat from the state and county averages. Millville's largest group is white at 76.1% of the total population, as compared to 65.9% in Cumberland County and 72.6% at the state level. The second largest group is African American comprising 15% of the total population in Millville, which is higher than the state total, 13.6% but lower than Cumberland County as a whole, 20.2%. The largest difference in ethnic and racial categories tracked by the U.S. Census Bureau occur with Asian American where they equal 5.7% of the total state population but only 1% in Cumberland County and .8% in Millville. Native Americans, Hawaiians, and other Pacific Islanders comprise very low percentages throughout New Jersey and in Millville. Finally, in Millville, the percentage of Hispanics was 11.2% in 2000. This compares to 13.3% in New Jersey and 19% in Cumberland County.²⁴

HOUSEHOLD CHARACTERISTICS

Table XI-5 demonstrates the variety of household types in Millville. According to the 2000 census, only 70 percent of the City's households are

²⁴ U.S. Census Bureau, Census 2000 Redistricting Data Summary Files PL1.

family households. The remaining 30 percent are comprised of non-family households, which include roomers, boarders, resident employees, foster children and live-in domestic help. Other household characteristics brought out in the 2000 Census include:

- Of the City’s family households, only 46.5 percent are married households.
- A female heads approximately 18 percent of the City’s non-married family households, while a male heads 5.4 percent.
- Over 25 percent of the non-family householders live alone, of which 11.6 percent are senior citizens (age 65 and over).
- Almost 40 percent of the households in Millville include an individual less than 18 years of age.
- Over 25 percent of the households in Millville include an individual over 65 years of age.
- The average household size in Millville is 2.65 persons per family, which is smaller than Cumberland County (2.73) but comparable to the State (2.68).

Table XI-5. Types of Households, City of Millville, 2000.

Type of Household	Number	Percent
Total Households	10,043	100.0
Family Households	7,011	69.8
Married couple families	4,671	46.5
Other family, male householder	543	5.4
Other family, female householder	1,797	17.9
Non-Family ⁽¹⁾	3,032	30.2
Householder Living Alone	2,519	25.1
Householder 65 years and over	1,162	11.6
Households with individuals under 18 years	3,978	39.6
Households with individuals 65 years and over	2,559	25.5
Average household size	2.65	

(1) - Not a member of a family. Roomers, boarders, resident employees, foster children, etc. are included in this category.

Source: U.S. Bureau of the Census, 2000

HOUSING UNIT CHARACTERISTICS

While the majority of Millville's housing stock is owner-occupied (63.9 percent), the City contains a large percentage of renter occupied units (36 percent). This blend of housing stock, which is shown in Table XI-6, reflects the wide range of households that reside in Millville.

Table XI-6. Units & Tenure, 2000, City of Millville and Cumberland County.

Units and Tenure	City of Millville		Cumberland County	
	Number	Percent	Number	Percent
Unit Type				
Occupied Year Round	10,043	94.3	49,143	93.0
Vacant, inc. Seasonal & Migratory	609	5.7	3,720	7.0
Total	10,652	100.0	52,863	100.0
Tenure of Occupied Units				
Owner Occupied	6,413	63.9	33,389	67.9
Renter Occupied	3,630	36.1	15,754	32.1
Total	10,043	100.0	49,143	100.0

Source: U.S. Bureau of the Census, 2000

As stated previously, Millville has a wide variety of housing stock, as indicated in Table XI-7. The traditional, detached single-family home represents less than 30 percent of the housing stock. Almost 11.7 percent of the City's housing stock is in large apartments buildings (containing 10 or more dwelling units), compared to only 8% percent of the housing stock in Cumberland County. Over 12 percent of the City's housing stock is located in smaller, multi-family structures (2 to 4 units), compared to 10% percent in Cumberland County. Approximately 10 percent of the City's housing stock is comprised of townhouses (single-family attached), compared to only 6.5 percent countywide.

The majority of the houses in Millville are older, with almost 23 percent of the City's housing stock being built before 1940. The average dwelling unit size is similar to that of the County. Fifty percent (50%) of the City's housing stock contains 5 or fewer rooms.

**Table XI-7. Housing Unit Data, 2000,
City of Millville and Cumberland County.**

Characteristics	City of Millville		Cumberland County	
	Number	Percent	Number	Percent
Year Structure Built				
1999 - 2000	151	1.4	773	1.5
1995 - 1998	317	3.0	2,045	3.9
1990 - 1994	492	4.6	2,381	4.5
1980 - 1989	1,221	11.5	5,251	9.9
1970 - 1979	1,924	18.1	9,118	17.2
1960 - 1969	1,484	13.9	8,524	16.1
1940 - 1959	2,688	25.2	13,354	25.3
1939 or earlier	2,375	22.3	11,417	21.6
Units in Structure				
One (single-family detached)	6,381	29.9	34,489	65.1
One (single-family attached)	1,071	10.1	3,453	6.5
2 to 4 units	1,338	12.6	5,384	10.2
5 to 9 units	310	2.9	1,802	3.4
10 to 19 units	407	3.8	1,283	2.4
20 or more units	845	7.9	3,035	5.7
Mobile home, trailer, other	300	2.8	3,517	6.6
Number of Rooms				
1 room	147	1.4	745	1.4
2 rooms	259	2.4	1,644	3.1
3 rooms	1,183	11.1	4,724	8.9
4 rooms	1,514	14.2	8,100	15.3
5 rooms	2,326	21.8	12,056	22.8
6 rooms	2,294	21.5	11,270	21.3
7 rooms	1,434	13.5	6,993	13.2
8 rooms	877	8.2	4,413	8.3
9 or more rooms	618	5.8	2,918	5.5
Median (rooms)	5.5		5.4	
Total Number of Housing Units (2000)	10,652		52,863	
Total Number of Housing Units (1990)	10,150		50,294	

Source: U.S. Bureau of the Census, 2000

Finally, as indicated in Table XI-8, a large number of housing units in the City contain at least one indicator of substandard housing conditions. The biggest indicator is the age of the housing stock, with over 2,375 housing units built before 1939. Other indicators include lack of complete plumbing facilities (38 units), lacking complete kitchen facilities (62 units) and overcrowded conditions (358 units).

It should also be noted, in terms of housing conditions, that 60% of all dwelling units may pose a hazard for lead-based paint. The age of the housing stock has implications for the condition of units based upon lead-based paint hazards. Based upon generalized percentages of dwelling units having lead paint by the age of the units, approximately 6,401 homes pose a danger of lead-based paint.

$$\begin{aligned}
 \text{Pre-1940 units: } 2,375 \times 90\% &= 2,138 \\
 \text{1940-1959 units: } 2,688 \times 80\% &= 2,150 \\
 \text{1960-1979 units: } 3,408 \times 62\% &= 2,113 \\
 \text{Total } &= 6,401 \text{ or } 60\%
 \end{aligned}$$

Table XI-8. Indicators of Housing Conditions, 2000,
City of Millville, Cumberland County, New Jersey.

Number of Units	City of Millville		Cumberland County	
	Number	Percent	Number	Percent
Built before 1939	2,375	22.3	11,417	21.6
Lacking complete plumbing facilities	38	0.4	235	0.5
Lacking complete kitchen facilities	62	0.6	228	0.5
1.0 or more persons per room	358	3.6	2,699	5.5
Total occupied housing units	10,043		49,143	

Source: U.S. Bureau of the Census, 2000

INCOME

The City of Millville is a relatively modest community in terms of income, as indicated in Table XI-9. The 1999 median household income in the City was \$40,378, which was slightly higher than Cumberland County (\$39,150) but well below the State median (\$55,146). Similarly, the 1999 per capita personal income in Millville (\$18,632) was slightly higher than the per capita personal income estimate for Cumberland County (\$17,376), but less than the

State (\$35,215).²⁵ In fact, Cumberland County for decades has had the lowest per capita income of any of the counties in the state.

As of July 2004, there are no new figures for household income. Therefore, the household income levels from 1999 have been adjusted to reflect 2004 values using the Consumer Price Index. The adjusted figures, which are shown in Table XI-9, indicated that the median household income for Millville is \$42,238. The U.S. Bureau of Economic Analysis has provided per capita personal income figures at the county and state level for 2004. These figures are also shown in Table XI-9.

Table XI-9. Per Capita and Household Income, 1999 and 2004,
City of Millville, Cumberland County, New Jersey.

Jurisdiction	1999-2000 Median Household Income	1999-2000 Per Capita Personal Income	2003/2004 Median Household Income	2003/2004 Per Capita Personal Income
Millville	\$40,378	\$18,632	\$42,238	\$19,997
Cumberland	\$39,150	\$17,376	-	\$25,856
New Jersey	\$55,146	\$27,006	\$66,734	\$39,436

Sources: U.S. Bureau of the Census, Current Population Survey March 1996 through 2003; The New Jersey income figures were inflated by the average of New York-metro and Philadelphia-metro Consumer Price Indexes for all Urban Consumers (CPI-U) U.S. Bureau of Economic Analysis and Consultant's estimate.

HOUSING VALUES AND COSTS

Housing cost problems are defined as households that spend more than 30 percent of their income on housing related costs. As indicated in Table XI-10, housing costs are a problem for approximately 20 percent of homeowner households and over 40 percent of renter households. In sheer numbers, there are over 1,200 homeowner households and more than 1,500 renter households facing various levels of problems associated with the costs of housing.

²⁵ - Personal income consists of private and government wage and salary payments in cash and in kind, other labor income, farm and non-farm proprietors income, personal interest income, rental income of persons, dividends and transfer payments, less personal contributions for social insurance. It is measured before the deduction of personal income and other personal taxes and is report in current dollars. Per capita personal income equals total personal income divided by total population.

**Table XI-10. Housing Values and Affordability, 2000,
City of Millville and Cumberland County.**

	City of Millville		Cumberland County	
	Number	Percent	Number	Percent
Monthly Owner Costs as Percent of Household Income				
Less than 15 percent	1,840	31.5	9,167	32.3
15 to 19.9 percent	1,129	19.3	4,914	17.3
20 to 24.9 percent	1,018	17.4	4,150	14.6
25 to 29.9 percent	601	10.3	2,905	10.2
30 percent to 34.9	327	5.6	1,814	6.4
35 percent or more	914	15.6	5,224	18.4
Not computed	21	0.4	196	0.7
Gross Rent as a Percentage of Household Income				
Less than 15 percent	527	14.9	2,168	13.9
15 to 19.9 percent	376	10.4	1,775	11.4
20 to 24.9 percent	474	13.2	1,802	11.6
25 to 29.9 percent	547	15.2	2,009	12.9
30 percent to 34.9	387	10.7	1,303	8.4
35 percent or more	1,074	29.8	5,403	34.7
Not computed	219	6.1	1,111	7.1
Median Housing Value (2000)	\$86,700		\$91,200	
Median Contract Rent (2000)	\$589		\$616	

Source: U.S. Bureau of the Census, 2000

The City's Community Development Block Grant Consolidated Plan 2005-2010 also analyzed household composition, housing costs, and household income. Small households (less than 5 persons) dominate both the renter and homeowner population segments and report the most difficulty in meeting housing costs.

Table XI-11. Households by Income

% of Median Income	Households	% of all households
30%	1,193	12%
30-50%	1,105	11%
50-80%	1,619	16%
80% or greater	6,030	61%

Source: US Bureau of Census, 2000

Thus, Table XI-11 demonstrates 23% or nearly one-fourth of all households in the City have family incomes that are less than 50% of the overall mean of those households with less than 50% of the mean family income, 75% are renters. This is demonstrated in Table XI-12.

Table XI-12. Household Income by Ownership Status

% of Median Income	Total Households	Ownership	Status
30%	1,193	206	987
30-50%	1,105	389	716
80%	1,619	938	681
80% or greater	6,030	4,846	1,184

Source: U.S. Bureau of Census, 2000

FUTURE HOUSING PROJECTION

Residential construction in Millville has been moderate over the past decade (1990 – 2000). Since 1990, a total of 757 residential building permits have been issued, almost all of which have been for single-family homes.²⁶ Only 10 multi-family building permits were issued over this time period. This provides an average of 68 residential building permits per year.

Millville issued 41 residential building permits in the year 2000, 37 in 2001, 41 in the year 2002 and 83 in 2003. All but one of these building permits was for single family homes. In 2004 Millville saw significant development growth with 947 building permits issued through September 2004 for single family homes and only one two-unit multi-family building permit issued. Two demolition permits were also issued. This significant increase in housing construction activity is a reflection of the development pressure being experienced throughout the county. Cumberland County is one of the

²⁶ - This total includes both single-family detached housing units and townhouses, which are classified as single-family units, approved as of December 2003.

last locations with available affordable land and infrastructure capacity. Large scale residential and commercial developers who have built projects in northern and central New Jersey are now proposing projects in the county. In Millville, there are several large planned unit development projects that have been proposed. Several of these projects have inclusionary housing components. Of the approximately 3,000 units proposed or recently approved, nearly half of the units are active-adult (55 years and older).

EMPLOYMENT AND LABOR FORCE CHARACTERISTICS

EMPLOYMENT TRENDS

Covered employment in Millville has declined over the past twenty years, as indicated in Table XI-13. In 1980, the City employed over 12,000 workers. By 1990, that number had declined to just under 11,000 workers. Between 1990 and 1998, local employment levels have fluctuated up and down, but stayed roughly near the 11,000 employment figure. Local employment declined in 1999 with the closing of the Ball Foster Glass Plant, which was the oldest continuously operating glass plant in the country. Approximately 300 jobs were lost as a result of the closure. In 2004, Dallas Airmotive, a jet engine overhaul company with facilities in Texas and Missouri, decided to close its Millville facility. This decision to consolidate operations resulted in the loss of 240 technical jobs and the closing of the airport's oldest business. These highly skilled jobs will be difficult to replace and the closing of the facility impedes the City's economic development goal of developing the airport into a full service aviation center. Despite employment gains from small businesses in the retail and service sectors, Millville's heritage as an industrial and manufacturing center raises serious concerns about the continued job losses. ARC/Durand Glass, located in the South Millville Industrial Park, is the City's largest employer with just over 1,000 workers. This glass manufacturer has continued to expand its operations despite national trends.

The City has developed a multi-faceted economic strategy aimed at diversifying the economic base. The City has an active economic development office that works in partnership with state and regional authorities such as the Delaware River and Bay Authority, New Jersey Department of Commerce, and the South Jersey Economic Development District. A \$100 million motorsports/entertainment project has been approved on 708 acres at the Millville Airport which could result in 1,500 jobs. In the Route 55/47 corridor, a new \$45 million shopping center is being proposed for 2005. This commercial development, when completed is projected to provide 1,000 retail and service jobs.

However, employment gains from the many small businesses that have located or expanded in Millville have more than made up for the employment loss created by the closing of the Foster Glass Plant. The City recently purchased over 800 acres of undeveloped land adjacent to the Millville Airport in order to expand the Airport Industrial Park. As access to the airport from Route 55 is enhanced, the City anticipates locating light industry, warehousing, and distribution companies in this location

Cumberland County, in comparison, saw a significant increase in employment between 1980 and 1990, and again between 1998 and 2000, when the employment level reached a high of 60,350 workers. It is projected that by 2010 both Cumberland County and the City of Millville will see a significant workforce increase.

Table XI-13. Covered Private Sector Employment, 1980 – 2000,
City of Millville and Cumberland County.

Year	City of Millville			Cumberland County		
	Number of Jobs	Change		Number of Jobs	Change	
		Number	Percent		Number	Percent
1980	12,239	-	-	45,087	-	-
1990	10,993	-1,246	-10.2	47,602	+2,515	+5.6
1995	11,036	+43	+4	45,593	-2,009	-4.4
1998	10,853	-216	-1.9	46,078	+481	+1.0
2000	13,001	+938	+8.6	60,350	+14,372	+31.2
2010 ⁽¹⁾	13,112	+1,321	+11.2	68,700	+8,350	+13.8

(1) - Projected

Source: U.S. Census Bureau, Census 2000. NJ Department of Labor.

LABOR FORCE CHARACTERISTICS

Millville residents are employed in a wide range of occupations, as indicated in Table XI-14. The greatest percentages of residents are employed in executive, administrative and managerial positions, equal to sales and office occupations each representing 24.8 percent and 24.5 percent of the labor force, respectively. The next largest representation in the labor force is service occupations at 19.9 percent and production and material moving occupations at 19.8 percent.

Table XI-14 also identifies the class of workers found in the City of Millville and Cumberland County. As expected, the largest sector of workers for both the City and the County are in the private sector, representing 72.1 percent

and 74.2 percent, respectively. Local government was the second highest employee class for both the City and the County in 2000.

The majority of the City's labor force (73.9 percent) drives to work, although a solid 18.2 percent carpool to work. In the County, 78.3 percent of the workforce drove to work and approximately 13.7 percent carpooled.

**Table XI-14. Employment Data – 2000 Occupation Characteristics,
City of Millville, Cumberland County.**

	Millville		Cumberland County	
	Number	Percent	Number	Percent
Occupational Group				
Executive, administrative and managerial	2,927	24.8	14,661	24.8
Service Occupation	2,345	19.9	11,207	19.0
Sales and Office	2,884	24.5	14,081	23.8
Farming, forestry and fishing	27	0.2	1,058	2.2
Construction, Extraction and Maintenance Occupations	1,270	10.8	5,770	9.8
Production, extraction, and material moving occupations	2,338	19.8	12,358	20.9
Total	11,791	100.0	59,129	100.0
Class of Worker				
Private wage & salary	8,505	72.1	43,850	74.2
Government	2,660	22.6	12,112	20.5
Self-employed	606	5.1	3,031	5.1
Unpaid family	20	0.2	136	0.2
Total	11,791	100.0	59,129	100.0
Commute to Work				
Drove alone	9,199	73.9	44,954	78.3
Carpooled	1,267	18.2	7,843	13.7
Public transportation	321	1.6	1,281	2.2
Walked	257	1.6	1,186	2.1
Other Means	149	4.7	887	1.5
Worked at Home	240	2.1	1,236	2.2
Total	11,433	100.0	60,937	100.0

Source: U.S. Bureau of the Census, 2000.

FUTURE EMPLOYMENT PROJECTIONS

Projections prepared by the New Jersey Department of Labor's Division of Labor - Market and Demographic Research (LMDR) show Cumberland County's labor force growing slightly more slowly than the state's overall rate from 1990 to 2010. According to these projections, the county's labor force is projected to grow by 11 percent during this period, which is slightly below the 12 percent increase projected for the state. Historically, the labor force in Millville has represented approximately 20 percent of the County's labor force. If this proportion holds true, then the City could be expected to increase its labor force from 13,112 in 2000 to 14,580 in 2010. This represents an increase of 1,468 persons.

Despite recent reductions in employment levels, these projections are reasonable for several reasons. Cumberland County's economic outlook will improve as companies take advantage of the county's Federal Empowerment Zone and Urban Enterprise Zone status. New economic development projects will have a positive impact on the county's job holdings and revitalization activities in Millville's downtown district will attract new businesses.

In 2003, the City designated the Millville Airport and Millville's Center City Area as areas in need of Redevelopment. The City is also pursuing a Revenue Allocation District that would include both of these redevelopment areas. Both designations would provide the City with additional financing tools to revitalize these areas. Job creation is the ultimate goal of a focus on redevelopment and the retention and expansion of existing businesses.

Table XI-15. Estimated and Projected Labor Force Estimates, 2000-2010, Millville.

	2000 Number	2010 Number	Percent Increase
Cumberland County	65,614	72,900	11.1
State of New Jersey	4,193,145	4,709,900	12.3

Source: Bureau of Labor Statistics

Fair Share Plan

INTRODUCTION

In order to receive substantive certification from the Council on Affordable Housing (COAH) a Fair Share Plan must be submitted in conjunction with the Housing Element. The Fair Share Plan represents the municipality’s strategy for satisfying its affordable housing obligation during a ten year period (2004-2014). It contains the projects and resources with which a community will create a realistic opportunity to meet its fair share of affordable housing and the implementing ordinances to facilitate the actual development of affordable housing.

FAIR SHARE NEED

As stated in the Housing Element, there are three components to a municipality’s fair share need:

1) The balance of prior round obligations	0
2) The 1999-2014 rehabilitation share	75
3) Growth share projections – jobs and housing units	<u>350</u>
Total need – Millville, New Jersey:	425

FAIR SHARE PLAN COMPONENTS

COAH substantive rules adopted December 20, 2004 (*N.J.A.C 5:94-4.1*) outline the components of a Fair Share Plan.

- 1) Description of the projects and funding sources that will be employed to meet fair share need during the 10 year certification process.
- 2) The collection of development fees, with a plan to spend the development fees.
- 3) Provisions to address the rehabilitation component of the fair share obligation.
- 4) Optional provisions including:
 - a) Inclusionary development;
 - b) Inclusionary zoning ordinance options;
 - c) Municipally sponsored construction and reconstructions;
 - d) Regional Contribution Agreements;
 - e) Alternate living arrangements;
 - f) Transitional housing;

- g) Accessory apartments;
- h) Subsidizing for-sale units;

PROJECTS AND FUNDING SOURCES TO MEET FAIR SHARE NEED

The City is proposing to utilize various public and private sector programs to provide the resources for developing citywide affordable housing. It is recognized that 10 year affordability controls are required in order for units to count toward the City's rehabilitation obligation.

HOUSING REHABILITATION

- ***Community Development Block Grant*** - Approximately \$175,000 per year will be utilized by the City in order to meet its rehabilitation component. It is estimated that approximately 20-25 homes can be rehabilitated to code standards annually, with an average rehab cost of between \$12,000-\$15,000. The cost of removing lead-based paint hazards has significantly increased the average rehab cost. This assistance is available citywide to income-eligible households (less than 80% of median income). The City has operated its rehab program since 1982 and anticipates this program will be the primary means of meeting its rehabilitation component of future need. The Policies and Procedures of the Rehab Program are included by reference to this Plan.
- ***HOME Program*** - The US Department of Housing and Urban Development also provides approximately \$178,000 annually for homeownership opportunities. The City provides 55% of these funds to a certified housing organization, AHOME, Inc., in order to construct and rehabilitate homes in the Center City neighborhood. In addition to providing AHOME some of its resources, the City utilizes the remaining funds to supplement its housing rehab program. These funds are particularly useful in deferring the costs of larger-scale projects that involve the removal of lead-based paint hazards. A small portion of the HOME monies are used for program administration. The City also designates approximately \$15,000 a year in HOME funds to Habitat for Humanity for the construction of new affordable housing, or, for the purchase of land for new construction.
- ***Revenue Allocation district/Redevelopment Area Designation*** - In 2004, the City designated its CDBG target areas as part of the large Center City Redevelopment area. The purpose of this designation was

to provide additional legal and financial tools to stimulate the revitalization of the City's central core.

In addition to being designated a redevelopment area, in 2005 the City is pursuing designation for this redevelopment area as a Revenue Allocation District. The State of New Jersey recently enacted legislation that permits municipalities to utilize this form of tax increment financing. In this form of financing, the City determines the tax base of the designated area and then tracks all new development and the subsequent additions to the City's tax base. The tax revenue enhancements are then utilized for revitalization projects within the district. The City will utilize 50% of all of the additional tax revenue for redevelopment projects including the rehabilitation of substandard housing. The new 500,000 sf. shopping center proposed for the Routes 47/55 corridor is the lead project for the Revenue Allocation District. The City has submitted a preliminary application to New Jersey Economic Development Authority for designation during 2005.

- ***NJ DCA: Neighborhood Preservation Program*** - The Third Ward Neighborhood is designated by the State as a Neighborhood Preservation Program neighborhood. This is a five year designation that includes a \$125,000 annual grant. As part of the grant, \$80,000/year is set aside for housing rehabilitation in the target area. This amount enables ten houses to be rehabilitated each year.
- ***Millville Housing Authority: MONI Program*** - The Millville Housing Authority (MHA) has been awarded a \$2 million grant from the NJDCA's MONI (Market Oriented Neighborhood Investment) program. The MHA will utilize this grant award to purchase and rehabilitate 17 housing units in the West Side neighborhood. In addition to the rehab component of their application, the grant award also included funding for the purchase of 4 vacant lots for the construction of 10 new homes. The MHA was awarded this grant through its nonprofit development corporation, the Holly City Development Corporation. In total, 17 homes will be constructed or rehabilitated for low and moderate income families.
- ***Payments-in-lieu of Construction*** - One of the options available to developers of planned unit development projects that are required to construct affordable housing units is making a per-unit contribution to the City's Housing Trust fund. Rather than actually construct dwelling units together with the market-rate units on site, developers can submit a payment equaling at least \$35,000 per unit to the Housing Trust. According to the City's Spending Plan, these funds may be used to enhance the City's rehabilitation needs. Presently, the

City maintains a waiting list of 150 income eligible households who need assistance in bringing their home to code standards. At least a portion of these funds will supplement the CDBG and HOME rehab programs. These funds will also be available for new construction, acquisition of land, interest buy downs, down payment assistance, and partnerships with nonprofit housing organizations.

- **Development Fees** - The fees collected from COAH authorized impact fees on new residential and nonresidential development may be used to address fair share obligation, including housing rehabilitation.

NEW CONSTRUCTION

Millville Housing Authority/Holly City Development Corporation. The Millville Housing Authority will be a key partner in the City's new affordable housing construction obligation.

- **New Senior Mid-rise Building** - During the first two years of the certification period, the MHA plans to develop a 100-unit mid-rise apartment building. This new building will be constructed in a private/public partnership with Bitonti Development. The MHA will manage the units and then obtain ownership of the building in fifteen years. The building will be located on a 6-acre site on Ware Avenue and Route 47, in close proximity to the MHA's other high rises. Tax credits will fund up to 75% of the project cost and the State's Home Express program will also provide funding.
- **MONI Program** - As mentioned previously, the Holly City Development Corporation has received a \$2 million grant from the State's MONI (Market Oriented Neighborhood Investment) program. A portion of this funding will be used for the acquisition of land and new construction of 10 affordable homes on the west side.
- **School Redevelopment Site** - Another potential option for the creation of new units is the adaptive reuse of an older, elementary school in the Third Ward. This project is a three-way partnership between the MHA, the City, and the Board of Education. If the City can obtain a blighted apartment complex through the use of eminent domain, the Board of Education is considering the construction of a new community school on the 6 acres site to replace the RD Wood School. The final project component would be the reuse of the old school by its conversion into approximately 24 senior citizen apartments.

AHOME, Inc. This organization is a nonprofit ecumenical housing organization that concentrates its efforts on developing affordable housing in the Center City area. By utilizing a UHORP (Urban Homeownership Recovery Program) grant sponsored by NJDCA, this organization has created 30 new affordable homes over a ten-year period through both new construction and rehabilitation. The City provides foreclosed lots to the organization. Through a partnership with the Cumberland County Technical Education Center, new homes are constructed on the vacant lots. It is estimated that AHOME will be able to construct 3-5 new units annually.

Habitat for Humanity. This well known affiliate of Habitat International has existed in Cumberland County for over 12 years. To date they have constructed 3 homes in Millville. Habitat has recently obtained ownership of a large piece of land on Garfield Street and intends to construct ten new homes.

Development Fees. The fees collected from COAH authorized development fees on new residential and nonresidential development may be used to address fair share obligation, including new construction.

Payments-in-lieu Construction. Developers who elect to make a per unit payment (not less than \$35,000/unit) rather than construct affordable dwelling units on site will submit their payment to the Housing Trust Fund. These resources will be available for new construction projects.

Revenue Allocation District. As previously described, the funds collected by the City as part of the Revenue Allocation District may be used toward municipally-sponsored new construction.

INCLUSIONARY ZONING REQUIREMENTS

The Land Use Ordinance includes an inclusionary housing requirement for the following planned unit development options.

- a) Land Conservation Zone: Planned Adult Communities
- b) Agricultural Conservation Zone: Planned Agri-communities
- c) R-20 Zone: Planned Residential Communities

The amount of affordable set-aside is tied directly to the density of the project, per Section 30-192 of the Zoning Ordinance.

General Development Plan approved 2004
 Preliminary subdivision approval 2/2005
 Payment-in-lieu proposed

Proposed Projects

- | | | | |
|----------------------------|--|---------------------------|--------------------------------|
| 3. | <u>The Villages at Chatfield</u>
Block 3 Lot 54
Route 49
No approvals to date; GDP submitted for review | 945 units | 47 affordable |
| 4. | <u>Union Lake Area</u>
Block 18 Lot 2
Route 47/55
No approvals to date; GDP being prepared | 600 units | 30 affordable |
| B) <u>New Construction</u> | | | |
| 1. | <u>Holly City Development</u>
Block 401 Lot 4
Route 47/Ware Avenue
No approvals to date; expected in 2005; seeking tax credits | 100 units
Sr. Citizens | 100 affordable
Sr. Citizens |
| 2. | <u>Holly City Development</u>
Scattered site – MONI Program
Western Millville
Project underway | 17 units | 17 affordable |
| 3. | <u>Holly City Development</u>
Archer Street
Block 304 Lot 1
Reuse of school building; conceptual | 20 units
Sr./disabled | 20 affordable
Sr./disabled |
| 4. | <u>AHOME, Inc.</u>
Scattered site – Center City
Will build as resources become available | 10 units | 10 units affordable |
| 5. | <u>Habitat for Humanity</u>
Block 526 Lot 5
Garfield Street
One house under constructions | 5 units | 5 units affordable |

ADMINISTRATION OF PLANS

The primary responsibility for the administration of the Fair Share Plan will reside with the Planning Director and the Community Development office. This office has operated housing programs since 1982, with extensive experience in housing rehabilitation, neighborhood redevelopment and housing regulations. This office is staffed as follows:

Kim Warker, PhD Planning Director/CD Director	Directs City's Planning and Community Development programs; policy development
Russell Barringer CD Assistant Director	Directs daily operation of CDBG, HOME and housing rehab programs
Debra Reed NPP Director	Operates Third Ward Neighborhood Center and NPP program

SUMMARY OF AFFORDABLE HOUSING RESOURCES

HOUSING REHABILITATION AND NEW CONSTRUCTION

Federal

Community Development Block Grant (CDBG)
HOME
Federal Home Loan Bank Board
Federal Low Income Tax Credit

State

NJDCA: MONI Program
NJDCA: Balanced Housing
NJDCA: Neighborhood Preservation Program
NJDCA: Home Express
NJHMFA: Various programs

Local

Revenue Allocation District Funding

Private

Payments-in-lieu
Development Fees
Nonprofit developers (Habitat for Humanity)

XII. Farmland Preservation Element

CURRENT STRATEGIES

Municipalities are required by the NJ Municipal Land Use Law to provide a Farmland Preservation Element when seeking to utilize state or county funding which demonstrates the manner in which the municipality intends to support and promote agriculture. This element also includes a listing of all properties within the City that are presently farmed, based upon a farmland assessment designation by the Tax Assessor's Office. For purposes of the Master Plan, farmland is defined as land in active agricultural or horticultural use.

The Master Plan as well as the city's development regulations support and promote agriculture as a business. The value of prime agricultural lands was recognized in 1990 when the Master Plan at that time designated lands on the perimeter of Millville as Agricultural Conservation zones. In this zone there are few principal uses allowed. The zone is primarily designated for farms, single family development on five-acre plots, wildlife conservation or forestry, parks, public educational or cultural facilities and cemeteries.

The Planning Board also adopted a Planned Agri-Community Development optional zoning overlay in 1990. The purpose of this development option was to provide a means of maintaining the natural, rural and scenic qualities of the AC District by preserving farmland and significant open lands while providing necessary housing opportunities and allowing land owners a reasonable economic return on their property. A minimum property of 100 acres is required for this option as well as open space totaling 50% of the gross acreage. A minimum of 30% of the total land area in the development shall be set aside for farmland preservation.

Statistics issued by the US Dept. of Agriculture demonstrated that farming in Cumberland County increased by 3,903 acres from 1997-2002. Cumberland County farm acreage accounts for 25% of the state's production of vegetables, melons, and potatoes. Traditional farms actually decreased in acreage during this time period, however, nursery industry farming has fueled the growth. The nursery industry outpaces fruit and vegetable farming \$68 million to \$43 million, respectively. Within the City of Millville there are numerous nursery farms.

Good soil and moderate weather have combined to keep farming productive within Cumberland County. In Millville approximately 20% of the land is assessed as farmland, constituting in excess of 5,400 acres. In reality, land coverage studies demonstrate that the actual land use in farming is much lower than 20%. Landowners may actually be holding land assessed as farmland or may be maintain it in woodland management. This suggests opportunities to preserve farmland through state purchase agreements, planned unit development, or transfer of development rights.

In Cumberland County 10,000 acres have been preserved since 1991 utilizing the Farmland Preservation Program. In 2004, Cumberland County farmers received \$521,000 through the state preservation program. The county's goal is to preserve 1,000 acres per year. However, the average price per acre offered to Cumberland County farmers is just under \$2,000. Farmers and county officials feel it is an unfair price and is not a large enough incentive to interest many of the county's farmers to sell their development rights. The amount offered for preservation is based on a state formula which is based strictly on fair market value at the time of purchase, irrespective of possible earning potential. The end result of this strategy is that the most productive land in the state is being offered the least amount of money for preservation while the most urban and suburban communities in the state receive the highest per acre offers.

PROPOSED STRATEGIES

TRANSFER OF DEVELOPMENT RIGHTS

One technique being considered by the Planning Board is the transfer of development rights. This preservation tool was previously only available in Burlington County as part of a state pilot program. In 2004, the Governor passed the State Transfer of Development Rights Act. This legislation was passed as part of the Governors smart growth and anti-sprawl policies and is a prime tool for preserving farmland. Transfer of Development Rights, or TDR, is a market-based zoning technique in which growth is transferred from places where the community would like to see less development ("sending zones") to places where the community wants to encourage development ("receiving zones"). Thus, TDR is a tool to redirect growth while being equitable to all affected landowners. The transfer is accomplished by separating the right to develop from a property in a sending zone and transferring it — for compensation — to another property in a receiving zone. It is based on the theory that land ownership constitutes a bundle of rights that can be separated and disposed of individually.

A sending zone is to be comprised of agricultural lands, woodlands, floodplain, wetlands, parklands, and other environmentally sensitive areas or areas that should remain at low densities. A sending zone may also be developed land which is aesthetically, architecturally, or historically distinctive and worthy of preservation.

A receiving zone must be suitable for development and must be capable of accommodating all of the development potential intended to be transferred from the sending zone. The statute requires this development to be “realistically achievable” considering the availability of infrastructure, zoning standards, and the local land market conditions.

Municipalities must adopt local TDR ordinances as well as several master plan elements (Development Transfer Plan Element, Capital Improvement Element, Utility Service Plan Element and a Real Estate Market Analysis). The mechanics of the transfer of development rights are set forth in the TDR ordinance and documented by the municipal government. Rights may be sold privately by a landowner in the sending zone to a developer in the receiving zone. Alternatively, a “TDR Bank” may be established at the municipal level to facilitate the transfer. Once the development credits are sold, the land they came from is deed restricted to agricultural or conservation purposes.

For example, a 300 acre tract with a zoning density of one housing unit per 5 acres (AC Zone) would yield 60 units. These units could be transferred to a smaller area of 20 acres at three units per acre. The amount of land thus consumed for housing is 15 times less than present policy.

RESIDENTIAL CLUSTER

Another method of retaining farmland and its development rights is through the clustering of residential units. This technique may be especially effective in the western portion of Millville where there are still several large, undeveloped lots in single ownership. Using this method, the amount of development that could occur throughout the large parcels would be concentrated along the state highway (Route 49). Clustering would allow greater densities of residential units on a portion of a site in exchange for the preservation of farmland, woodland or open space. Millville already encourages clustering through its zoning regulations.

PLANNED UNIT RESIDENTIAL DEVELOPMENT

A third method is to use the Planned Unit Residential Development (PURD) process in the municipal land use law. Planned development can include

land that is not contiguous; that is, scattered lots can be used to meet the minimum tract area. The PURD would allow the transfer of allowed houses from one of the scattered sites in the agricultural belt to a parcel closer to where development is preferred. The developer would need to secure an equity interest in all of the parcels involved. The PURD could be considered a hybrid between the transfer of development rights and the residential cluster methods. While permitted, the PURD has not yet been utilized in the state.

FARMLAND PRESERVATION POLICY RECOMMENDATIONS

- 1) Create and utilize flexible zoning tools to encourage farmland preservation as well as preservation of open space and recreation areas.
- 2) Utilize the State Plan Cross Acceptance process as a tool to educate state policy-makers of the value of farmland and the need to preserve farmers' equity.
- 3) Encourage the state to increase the property value of farmland for the farmland preservation program in Cumberland County.

XIII. Recycling Plan

PURPOSE OF THE RECYCLING PLAN

The City of Millville has established a recycling plan in order to reduce the amount of solid waste and to promote the conservation of recyclable materials. The separation and collection of white goods, newspapers, commingled glass and metal food and beverage containers HDPE plastic bottles, PET plastic bottles and leaves for recycling from the residential, commercial and institutional establishments in Millville will minimize the adverse environmental effects of landfilling by reducing the need for new landfills, conserve existing landfill capacity, facilitate the implementation and operation of other forms of resource recovery, conserving natural resources, and reducing the cost of solid waster disposal in general. The promotion and use of recyclable materials, goods produced from recycled materials, and goods which facilitate recycling, will further serve the same purpose by encouraging and facilitating recycling.

OVERALL GOAL OF THE RECYCLING PLAN

The reduction of solid waste has been established as the purpose of recycling in Millville. The specific goal of the recycling plan is to reduce overall solid waste within the City of Millville by 25%.

ESTABLISHMENT OF CURBSIDE RESIDENTIAL PROGRAM

A curbside program has been established in Millville for the separate collection of newspaper, commingled glass and metal food and beverage containers HDPE plastic bottles and PET plastic bottles from all non-physically disabled residents as well as commercial or institutional establishments whose solid waster is collected by or on behalf of the City. Apartment or condominium complexes or mobile home parks are not part of the city's curbside program.

Collection of recyclables at the curbside will occur every week according to a solid waste schedule published by the City. All residents are required to source-separate recyclables and place them at the side of the road fronting their residence on the date specified for collection. The City has established rules for how each of the recyclables should be prepared for collection, including newspaper in paper bags not exceeding 35 pounds or one foot in thickness, bottles and plastic containers rinsed free of contaminants with

caps and lids removed. Commingled glass and metal containers, as well as plastic bottles, must be placed in the recyclable container provided to each household.

COMMERCIAL AND INSTITUTIONAL PROGRAM

Commercial and institutional uses must also participate in the mandatory source separation program. These uses must also separate corrugated cardboard, food waste, and mixed paper. Commercial and institutional facilities must arrange for the collection of designated recyclables contractually either through pick up on site or delivery to a drop-off point.

RECYCLING OF LEAVES

Leaves must be recycled at a composting facility. Municipal residents can place leaves curbside at designated times of the year or place them in recyclable, clear bags. The Streets and Roads Department collect loose leaves on an established schedule during the fall and early winter. If the leaves are bagged they will be picked up during the regular trash collection cycle.

UNLAWFUL ACTIVITIES

The City of Millville has also designated certain activities as unlawful and considers them to constitute public nuisances. These activities include:

- The collection of designated recyclables at the roadside by any person other than those authorized for roadside collection;
- Any violations of any provision of the Recycling Ordinance, Article V, Section 61 of the Municipal Code;
- The placement of any material other than a designated recyclable in a recycling drop-off; and
- The interference or obstruction of the collection of recyclables.

The Recycling Ordinance provides penalties of not less than \$25 or more than \$1,000, or a term of imprisonment in the county jail for a term not to exceed 90 days, or community service for a period not to exceed 90 days for violations.

RECYCLING PLAN POLICY RECOMMENDATIONS

- 1) Promote the maximum practical recovery and recycling of recyclable materials from municipal solid waste; increase the number of private and public facilities that provide a full scale recycling program.
- 2) Promote the use of recycled materials for building projects.
- 3) Promote the grant program offered by the Cumberland County Improvement Authority for the use of recycled materials in local projects (docks, playgrounds, fences, etc.).
- 4) Promote the Millville Clean Communities program with Millville neighborhoods.

XIV. Land Use Plan Element

INTRODUCTION

The Land Use Plan Element seeks to maintain a balance in land use while providing the framework for planning and policy goals. It is designed to maintain and improve the quality of life for residents, land owners and visitors to the City of Millville. The Land Use Plan Element synthesizes the policies in the other elements of the Master Plan. The Land Use Plan Element is designed to encourage compatible land uses, the reuse of existing buildings, the conservation of environmentally sensitive areas, and the careful management of growth on the vacant land remaining. The Land Use Element is designed to help implement the goals and objectives of the Master Plan in map and text form. This is accomplished by designating different geographic areas of the City into land use classifications and by describing the development policies associated with each one.

The Land Use Plan Element is based upon an analysis of current issues and development trends contained within the April 14, 2003 Reexamination Report.

The Master Plan forms the legal and conceptual foundation for the zoning ordinance and zoning map. New Jersey, among a few other states, explicitly requires the adoption of a plan before the enactment of a zoning ordinance and zoning map. These latter two documents are the local rules which govern the use of land and the location of buildings. The zoning ordinance must be substantially consistent with a municipality's master plan. In the same manner, the zoning map must be substantially consistent with the land use plan. In this document, Land Use Element refers to the text and Land Use Plan refers to the map that indicates the various land use categories in the City.

The intent of the Land Use Element and Plan is to create an implementation document that will be used regularly to review and judge application proposals and guide the future development of Millville.

Existing Land Use

As part of the process to develop the land use plan and element, an existing land use survey was undertaken. The survey was completed to determine how land is actually used instead of how it is regulated. The complexity of the information on land use led to the creation of two existing land use maps.

One is primarily based on the City's tax assessment data and the second map on the New Jersey Department of Environmental Protection's (NJDEP) land use cover data from 1995-1997. These were spot checked in the field as well as updated utilizing aerial photography that consisted of Year 2000 Cumberland County data and the 2002 infrared photography compiled by NJDEP.

The City's tax assessment data was derived from what is called the MODIV (pronounced "mod 4") tabulation that was converted to spreadsheet form and incorporated into the geographical information systems dataset for Millville. Since the City has a substantial amount of tax exempt property, this information was broken down in a number of subsets depending on whether the land was owned by the City, Board of Education, County, State, or other non-profit or governmental entity. Table XIV-1 provides a breakdown of existing land use by ownership and tax assessment classification.

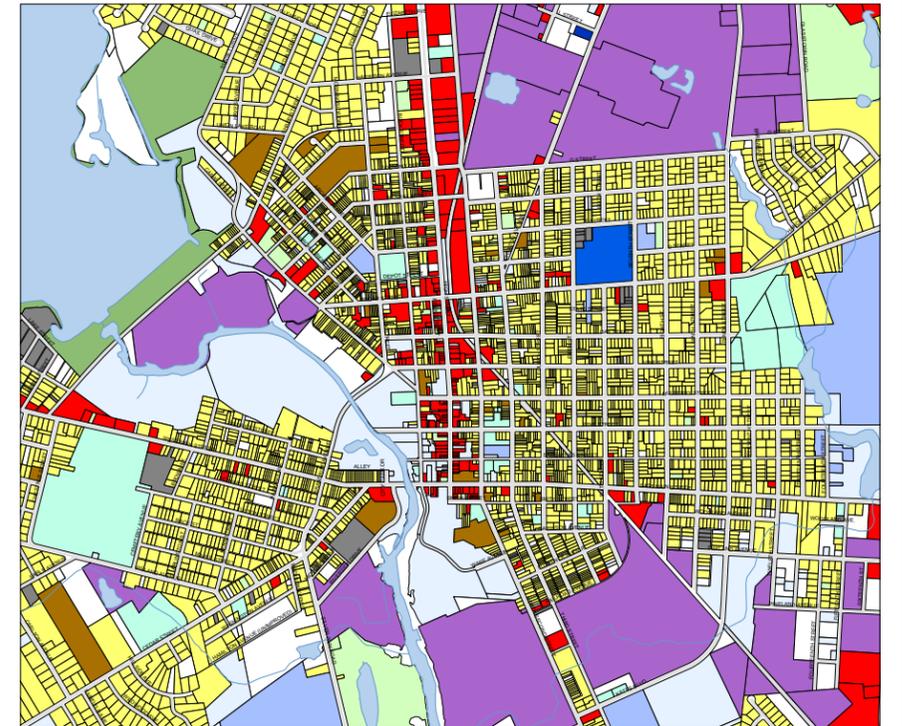
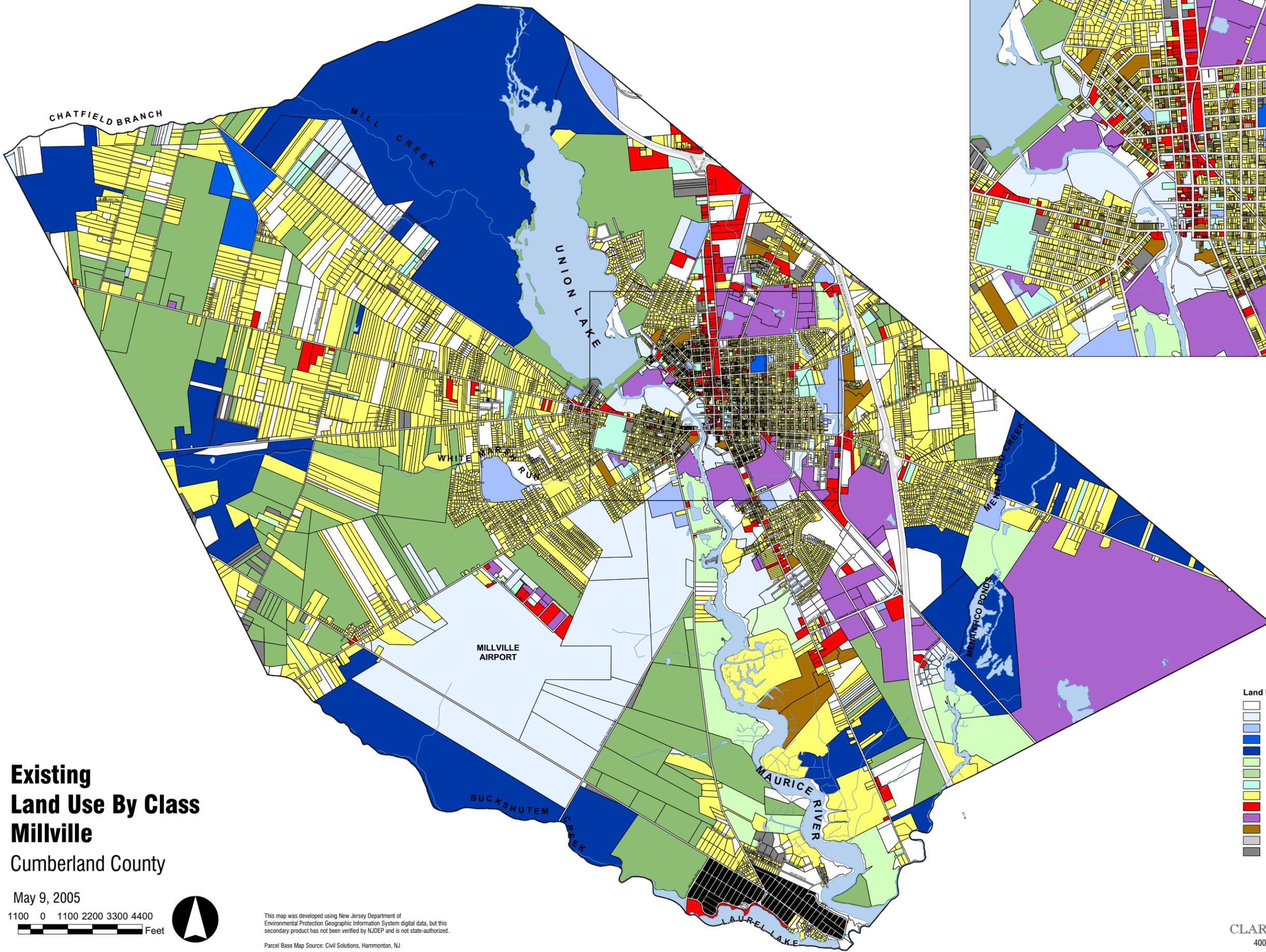
Table XIV-1. Land Use by Assessment Classification.

Assessment Classification	Acreage	Percentage of Total
Assessed Farmland	5,449	20.4%
Residential ⁽¹⁾	6,142	23.0%
Apartments & Mobile Homes	94	0.4%
Commercial	614	2.3%
Industrial	2,282	8.6%
Transportation ⁽²⁾	50	0.2%
Millville City	2,535	9.5%
Millville Board of Education	1,225	4.6%
Cumberland County	168	0.6%
State of New Jersey ⁽³⁾	4,811	18.0%
Land Trusts	970	3.6%
Church, Charitable & Cemetery	248	0.9%
Vacant	2,078	7.8%
Total Assessed Property	26,666	100.0%

(1) – Excluding apartments and mobile homes.

(2) – Not including street rights-of-way.

(3) – Including Union Lake and Menantico Ponds, but not including the Maurice River.



Center City

Existing Land Use By Class Millville

Cumberland County

May 9, 2005



This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.
Parcel Base Map Source: Civil Solutions, Hammonton, NJ

- Land Uses**
- Vacant
 - City Property
 - School Property
 - County Property
 - State Property
 - Land Trust Property
 - Farmland
 - Church, Charitable and Cemetery Properties
 - Residential
 - Commercial
 - Industrial
 - Apartment/Mobile Home
 - Transportation
 - No Database Entry

An existing land use map of assessed land has been shown on the preceding page. In a number of instances, for example the Connectiv site in the eastern end of Millville, because the whole parcel is owned by one entity, the site is classified as industrial due to the standby power plant on the site. This site only occupies a small portion of the total tract. A more complete picture emerges when examining the second map which classifies existing land use in accordance with land cover.

The Table XIV-1 classifications are described below:

- **Assessed Farmland** is both land and buildings that are part of an agricultural parcel, including the homestead.
- **Residential** is land used for residential purposes excluding apartment building uses. Also, land owned by the Millville Housing Authority is not included in this category.
- The **Apartment/Mobile** home class is for apartment complexes whether publicly or privately owned and mobile home parks.
- **Commercial** property is retail and wholesale sales and services and office uses.
- **Industrial** uses include manufacturing, assembly, warehousing, distribution and similar uses.
- **Transportation** is generally land owned by the railroad and does not include street rights-of-way, which are not assessed for tax purposes.
- **Millville City** property includes land for recreation and open space, government (e.g. City Hall and the Police building), the Millville Housing Authority, the airport and adjacent areas, land in industrial parks, as well as land acquired through tax foreclosure.
- The other major local governmental entity is the **Millville Board of Education** and this classification includes school property.
- The **County of Cumberland** owns land for the County fair on Carmel Road that is in this category.
- The **State of New Jersey** has significant land holdings for fish and wildlife management, including Union Lake, Buckshetum and Edward G. Bevan, Peaslee and Menantico Ponds. The state also owns other lands not specifically in designated wildlife management areas.
- **Land Trust** properties are owned by non-governmental organizations for conservation purposes, the best known being the Nature Conservancy.
- Other tax exempt lands include those owned by **religious** organizations, **charitable** institutions, or **cemetery** associations.
- **Vacant** is land being used for no discernible purpose.

In most communities at Millville's level of development, the amount of land used for residential and agricultural purposes typically accounts for the largest land areas. In Millville's case, however, government, education and institutional uses – which are tax exempt – constitute the largest overall category of land use, 9,957 acres, or 37.3% of the City's assessed land. This is comparable to levels found in large built-up cities in New Jersey but is unusual in a suburbanizing location like Millville even though it has a traditional commercial and residential core. This ratio should improve when the City's land intended for industrial purposes is sold to industrial users and returned to an assessable use. The amount of farmland is also encouraging. Though the percentage of assessed farmland is only about 20%, due to the large size of Millville, it constitutes in excess of 5,400 acres. This suggests opportunities to preserve farmland through traditional purchase arrangements through the county and state or through planned unit development or transfer of development rights processes (see further discussion under Land Use Issues).

EXISTING LAND USES AND LAND COVER

Another way to examine the existing land use in Millville is to combine environmental information on wetlands, stream corridors and the extent of woodland with broadly defined land use information. This gives a truer picture of the amount of development that actually exists in Millville. Unlike the information in the Land Use by Tax Assessment Map, the Land Uses and Land Cover Map indicates the extent of woodland cleared for development. This allows an assessment of the underutilization of land that has become apparent in the Agricultural Conservation zoning district, for example. Table XIV-2 indicates land use classifications following this set of data.

Table XIV-2. Existing Land Use by Land Cover.

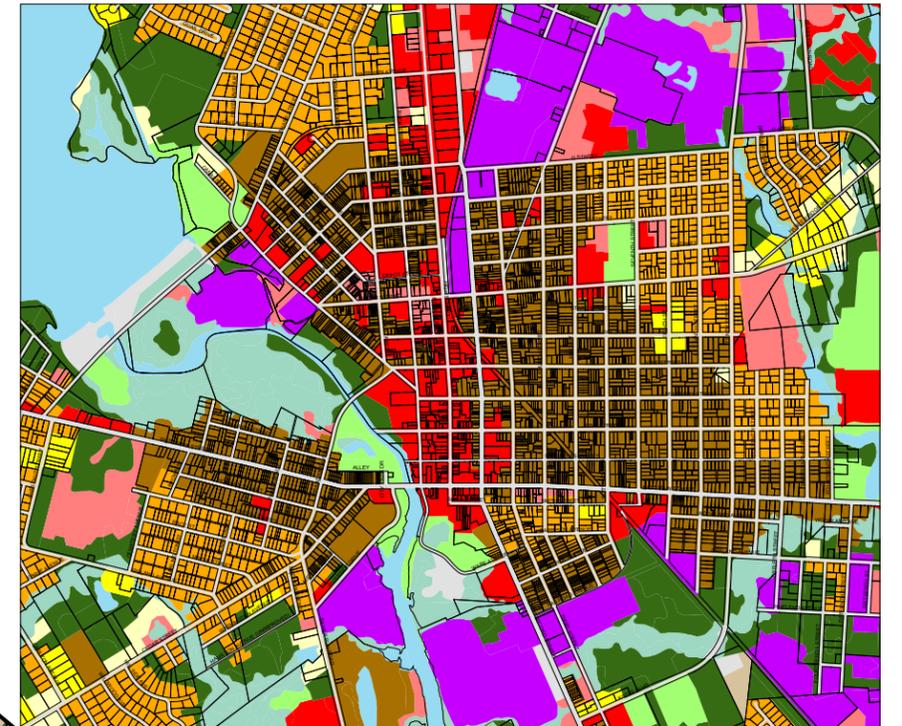
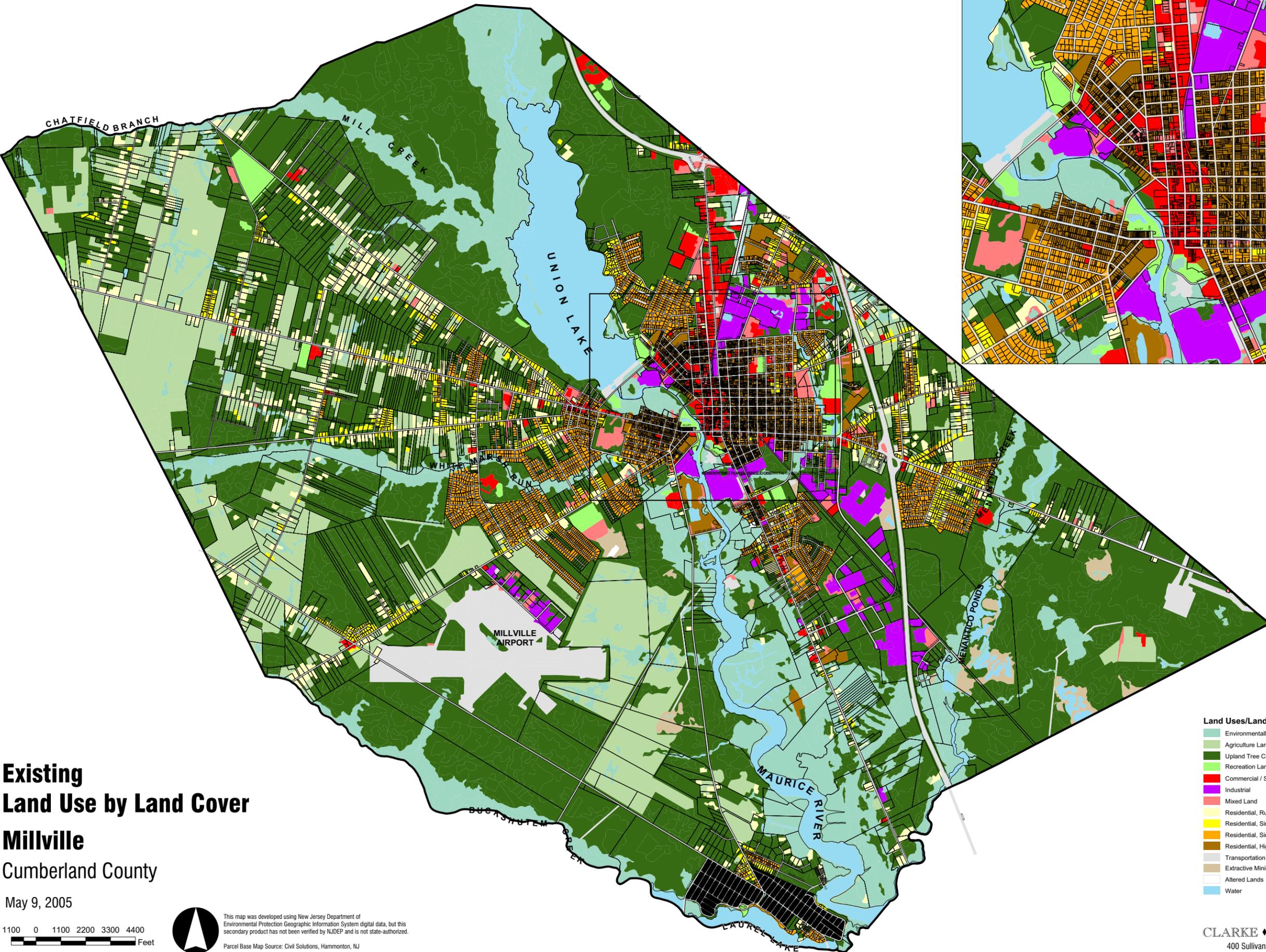
Land Cover Classification	Acreage	Percentage of Total
Environmentally Sensitive	3,937	13.8%
Agriculture	3,438	12.1%
Upland Woodland	13,211	46.3%
Recreation Land	232	0.8%
Commercial and Institutional	506	1.8%
Industrial	535	1.9%
Mixed Use	354	1.2%
Rural Residential SFD	1,088	3.8%
Residential Low Density SFD	642	2.3%
Residential Medium Density SFD	1,372	4.8%

Land Cover Classification	Acreage	Percentage of Total
Residential High Density MF	622	2.2%
Transportation, Communication, Utilities	818	2.9%
Extractive Mining	199	0.7%
Altered Lands	25	0.1%
Water	1,524	5.3%
Total Land Cover	28,502	100.0%

Table XIV-2 indicates some notable information. The areas of Millville that remain wooded are extensive. In addition to the wooded uplands identified on the Land Use by Land Cover Map, the environmentally sensitive lands – mainly wetlands and floodplain – also include significant woods. The Land Use by Land Cover Map is found on the following page. With regard to agriculture, this number is substantially less than the tax assessment records indicate. This means that areas in woodland management are extensive in contrast to observable field crops, pasturage, and orchards. It is also a sign of landowners holding property for other uses. The transportation category is much smaller in Table XIV-1 compared to Table XIV-2 due to the exclusion of roads from the tax assessment records. The addition of the land in streets and roads in Table XIV-2 and the additional land under water constitute most of the difference in acreage between the two tables. The land identified as extractive mining represents former sand and gravel mining rather than active operations. There are active mining operations across the municipal boundary in Maurice River Township.

The land use categories in Table XIV-2 are described in the following section:

- ***Environmentally Sensitive*** lands include tidal and freshwater wetlands areas, flood plain and water courses.
- ***Agriculture*** includes cropland, pasture, orchards, vineyards, nurseries and livestock and poultry production. It also includes the homestead when it is isolated from other residential development.
- The ***Upland Woodland*** designation refers to the extent of forest and woodland in the City outside of environmentally sensitive land. In Millville, this is mostly deciduous forest in the western half that gradually changes to a mixed oak and pine forest in the eastern half.
- ***Recreation*** land is facilities for active recreation and leisure pursuits that are open to the public.



Center City

**Existing
Land Use by Land Cover
Millville
Cumberland County**

May 9, 2005



This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.
Parcel Base Map Source: Civil Solutions, Hammonton, NJ

- Land Uses/Land Cover**
- Environmentally Sensitive Land
 - Agriculture Land
 - Upland Tree Cover
 - Recreation Land
 - Commercial / Services / Institutional
 - Industrial
 - Mixed Land
 - Residential, Rural, Single Unit
 - Residential, Single Unit, Low Density
 - Residential, Single Unit, Medium Density
 - Residential, High Density, Multiple Dwelling
 - Transportation / Communication / Utilities
 - Extractive Mining
 - Altered Lands
 - Water

CLARKE ♦ CATON ♦ HINTZ
400 Sullivan Way ♦ Trenton, NJ ♦ 08628

- **Commercial and Institutional** uses include the downtown area, the interchange shopping area, much of the northern portion of Rt. 47, and other scattered sites that have retail and office uses, motels, and governmental uses. Also included are large institutional uses such as schools and medical facilities.
- The **Industrial** category is for manufacturing, distribution, assembly, and other primary processes.
- In center city, there is an intertwined land use of business and housing occurring block to block and has been characterized as **Mixed Use**.
- The lowest density of the single family residential uses is the **Rural Residential** that is two acres or greater.
- The next lowest density is the **Residential Low Density Single Family** with land use of about one acre in size.
- **Residential Medium Density Single Family** is land use with lots of about one-half acre in size.
- **Residential High Density** includes the City's densest neighborhoods and apartment complexes with densities up to 20 units per acre.
- **Transportation, Communication and Utilities** includes Millville Airport as well as the Conectiv standby generating facility on Rt. 49, road area and railroad land.
- As noted previously, **Extractive Mining** is former sand and gravel mining on the Conectiv parcel and adjacent parcels.
- **Altered Land** is area that has been obviously filled by either a sanitary landfill or other means.

The Land Cover map in particular demonstrates a prototypical American City, with a core area consisting of a grid of streets, with radial highways providing transportation links to other centers of population, industrial uses along rail lines and around the airport, with expanding suburban development around the central city.

Land Use Issues

The April 2003 Reexamination Report identified a number of land use issues in its analysis of the City's prior master plan documents and in its review of the changed circumstances that have occurred since the 1997 Reexamination Report. These land use issues include:

MILLVILLE AIRPORT

The Millville Airport and its environs have been identified by the City as having the greatest potential for economic growth. The airport itself needs to upgrade its facilities and plan for future air traffic and services in order to remain competitive with other regional airports. The Delaware River and Bay Authority (DRBA) currently operates the airport, having taken it over from the City in 1999. An airport study²⁷ commissioned by the DRBA recommended a three phase improvement plan beginning in 2003 and lasting until 2020. In the second phase (2006-2010), a 1,000 ft. eastern expansion of Runway 10-28 (the longer of the two at present) is planned. This area is less developed than the western end where there are several existing and planned housing developments.

From a land use perspective, buffer areas need to be secured to reduce the impact from the runway extension and any further expansion of the airport. Impacts from airport operations include noise, but other additional environmental impacts may also occur such as storm water runoff and wetlands encroachment. Addressing these impacts in a detailed Environmental Impact Study and in a public hearing process is a requirement of the Federal Aviation Administration prior to any approval.

The City has acted to secure a significant portion of the eastern perimeter of the airport through the purchase of 819.62 acres from George F. Pettinos, Inc. (also known as Better Materials), a sand and gravel mining operation²⁸. The City has interest from a variety of industrial users for portions of the property. The airport area has been recognized by the state as an area for state-supported economic development. The City anticipates that future development will include airport-related industries, light manufacturing and distribution facilities. In addition to these uses, a motorsports facility has been planned and approved by the City for the southeast corner of the airport

²⁷ - *Millville Municipal Airport – Airport Layout Plan Update – Final Report*, C&S Engineers, Inc., March 2002

²⁸ - Consisting of Block 124, Lots 1, 3 and 4; and Block 136, Lots 1-4. Two other parcels totaling 13.27 acres were also purchased that are not located near the airport.

proper at the intersection of Dividing Creek Road and Buckshetum Road. The Better Materials tract also includes land on the east side of Dividing Creek Road that is directly in the path of the proposed runway expansion.

Three land uses are least affected by the impacts of the airport use: open space and more specifically conservation land, farmland and industrial uses. Open space reserved primarily for conservation use or passive recreation such as a trail system is suitable because of the lack of human occupancy. Both humans and wildlife have the capacity to assimilate, to a greater or lesser degree, airport noise. Sound perception is based on psychological factors that differ among individuals. Nonetheless, lessening use of adjacent and nearby property by reserving it for open space is a good strategy for the long term retention of the airport use. Open space (see below) is proposed on the eastern side of the airport along the Maurice River encompassing the bluffs and lowlands adjacent to the watercourse and to the south on the opposite side of Buckshetum Road. Most of this land has been recently purchased by a land trust, The Nature Conservancy, for conservation purposes. On the west side, a mixture of industrial and agricultural uses is proposed; however, there is existing residential development that will be affected by airport uses, regardless of land use policy.

Farmland offers many of the same attributes of reduced human activity as open space. The highest level of activity would take place at harvest in the fall, but there would be little presence in winter. Further, many of the activities that take place in agriculture involve the running of machinery that masks the noise of the airport for the operator. Obviously, farmsteads should be located in places outside of the flight path of the two runways as feasible. Agricultural Retention (see below) is proposed in the land use plan to the extent feasible on the west side of the airport proper. This marks a change on the northwest side of Cedarville Road (C.R. 610) where airport industrial uses were earmarked. An examination of airport runways and air corridors indicates that a portion of existing agricultural land on the west side of the airport could be used for residential uses without unduly exposing future residents to aircraft noise.

Industrial uses on the north and east of the airport are proposed as an intervening use between the more heavily residential areas located farther north. Industrial uses fall into two types, those supporting the airport with aircraft maintenance services, aircraft component development or similar related uses and those that are more generically industrial in nature such as manufacturing and assembly, warehousing and distribution. In the former instance, these industrial uses by necessity require close proximity to the airport proper. The other industrial uses would not necessarily be required

to be adjacent to the airport, but nearby. Noise effects in both instances can be masked by existing machinery used in industrial operations or are in modern buildings with sound insulation. Further, the State recognizes that workplaces will have higher acceptable sound levels than residences, schools and other institutional uses.

LAND CONSUMPTION IN THE WEST END

The Reexamination Report identified undesirable changes in land use in the western side of Millville. Western Millville exhibits a common development pattern in semi-rural areas where there is steady population pressure. The population pressure occurs from natural net increase in births over deaths and the steady drop in household size. This is illustrated in Table XIV-3.

Table XIV-3. Comparison of Population to Housing Units.

Year	Population	% Increase	Housing Units	% Increase
1970	21,336	N/A	7,412	N/A
1980	24,815	16.3%	9,385	26.6%
1990	25,992	4.7%	10,150	8.2%
2000	26,847	3.3%	10,652	4.9%

Source: U.S. Decennial Census

As Table XIV-3 reports, for more than thirty years (and likely longer), while the population has steadily increased, the number of housing units has increased even more rapidly. Housing increased by a rate 63.2% higher than the population between 1970 and 1980, 74.5% faster between 1980 and 1990, and 48.5% more between 1990 and 2000. During that same time period, the average size of houses also increased.²⁹ Larger house sizes typically require larger lot sizes, however, the trend line in average lot size has decreased nationally to less than 17,000 sf.³⁰ In Millville, the area of strongest growth has been in the Agriculture Conservation (AC) zoning district where the minimum lot size, excepting cluster development, is 5 acres (217,000 sf.).

Since many of the lots in the AC district were developed under the minor subdivision process, the frontages along major roads are often fully developed – a nearly solid line of housing is found on Carmel Road and West Main Street, for example. From the landowner's perspective, it provides a simple and inexpensive means of selling lots for profit. For some farmers, the ability

²⁹ - The National Association of Home Builders (NAHB) reports that the average single family detached house increased in size from 1,905 sf. in 1987 to 2,320 sf. in 2003, continuing a trend since WW II.

³⁰ - 16,453 sf. (.38 acres) where a decade ago it was 1,000 sf. larger according to the NAHB.

to sell a lot supports the farm during economic downturns. For the public traveling on the county highway, the area looks almost fully developed; however an examination of the Land Uses and Land Cover Map shows that the interiors of many lots are simply unused. There is a pattern of narrow, but very deep lots in this area. This pattern of development becomes a greater problem the longer it continues. There are several adverse effects that come from such development:

- A loss of rural character.
- A substantially reduced ability to develop the interior of the superblock formed by the formerly rural roads.
- An inefficient street pattern that raises the cost of providing municipal services.
- A reduction in the capacity of the road network due to multiple and conflicting curb cuts.
- An increase in conflicts between agricultural practice and homeowners that comes from chemical spraying and off-road vehicle use.
- Increased requests for flag lot development.

The regulations associated with the district have aggravated these trends. The five acre minimum lot size for standard residential housing works well with relatively low development pressure but as the number of houses increases, it converts a great deal of land to non-agricultural use without a corresponding benefit to the City. The narrow lot frontage permitted in the AC district, 200 feet, assures very deep lots that affect the ability to develop the interior of the superblocks. (A lot with 200 feet of frontage requires a depth of 1,089 feet to meet the minimum lot size.)

In the less developed portion of the AC district, a different approach is recommended – the creation of new centers of population at higher densities that would function as receiving areas for houses that would otherwise be built in agricultural areas. The following sections discuss techniques for how this might be accomplished.

In those areas that have already been developed with 5 acre or larger lots, smaller lot sizes are envisioned that would create opportunities for the interior of superblocks to be developed with housing. Housing, like any good or material for sale, is subject to supply and demand. If the supply of land for housing is increased in one area, it can lessen the demand in other areas. Without a change in land development policy in the AC district, all of western Millville will be developed with five acre lots and agriculture will disappear.

VILLAGE DEVELOPMENT

The loss of farmland and the proposed development of several large tracts of land for residential use have prompted a review of other methods or patterns of providing housing and services to existing and new residents. Reinventing the village has been linked to the neo-traditional or new urbanism movement as an antidote to the disconnected suburban development that has dominated residential development in the United States since World War II. In many ways it combines the best aspects of traditional downtowns like Millville with older suburbs that have an integrated park system. While the architectural characteristics of new urbanism do not have to be used in Millville, it creates a traditional looking exterior with a modern interior floor plan and amenities. In Millville, traditional houses abound but do not have modern interiors and those with modern interiors also have modern exteriors. Several pictures of newly constructed neo-traditional housing from around the country are included below:



Source: Urban Design Associates

The first picture depicts a housing unit that is part of an attached row of houses. The second picture is a single family house on a small lot and the third picture depicts how a retail use and apartments could be integrated into a mixed use building – much like the buildings in the downtown. Surveys of likely homebuyers find that about 35% of the population is seeking this type of community as compared to other types of neighborhoods.

Neo-traditional development could also be used on a smaller scale to encourage the development of hamlets at crossroads when the number of units would not make a full scale village. Cumberland County is replete with examples of hamlets such as Farmingdale, Carmel and Buckshetum that could be used as a template for future development.

METHODS OF ENABLING VILLAGE DEVELOPMENT

TRANSFER DEVELOPMENT RIGHTS (TDR)

The state legislature adopted and the then governor signed the State Transfer of Development Rights Act³¹ to expand the transfer development rights pilot program from Burlington County to the rest of the state. As noted in the Farmland Preservation Element, transfer of development rights is based on the theory that land ownership constitutes a “bundle of rights” that can be separated and disposed of individually. This is well established in law and examples include the selling of mineral rights under the ground or air rights over a parcel. With transfer development rights, the “right to develop” a piece of ground is one of the parts of property that can be disposed of separately. The right to develop is established by government through its regulatory police power provided that it does not extinguish all use of the property either directly or by regulation. This right to develop can then be moved from one property and applied to another under a transfer development rights (TDR) ordinance. For example, a 300 acre tract with a zoning density of one housing unit per 5 acres would yield 60 units. These units could be transferred to a smaller area of 20 acres at three units per acre – still at suburban densities. The amount of land thus consumed for housing is 15 times less than Millville’s present policy in the Agricultural Conservation zoning district.

The TDR program works by landowners selling development credits either directly to a developer that needs them or indirectly to a TDR bank with one credit allowing the construction of one housing unit in the receiving area. In this Master Plan, the receiving area would be one or more of the village nodes identified on the Land Use Plan. When the credits are sold, the land they came from is deed restricted to agricultural or conservation purposes. While this explanation is an oversimplification of the program, TDR would meet the goal of farmland retention and village development as an alternative to low density suburban development. It has the advantage of creating a market in development credits to match sellers and buyers more efficiently while preserving farmland.

RESIDENTIAL CLUSTER

There are also two other methods where farmland could be retained and its development rights placed in the new village. The first is already known by the City: the clustering of residential units. This could work in a limited way

³¹ - P.L. 2004, c.2, enacted March 29, 2004.

in the west end because of the two large parcels³² in the Nabb Avenue area. In this method, the amount of development that could occur throughout the large parcel would be concentrated along Rt. 49. The drawbacks with this method are that it requires the land to be in single ownership or controlled by one entity and to have Rt. 49 frontage. This method is the one used for the general development plan approval for the Conectiv (Holly Ridge) site where large areas are being preserved for wildlife habitat plus a golf course that will at least leave the land in an open state.

The clustering provisions in the AC district have a generous bonus that is much larger than the clustering ordinances of other municipalities. A typical clustering ordinance might give a 10-20% bonus where the AC zone allows a 150% bonus. Given the characteristics of the land market at this point in time, a bonus of no more than 10% should create enough incentive to encourage clustering. This has the effect of increasing the amount of open space that might be preserved on the tract and allows more units in the part of the municipality that is intended for development. Further, if more open space is established along the frontage of the property, it helps maintain a sense of rural character at the edge of the roadway. In some municipalities, clustering has been made mandatory for any parcel over a particular size, for example, 20 acres. Mandatory cluster has withstood judicial scrutiny in New Jersey and is a strong method for preserving farmland and open space that could be used in any district with a density of 2 acres per lot or larger and in the three designated village nodes.

PLANNED UNIT RESIDENTIAL DEVELOPMENT

The third method is to use the Planned Unit Residential Development (PURD) process in the municipal land use law. Planned development can include land that is not contiguous; that is one can use scattered lots to meet the minimum tract area. In this method, the PURD would allow the transfer of allowed houses from one of the scattered sites in the agricultural belt to a village node. The developer would need to secure an equity interest in all of the parcels involved. The PURD method could be considered a hybrid between the TDR and Residential Cluster methods.

³² - Block 3, Lot 54 (315 acres) and Block 36, Lots 6 & 9 (449 acres).

BALANCE IN LAND USE

The City of Millville and the State of New Jersey have emphasized different land use priorities over the years that have at times conflicted with each other. Millville is a relatively distressed city with a higher than average unemployment rate. Ever since it's founding, the City has had a manufacturing base for employment. While Millville has lost manufacturing jobs as has the rest of New Jersey, people working in manufacturing and transportation still constitute nearly 20% of the workforce compared to less than 12% for the state. Millville is an attractive place for manufacturers to locate because it has a trained workforce, numerous financial incentives through state and federal programs, sufficient infrastructure capacity and vacant land for what are often very large buildings. Further, Millville has its airport, which is a regional asset for South Jersey. Airport related industrial uses are poised for greater growth. Given these factors, Millville has a need for a larger supply of land for industrial uses to satisfy demand not just for itself, but state-wide. Much of the rest of New Jersey simply does not have either the land or the workforce for a significant manufacturing presence. In the Rt. 55 and Rt. 47 corridor, these factors have combined to make Millville a prime target for commercial, residential and industrial development – indeed more development activity than in living memory.

Millville has magnificent natural resources that range from the beautiful Maurice River, to Union Lake, to the sand wash ponds of Menantico and extensive forested areas. The Maurice River watershed has been the focus of acquisition activities for conservation purposes by the state and by non-profit land trusts. The southern portion of the river has been designated a federal Recreation and Scenic River. Numerous threatened and endangered species reside in Millville (*see Conservation Plan Element*). The City's economic development needs must be balanced with the desire to preserve these natural resources. Millville differs from other nearby municipalities in having a much larger population and economy that, in concert with Vineland, constitute a state designated regional center. Growth is intended to occur in Millville that the State Development and Redevelopment Plan does not intend, for example, in Maurice River, Downe or Fairfield Townships. Though Millville differs significantly in its land development characteristics in comparison to these other municipalities, this Land Use Plan proposes that more than 50% of Millville be a combination of open space lands, water, freshwater wetlands and preserved farmland. It is difficult to find another municipality in the state with as large a population as Millville, with its existing manufacturing base and economic growth potential that proposes preservation of this magnitude. State interest in land preservation competes with Millville's goals for development and conflict in areas already proposed

for development: the airport, east of Union Lake (commonly called the Wawa tract) and on the Conectiv site in the extreme eastern part of the City. These at times competing interests can be reconciled. The state should recognize that Millville is not Downe or Commercial Township where the vast majority of the land area is preserved and Millville should understand the benefits of natural resource protection for the long term sustainability of the City's ecosystem. This plan seeks to set the boundaries for development.

AREAS OF COMPETING GOALS

On the east side of the airport stands the most developable part of the airport proper. Between the airport proper and Dividing Creek Road, this area is proposed for industrial development, runway expansion and a motorsports facility. The industrial and motorsports facilities will be only slightly affected by the potential nose from an airport expansion. To the east of this area, the triangle of land bounded by Dividing Creek, Silver Run and Buckshetum Roads has been variously proposed for conservation purposes industrial development, or resource extraction. Most of this superblock is part of the Better Materials tract, most of which has been cleared for agricultural use; however, the company is in the resource extraction business. Other portions of the tract, primarily in the southeast corner, are residentially used. The most important part of the tract from a conservation standpoint is the east side of the property (the west side of Silver Run Road). Most of the land between Silver Run Road and the Maurice River has already been preserved for conservation use by the State or The Nature Conservancy. The dividing line between the less intensive uses on the east side and the more intensive uses on the west side could be located in a number of places, however, a Conectiv power line easement that generally runs in a north/south direction is a physical demarcation that provides an unambiguous boundary. The east side is proposed to be retained in open space for conservation purposes; however, since the land remains privately owned, a low density residential use would have the lowest impact on the environment. The already cleared areas on the west side of Dividing Creek Road are earmarked for industrial and motorsports/entertainment purposes in association with the airport. These are depicted on the Land Use Plan.

A second area of conflicting goals involves the Wawa tract that is located between Union Lake and Rt. 47. This area is zoned Lakeshore Conservation and the district regulations are in general agreement with the ideas presented in this Plan. However, a more explicit requirement for establishing a significant buffer along the edge of Union Lake is needed for both aesthetic and wildlife reasons. The lake itself and the land to its west constitute the Union Lake Wildlife Management Area. The area is the home

of a nesting pair of bald eagles and the edge of the water on the east side is part of the eagles' foraging area. The site otherwise has few environmental constraints but is heavily wooded and thus provides habitat for flora and fauna. The Wawa tract is a logical location for development when viewed in the context of the existing development of Millville. It is surrounded on three sides by development and is in the expanding Rt. 47 corridor. It can be accessed directly from major thoroughfares and public utilities are located adjacent to the tract. Existing residential development has been constructed at a density of 2-3 units per acre. To resolve these areas of competing goals, the development concept for this area is to concentrate residential development in a smaller area through clustering. Because of the existing developments of Woodland Shores and Oakland Estates border the Wawa Tract, a portion of the tract should be rezoned for the same size lots. This would allow for the completion of the existing development with houses of similar size and lot configuration. The remainder of the tract could be developed with a variety of housing in a compact form to produce the maximum feasible open space. This tract would also benefit though a design that consciously integrates a Union lake buffer with the common open space on the rest of the tract. Public access to the waterfront should be required, provided State permits could be obtained.

The last area of conflict pertains to the Conectiv site. Since the land has received a general development plan approval, the owner has obtained certain rights to develop the land. These rights, however, lend themselves to the development of a village node in this area with the remaining area in open space. While some portion of the open space is proposed for the development of a golf course, the remaining land would be retained for conservation purposes. This area of the tract totals two-thirds of its 1,300 acres. The golf course use, if designed properly, can complement the other open space. There are three aspects of golf course development that can affect environmentally sensitive areas: water use, fertilization and pesticide use. A playing area designed as a links course instead of a fairway course uses less water and chemicals for maintenance. The use of native plant material in the design is important as is integrated pest management that relies more on natural means of controlling pests rather than man-made chemical use. This site provides the opportunity to create a model for establishing protected habitats for endangered and threatened species in areas with human activity. A habitat conservation plan was developed for the northern pine snake found on this site and further review and revision of its habitat protection will undoubtedly be required as the project is examined at the state and federal level.

WATER RESOURCES

NJDEP has informally identified a lack of water resources for growth in the Maurice River watershed. This pertains to the withdrawal allowances for well water that is dependent on the underlying aquifers. Agricultural irrigation is apparently the largest user of groundwater in the region. The spray irrigation favored by farmers allows much of the water to be evaporated into the air instead of percolating back into the ground to replenish the aquifer. The NJDEP has flagged this concern for future study and it may affect the ability in the future for additional development.

RESOURCE EXTRACTION

Areas of Millville have sands and gravel suitable for construction purposes (*see* Geology in the Conservation Element) and are owned by sand and gravel mining establishments. The City has an extensive review process for any new or expanded site intended for resource extraction that is set forth in Article XXII of the Land Use and Development Regulations ordinance. The intent is to permit the continuation of resource extraction to the degree that it is allowed under the current regulations. In those zoning districts where resource extraction is permitted, the intent of the categories in the land use plan is the eventual use of the land after it has been restored under the required reclamation plan. For example, in the Airport Industrial category, once the resource extraction is complete, the land would be used for industrial purposes after appropriate reclamation.

Land Use Categories

A number of factors have been taken into consideration in the development of the Land Use Plan. Foremost among these are the goals and objectives for development and redevelopment in Millville found in the Statement of Goals and Objectives. In addition, the changed circumstances that are discussed in the Reexamination Report and the Land Use Issues section of this element require attention in this Land Use Plan and have led to the development of the new land use categories embodied here. The land use categories described below are the explanation of the intent of the Land Use Plan found at the end of this element. The land use categories as applied to the Land Use Plan support the City's zoning regulations but are not a one-to-one transfer from the Plan to the Zoning Map. Land use categories are more broad-based than zoning districts and indicate the general policy of the municipality for uses in that geographic area. Due to their broader nature,

more than one zoning district may be needed to implement the land use categories through the Zoning Map.

VILLAGE NODES I AND II

The idea of creating new concentrations of development – “village” for want of a better name – has been discussed in the preceding section. There are three areas where such nodes have been identified: The Wawa tract on the east side of Union Lake, the intersection of Rt. 49 and Nabb Avenue, and on the Conectiv site at the eastern end of the City. The village node is primarily a design concept rather than a prescription for land use. The villages are intended to create a physical environment that more closely resembles the older neighborhoods of Millville. Partly, this is intended to provide greater choice in new housing than just the single family detached house on a large lot that has dominated construction in Millville over the past two decades.

On the Wawa tract, the intent is to allow only residential uses, but those residential uses would be on a wide variety of lot sizes. The idea is also to limit the maximum size of lots so that there is more common or public open space associated with its development. The majority of units are intended to be single family detached dwellings and the large majority single family detached and single family semi-detached dwellings. A small percentage of housing units, perhaps up to 15 or 20% of the total, may be multi-family to encourage the greater diversity in the type of housing available for the consumer. The more specific types of units proposed could be triplexes, quadraplexes, townhouses, and back-to-back townhouses also called stacked townhouses. Since multi-family housing has a smaller building footprint, including these types of units would also reduce the amount of land used for construction. This area is intended for a base density of one unit per acre with possible density bonuses for the type and amount of open space, amenities provided for residents, the inclusion of active adult housing, the variety of housing units offered, and means of connection to the existing street network. The level of bonuses should result in a total density less than the existing densities of the adjacent neighborhoods of Woodland Shores and Oakland Estates to account for the higher level of open space.

The village node proposed at the intersection of Rt. 49 and Nabb Avenue is intended as a receiving area for development in the Agricultural Retention district (see below). The design of the residential areas should follow the residential concepts for the Wawa tract but allow a higher percentage of multi-family residential uses, up to 30% of the total number of units, and apartments if they were constructed over a retail center. A neighborhood commercial shopping area on Rt. 49 would be allowed, on a parcel of 15-20

acres, as part of the overall development of the village. Integration of the vehicular and pedestrian circulation systems between the residential and commercial areas is very important to ensure that the residential and commercial uses function together rather than as two separate developments.

On the east side of the City, the same concept may be applied to the Conectiv site, except that any commercial development should be limited more to convenience use on a parcel of no more than 5 acres. See also, the Open Space section for additional information on the Conectiv tract.

AGRICULTURAL RETENTION

The Agricultural Retention land use classification is anticipated to be the focus of any farmland preservation efforts to be undertaken by either the City or the County. Agricultural retention, based upon fertile soil types, would also be a means of preserving a greenbelt surrounding the city. Incentives for clustering and transfer of potential housing units to Village Nodes should be provided through the techniques discussed in the preceding section. The intent of the Master Plan is to reduce the potential intensity of development for the clustering of development from 6 units to the acre to one unit per two acres. The base density of one unit per five acres would be retained. The increase in density presently allowed in the City's clustering options provides a powerful incentive to develop this land where the emphasis should be on agricultural retention. Allowing a bonus for clustering of one unit per two acres still provides a 250% increase in density over the base zoning and other potential bonuses may be considered for public amenities and facilities, and furthering the design and land use goals of this document.

The Agricultural Retention district would permit the clustering in two ways. If a tract was a minimum of 100 acres, the clustering option could be exercised on that tract. For parcels under 100 acres, the clustering could only be utilized by transferring the development rights to a receiving village node. The sending area would be restricted from further development except for one additional house lot, if the sending tract is at least 10 acres in area. This would allow the development of a house for a son or daughter on the property, a common desire in farming families. This type of transfer could either be undertaken through the non-contiguous planned unit residential development regulations of the Municipal Land Use Law or through a transfer development rights program, should the latter be implemented by the City.

OPEN SPACE

Millville contains a significant amount of land that is owned by the State of New Jersey or land trusts dedicated to the preservation of land in its natural state or for limited recreational purposes. Three major wildlife management areas are wholly or partially located within Millville: Union Lake, Menantico Ponds and Edward G. Bevan. In addition there are several smaller wildlife management areas: Buckshetum, White Marsh, and a small section of Peaslee. State lands for conservation total 18% of all of the City's land area. Aside from the public ownership of land in Millville, land is also owned by non-profit land trusts such as the Nature Conservancy that constitute another 3.6% of Millville. The Green Acres Program under NJDEP is seeking to preserve additional land in Millville along the Maurice River. Their purpose relates to the federal designation of the southern half of the river (in Millville)³³ as a Recreational and Scenic River. Conservation land in this category is also designated for the southwest portion of the City to provide a continuous link for wildlife and open space that ties together Menantico Ponds and the Maurice River watershed. In times past, Rt. 47 south of the City was viewed as a highway corridor but with the construction of Rt. 55, traffic has been siphoned away from the old road and is not likely to return. This presents the opportunity to preserve the entire south end of Millville as a greenbelt surrounding the City where there is little economic utility to the land. These areas that are largely intended for conservation would also be suitable for ancillary uses such as trails and trailheads, visitor facilities, boat launches, campsites, hunting camps, and similar uses related to the primary purpose of land preservation.

The Conectiv site has been designated for open space and in this instance reflects the general development plan (GDP) approval for the Holly Ridge proposal. The GDP envisions retention of approximately 900 acres of the 1,350± acres of the tract. The proposed developed portion would be a location for the village node concept discussed above. This open space designation differs from the agricultural retention district in the west end since no agriculture, including woodland management or harvesting is intended for the site. An Open Space designation on private land, rather than public land, means that the majority of the land will be preserved while allowing economic utility of the site. A revision to the zoning regulations in this area is warranted to reduce the potential intensity of development due to the presence of endangered and threatened species and the consequent need to retain a significant majority of the land in tree cover.

³³ - Roughly below the location of the Millville Sewage Treatment Plant.

This category contains some scattered single family detached houses that front on county or rural state roads. Though included within this category, a low density residential zoning district is appropriate for these uses.

The Open Space land use classification also includes parks and recreation land owned by the City along the Maurice River. Other parks and recreation uses related to neighborhoods have been placed in the residential categories of land use.

RESIDENTIAL – 5 ACRE-WESTERN MILLVILLE

At the developing fringe of western Millville the large majority of lots have already been subdivided into 5 acre lots for single family residential purposes. The ability to develop additional housing in infill lots is limited. There is also a concern about developing additional housing units in the “European Colonization” area adjacent to the Union Lake Wildlife Management Area with limited infrastructure. It is intended that the area remain a five acre lot district. This classification, as well as the other single family detached districts that follow, would also permit small scale institutional and quasi-public uses with appropriate development controls for religious uses, public and private schools, public and quasi-public recreation uses, fraternal uses, and social clubs. Clustering and transfer of development as described in other sections of this element would be applicable in this district.

RESIDENTIAL – 2 ACRE

The Residential 2 Acre district is proposed for residential infill that would take advantage of the proposed Beaver Dam Road identified on the Circulation Plan. This area has a rudimentary interior road system that would facilitate the ability to develop two-acre lots in this location rather than in the Agricultural Retention district. This designation has also been applied to the area outside of the Laurel Lake community where existing lots fit into this category and just south of Poplar Avenue on Race Street and Silver Run Road. The rerouting of most traffic from Rt. 47 south of center city because of the construction of Rt. 55 has presented the opportunity to establish this as a more residential area that would be compatible with the conservation uses proposed to the east and west. This is also the rationale behind the designation of this land use category for a number of lots on Cumberland Road (also known as E. Main Street, Rt. 49). Clustering of residential units on lot sizes of 30,000 sf. or larger (provided that appropriate public sanitation can be maintained) would allow for the preservation of

pockets of open space and help retain the wooded nature of much of the City's undeveloped and unconstrained land.

RESIDENTIAL – 1 UNIT/ACRE

This land use category is intended for most of the Wawa tract where it would serve as the base density for this land area. As noted in the Village Node section, additional bonus incentives would allow for increased density on the tract as determined in a revised zoning district. A new district is also proposed in the Newcombtown Road (also known as Leamings Mill Road, C.R. 684) and Burns Road section that would lessen the allowed density. This area is poorly served by the existing road network. Newcombtown Road turns to gravel and peters out in the Peaslee Wildlife Management Area and Burns Road is a narrow, sharply angled street with a low traffic capacity. Single family residential uses on one acre lots and other typical institutional uses normally allowed in single family residential districts are proposed for this land use classification. This area would also be suitable for the clustering of dwellings on lots of at 25,000 sf., provided that public sewer is available to serve the development.

RESIDENTIAL – 2-3 UNITS/ACRE

This land use category encompasses the R-15 and R-20 zoning districts and is proposed to be expanded west of Rieck Avenue School. This designation has also been applied to the Forest View Crossing development on Cedarville Road and Hogbin Road that has a general development plan approval for age-restricted development³⁴. Small lots that front on these two roads adjacent to Forest View are also included in this designation. Lastly, several out parcels along Bluebird Lane next to the Wawa tract have been designated for residential use.

RESIDENTIAL – 4-5 UNITS/ACRE

The Residential – 4-5 Units/Acre land use classification generally designates the R-10 district areas outside of the center city area and constitute older housing stock in Millville (though not as old as that in the Center City Residential district). It also includes the City's two mobile home parks on Race Street and Rt. 47 that have been developed at roughly these densities.

³⁴ - In this instance, generally those who are 55 years old or older.

CENTER CITY RESIDENTIAL

The Center City Residential land use classification encompasses most of the residential areas of the Center City Redevelopment Area. These constitute the oldest residential sections of Millville. In general, the Redevelopment Plan for the area, as it is established, should govern the density of development. The existing density of development is quite high, perhaps 12-14 units per acre due to the significant conversion of single family residences into two or more units and the conversion of twin houses into double duplexes in many locations. While this practice has been stopped, overcrowding of the land has occurred from people and vehicles. A lower density of 6-8 units per acre would be appropriate, consistent with the original density of population when the structures were built. Scattered site apartment buildings, for example the Millville Housing Authority's Riverview West building on Riverside Drive, may also be found. The Center City Residential district also contains some small businesses on scattered sites, institutional uses, and minor office uses. There is no intent to allow for additional business uses in this district. It is intended that the Downtown and Highway Commercial land areas would serve these neighborhoods. Because of the varying density and uses in this district, this land use district will require several different zoning districts in order to be implemented.

APARTMENT AND TOWNHOUSE

The City has a number of garden apartment and townhouse complexes outside of center city that have been assigned to the Apartment/Townhouse district. The density of existing development is approximately 6-20 units per acre. No new locations for these uses are proposed except near Overbrook and Wheaton Avenues where the density of the housing should be no more than 6 units per acre. This new area is adjacent to existing multi-family housing.

WATERFRONT DEVELOPMENT

The Waterfront Development district contemplates the redevelopment of the Maurice River edge north of Main Street to Sharp Street and south of the City Marine to encompass the former Ball Foster glass plant for a mixed use development. In this instance, mixed use is intended to consist of retail shops, restaurants, studios and residential units. It is intended that the former industrial buildings would be converted to residences and lofts, at least in the northern section. There have been many successful examples of the reuse of waterfronts for quality residential development to attract higher income households. Higher income households are important to the overall

redevelopment of the downtown since they have enough discretionary income to support the businesses in the downtown area. The Waterfront Development district is viewed as an adjunct to the Downtown area with the range of allowed uses the same but with a greater proportion of those uses being residential. South of Main Street, the City's docking facility would be redeveloped as a more attractive focal point for water-oriented entertainment, restaurants and watercraft. A relatively high density of 8 to 12 units per acre is recommended for two reasons. A critical mass of people is necessary to support downtown businesses and new business within the district itself. Second, the redeveloper should incorporate the City's waterfront promenade and high level of amenities envisioned for the district. This higher density enables the project to be financially feasible. Floor area ratios for the non-residential development portion of the Waterfront Development district should range between .15 and .25.

DOWNTOWN

The Downtown District is conceived as a mixed-use district of commercial and civic uses with ancillary apartment uses in mixed-use buildings. It is intended to be compact in its development and redevelopment with an emphasis on pedestrian access. The Downtown district has been assigned to the traditional commercial center of Millville, principally High and Second Streets from Broad Street south to Smith Street. This area encompasses the Glasstown Arts District and is generally the eastern half of the original Downtown Redevelopment Area³⁵.

In this district, mixed used buildings combining retail sales and services and office uses on the first floor with apartments on upper floors are proposed. This is also the central area for restaurants and taverns, galleries, and live/work units³⁶. Live/work units are important to the Pioneer Program where artists are assisted with low costs loans through the Millville Development Corporation in setting up studios and galleries. The Downtown land use designation is also the City's civic hub where City Hall, the Police Building, Housing Authority, Board of Education, and numerous religious organizations are located. Lastly, the Downtown district contains a number of mid- and high-rise apartment buildings owned by the Millville Housing Authority, including Jaycee Plaza, Maurice View Plaza and Riverview East; however, no new apartment buildings are anticipated as part of this district.

³⁵ - The Downtown Redevelopment Area is now contained within the Center City Redevelopment Area that encompasses a larger area of the City.

³⁶ - Live/work units are a single use of a building where the lower floor is used for an office; studio or display space and the upper floors are for living purposes.

The Downtown land use category has the highest concentration of historically important buildings. Millville's efforts to attract customers to the downtown are partly predicated on maintaining a high level of quality in the development of new buildings and in the renovation of existing ones. Preserving the eclectic characteristics of buildings in the downtown improves its appeal to customers and merchants. Suburban style development with large front yard parking lots is not appropriate for this part of Millville. Design standards for the downtown that provide a prospective developer or landowner with guidance on desirable architectural features to incorporate into the construction have been established by the Millville Development Corp. This more urban environment for the Downtown district then leads to parking requirements that rely upon on-street parking and select municipal parking lots rather than the creation of off-street parking.

NEIGHBORHOOD BUSINESS

The Neighborhood Business district is intended for a few locations around the City: Bridgeton Pike (W. Main Street, Rt. 49) near Sharp Street, at the north end of Wheaton Avenue, the intersection of Hogbin Rd. and Rt. 49, the intersection of Rieck Avenue and Rt. 49, the intersection of Buckshetum and Cedarville Roads, and a portion of South Second Street (Rt. 47). The Neighborhood Business is intended for personal sales and services for the everyday needs of residents, but with limits on the size of buildings to keep them to a similar scale to large single family houses. The district is also proposed for professional office uses and single family detached residences, which are already found in some of these locations. Floor area ratios should be limited to .20.

HIGHWAY COMMERCIAL

The Highway Commercial district is proposed for automobile-oriented retail sales and services, lodging, new and used vehicle sales, grocery stores, department stores, service stations, chain restaurants, banks and other similar uses that are designed primarily for Millville residents. The highway commercial use is intended to include a special sub-category for Wheaton Village as a tourist-oriented development that incorporates glass making and blowing exhibits, a museum, shopping and lodging in an integrated complex. A new district is proposed at the intersection of Buckshetum Road and Dividing Creek Road as a location for ancillary services and support functions to the motorsports park. The district is intended to be suburban in nature with floor area ratios up to .25.

REGIONAL COMMERCIAL

The Regional Commercial district differs from the highway commercial by offering retail sales that have a regional as well as local demand. This area is in close proximity to the Rt. 55 and Rt. 47 interchange where the transportation system can accommodate the higher levels of traffic generated by these uses. This is the favored location for large stores in excess of 100,000 sf. in area. A similar intensity of development as the Highway Commercial land use category is expected.

INSTITUTIONAL

Institutional uses include governmental, educational, religious, cemeteries and charitable organizations. This district only identifies the largest of these uses and in the Land Use Plan these are mostly educational in nature. The Downtown district also includes many of the same uses as part of its mixed use development pattern, such as City Hall and the Police Station.

AIRPORT

This land use district specifically earmarks Millville Airport and its direct services in contrast to airport-oriented industrial uses. This district includes the Federal Trade Zone, Federal Empowerment Zone and Urban Enterprise Zone designations established by federal and state statutes, though the UEZ is larger than the airport itself. This land use designates the hub of the airport with its runways, airport control, fueling services and hangars directly related to servicing and maintaining planes. At the present time there are also a number of smaller lots that front on Cedarville Road. Some are vacant and others have residences. It is intent of the airport authority to purchase these as they become available and as finances permit. Accordingly, these lots have been designated for the Airport district.

AIRPORT INDUSTRIAL

The Airport Industrial district provides the opportunity for manufacturers and distributors to take advantage of the air services offered by the airport, but that are not necessarily in the business of servicing planes or supplying airport services. This area encompasses the northeast, east and south sides of the Airport district. The Airport Industrial district also serves as a transition area from more intensive residential development that would otherwise occur around the airport. Sufficient land area to ensure the ability to lengthen the runways without materially affecting residents is of prime

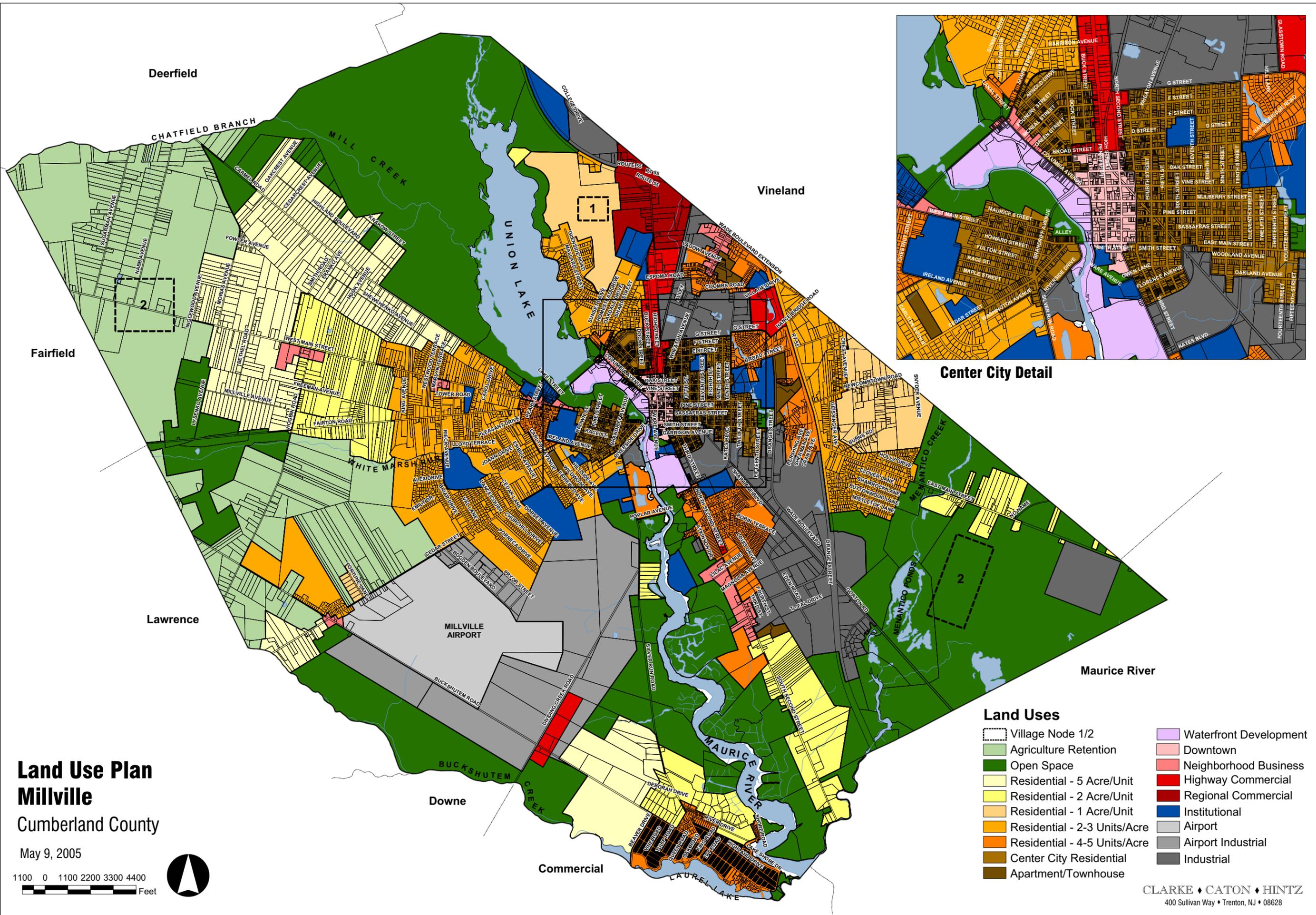
importance in maintaining the industrial park. The district also includes the motorsports park with track and associated support services.

INDUSTRIAL

Outside of the Millville Airport are two main industrial park areas, one on the north side of the Center City Residential district and the other on the south side of the City, with a concentration on Orange Street and Ware Boulevard. Industrial development is intended for manufacturing, particularly oriented to the glass and plastics industry, assembly, warehousing and distribution, contracting yards, office uses, personal storage centers and similar types of uses. This designation also includes the power generating station operated by Conectiv on Rt. 49 at the east end of the City.

LAND USE PLAN POLICY RECOMMENDATIONS

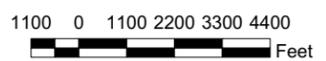
- 1) The area surrounding the airport should be earmarked for uses that are compatible with its future expansion. The City can best ensure that outcome through acquisition of key parcels as has already been done with the Better Materials property.
- 2) The consumption of land in western Millville prompts a review of the existing land development regulations. A significant shift in policy is proposed that includes a reduction in allowed development, the transfer of density to a new core area — a village node — and the pursuit of farmland preservation. This is balanced by encouraging development, where feasible, in the rear of underdeveloped lots fronting on state and county roads.
- 3) Encourage certain locations to be developed into village nodes that utilize neo-traditional street and lot layouts.
- 4) Pursue the goal of preserving 50% of the land area of Millville in open space.
- 5) Manufacturing will continue to have a significant presence in Millville even though tourism is expected to increase. Economic development efforts should continue to have a manufacturing emphasis.
- 6) Explore methods of water conservation to reserve capacity for new development.
- 7) Implement the recommendations presented in the Land Use Categories section.



Land Use Plan Millville

Cumberland County

May 9, 2005



Land Uses

- Village Node 1/2
- Agriculture Retention
- Open Space
- Residential - 5 Acre/Unit
- Residential - 2 Acre/Unit
- Residential - 1 Acre/Unit
- Residential - 2-3 Units/Acre
- Residential - 4-5 Units/Acre
- Center City Residential
- Apartment/Townhouse
- Waterfront Development
- Downtown
- Neighborhood Business
- Highway Commercial
- Regional Commercial
- Institutional
- Airport
- Airport Industrial
- Industrial

XV. Consistency with Other Planning Documents

INTRODUCTION

This section addresses the relationship of the land uses proposed under Millville's Master Plan to the land use designations and related Master Plan policies of contiguous municipalities, Cumberland County, and the State of New Jersey. The land use categories implementing Millville's land use policy are more fully described in the Land Use Plan Element.

LAND USE POLICY IN SURROUNDING MUNICIPALITIES

COMMERCIAL TOWNSHIP

The boundary between Millville and Commercial Township is largely defined by Laurel Lake, which separates established, relatively dense residential neighborhoods in each municipality. The lake is encapsulated by the Maurice River on its eastern shoreline and the Buckshutem Creek that traverses through the Edward G. Bevan State Wildlife Management area to the west. The proposed lower density residential zoning in Millville on lands between Beaver Drive and the Edward G. Bevan State Wildlife Management area is consistent with the more sparsely populated area along the edge of the state lands within Commercial Township.

DEERFIELD TOWNSHIP

The Future Land Use Plan adopted as part of the Deerfield Township Master Plan of January 2002, proposes to consolidate the residential and business districts concentrated along Irving Avenue and Sherman Avenue (C.R. 552) and Miller Avenue (C.R. 634) that constitute the Carmel section of the Township into a defined center comprised of mixed use, business and residential sub-districts in an effort to prevent further sprawl. With the Chatfield Branch stream corridor providing a natural buffer along its southern boundary, the village development concept is not at odds with the Agriculture Retention and Open Space districts in Millville.

Deerfield's Master Plan also calls for Rural/Agriculture zoning to promote land conservation south of Bridgeton - Carmel Road / Irving Avenue (C.R. 552) west of Carmel Center together with a Public zone to encompass the

Union Lake Wildlife Management Area to the east. Both designations are consistent with Millville's land use policies in this area of the City.

DOWNE TOWNSHIP

The Edward G. Bevan State Wildlife Management area occupies the land area within Downe Township along a section of Millville's southwest border. Notwithstanding the public nature of the Management Area, Downe Township's zoning in this location provides for extractive industries and public uses within its M2 district and conservation in the C-1 district. The March 2000 Master Plan calls for a collaborative effort between the State of New Jersey, the Township and sand mining companies to "...assemble a strategy for mining a portion..." of the Edward Bevan tract, a goal reinforced by the "Sand Mining" designation on the Township's "Future Land Use Map". The Master Plan notes such activity could have an impact on the road network in Millville. The extractive industries could affect the City's circulation pattern depending on the method of transporting sand and gravel. If truck transportation is used, additional congestion to west Millville would occur.

FAIRFIELD TOWNSHIP

Fairfield Township shares a portion of Millville's western boundary extending from the Chatfield Branch stream corridor down to Fairton Road (C.R. 698). The zoning in this area is almost entirely agricultural in nature with the exception of a compact residential district and a Planned Business & Light Industry zone along Bridgeton Pike (Route 49). This is compatible with Agricultural Retention and the Open Space designation covering the Buckshutem Wildlife Management Area in Millville. While the Light Industry designation could affect any residential development that might occur in the Agricultural Retention land use category, development of these uses would require sanitary sewer. Since the most likely connection would be to Millville's treatment plant, the City has significant control over what could occur in this area.

LAWRENCE TOWNSHIP

Lawrence Township has portions of four zoning districts along Millville's southwestern border. A Low Density residential district known as R-2 is situated along Hogbin Road (C.R. 625), surrounded by the R-3 Rural Residential district which extends southward past Cedarville Road (C.R. 610). The residential character of this area is consistent with that in Millville along Hogbin Road and Cedarville Road.

The Agricultural zone to the north and the Public district south of Cedarville Road reflect similar conditions in Millville where Agricultural Retention and Open Space are proposed north of Cedarville Road and the Open Space designation is applied to the Edward G. Bevan State Wildlife Management area south of it.

MAURICE RIVER TOWNSHIP

Maurice River Township has designated an extensive area in the C-Conservation zone district in the vicinity of the municipal boundary with Millville. The purpose of this district is to permit agriculture, parks and recreational activities with residential density limited to one dwelling per 25 acres. The C-15 Conservation district with a River Conservation Overlay related to the federal Scenic and Recreational River designation is in place along the Menantico Creek in the area west of Route 55. The C-15 district promotes the same land uses as the C-Conservation district however; residential dwellings are permitted at a density of one unit per 15 acres. This zoning is consistent with the Open Space designation in Millville.

VINELAND CITY

Zoning in Vineland along Millville's northeastern border is consistent with the City's Land Use Plan. A W-6 zone controls the area east of May's Landing Road; to the west of Route 55 is the W-5 district. Designed to recognize and preserve the character of forested areas, the Woodlands classification is consistent with the Open Space designation in Millville in these respective locations.

The more intensive industrial, business and institutional zone districts established along Route 55, particularly at the interchanges, are compatible with the Regional Commercial, Industrial and Institutional districts in Millville.

CUMBERLAND COUNTY

Cumberland County has undertaken a number of planning and economic development studies and policy prescriptions over the past decade and a half³⁷. Coordination with planning policy between the county and municipalities has been a long standing practice and thus there is close

³⁷ - *Planning for the Future: A Summary of Cumberland County Planning Initiatives*, Cumberland County Department of Planning and Economic Development, 2004.

agreement between Cumberland County and Millville in their policy. County policies for infrastructure call for enhancements in the regional connections to larger metropolitan areas, maintenance of rail freight service to Cumberland, and to create a bicycle and pedestrian trail system throughout the area. All of these policies have direct counterparts in this document. County policy calls for the maintenance of the Maurice River corridor, as does this plan.

Millville's policies for economic development have much in common with those of Cumberland County. For example, the development of the tourism industry is advocated, and in particular eco-tourism. This fits in well with the desire to maintain the Scenic and Recreational designation of the southern half of the river in Millville. Millville's approval of a motorsports complex will provide spin off effects for the hospitality industry, including restaurants. In turn, these will also support the fledging eco-tourism industry that will have its primary focus on the wildlife management areas in other municipalities. Millville is part of the Intermunicipal Urban Enterprise Zone (UEZ) program that began in January 1999 and both the County and municipality are emphatic in retaining and, if feasible, expanding its geographic extent.

The County planning policy with regard to land uses supports more intensive development in proximity to existing centers, with Millville specifically mentioned. The intent of the County policy is a main goal of improving the quality of life for residents, business owners and visitors to the region, very similar to a major goal of this Master Plan.

STATE DEVELOPMENT AND REDEVELOPMENT PLAN

The New Jersey State Plan, first adopted in 1992 and updated in March 2001, is a comprehensive statewide guide to municipal, county and regional planning. It contains vision statements, goals, strategies and policies. The overall goals of the State Plan were derived from the State Planning Act and are paraphrased below:

- 1) Revitalize the State's cities and towns;
- 2) Conserve the State's natural resources and systems;
- 3) Promote beneficial economic growth, development and renewal for all residents of New Jersey;
- 4) Protect the environment, prevent and clean up pollution;
- 5) Provide adequate public facilities and services at a reasonable cost;
- 6) Provide adequate housing at a reasonable cost; and

- 7) Preserve and enhance areas with historic, cultural, scenic, open space and recreational value.³⁸

The State Plan Policy Map integrates the two critical spatial concepts of the State Plan –*Planning Areas* and *Centers and Environs* – and provides the framework for implementing SDRP goals and policies. Each Planning Area consists of many square miles of land that share certain characteristics and strategic intentions. Centers are central places within Planning Areas where growth should either be attracted or contained, depending on the unique characteristics and growth opportunities of each Center, and the characteristics of the surrounding Planning Area in which it is located. Areas outside Center Boundaries are Environs and should be protected from the growth that occurs in Centers.

The Planning Areas, arranged in order from most to least developed, are as follows:

- PA1 Metropolitan Planning Area
- PA2 Suburban Planning Area
- PA3 Fringe Planning Area
- PA4 Rural Planning Area
- PA5 Environmentally Sensitive Planning Area

The current State Development and Redevelopment Plan, like its predecessor, included five centers (ranging from ‘urban center’ to ‘hamlet’) that were embedded in Planning Areas. Planning Areas constitute regional lands with common development patterns, either existing or intended for the future. Millville is part of a designated regional center with Vineland; however, this designation does not cover the entire City. The State Plan’s mapping of Millville includes considerable acreage in the Environmentally Sensitive Planning Area. The State Plan defines this planning region as follows:

[The] Environmentally Sensitive Planning Area contains large contiguous land areas with valuable ecosystems, geological features and wildlife habitats particularly in the Delaware Bay and other estuary areas, the Highlands Region, and coastal area. The future environmental and economic integrity of the state rests in the protection of these irreplaceable resources. (p. 215)

³⁸ - *The New Jersey State Development and Redevelopment Plan*, New Jersey State Planning Commission, March 2001, p.7.

The State Plan goes on to note:

The Environmentally Sensitive Planning Area is highly vulnerable to damage of many sorts from new development in the Environs, including fragmentation of landscapes, degradation of aquifers and potable water, habitat destruction, extinction of plant and animal species and destruction of other irreplaceable resources which are vital for the preservation of the ecological integrity of New Jersey's natural resources. Perhaps most important, because the Environs in Environmentally Sensitive Planning Areas (and Rural/Environmentally Sensitive Planning Areas) are by definition more sensitive to disturbance than the Environs in other Planning Areas, new development in these Environs has the potential to destroy the very characteristics that define the area. (p.216)

In this last passage, "Environs" means the area outside of the Millville/Vineland regional center – in other words, most of the land area to the south and east of Center City. The mapped area of PA5 includes the land between Dividing Creek Road to the Maurice River and even a portion west of the street, virtually all of the land east of Rt. 55 in eastern Millville and the eastern side of Union Lake. All three of these areas are slated for future development – respectively, the airport, the Wawa and the Conectiv tracts. The City's Master Plan policies are in certain locations at odds with the State Plan. However, if the criteria used to select the PA5 area in Millville are examined, at least some of the land area where it has been applied does not appear to fall under this category. The State Plan also includes a caveat, "Local conditions may require flexible application of the criteria to achieve the Policy Objectives of this Planning Area."

The delineation criteria for the Environmentally Sensitive Planning include:

- 1) Population density of less than 1,000 people per square mile.
- 2) Land area greater than one square mile.
- 3) One or more of the following features outside Centers:
 - a. Trout production waters and trout maintenance waters and their watersheds;
 - b. Pristine non-tidal Category I waters and their watersheds upstream of the lowest Category I stream segment;
 - c. Watersheds of existing or planned potable water supply sources;

- d. Prime aquifer recharge areas of potable water supply sources and carbonate formations associated with recharge areas or aquifers;
- e. Habitats of populations of endangered or threatened plant or animal species;
- f. Coastal wetlands;
- g. Contiguous freshwater wetlands systems;
- h. Significant natural features or landscapes such as beaches, coastal spits, barrier islands, critical slope areas, ridge lines, gorges and ravines, and important geological features (including those associated with karst topography) or unique ecosystems; and/or
- i. Prime forested areas, including mature stands of native species. (pp.216-217)

Of these criteria, potentially “e” may apply in select locations and the state would likely consider the Maurice River valley as a “unique ecosystem” in “h”. Possibly, “i” would apply in the eastern part of Millville. The PA5 classification, however, may only have been applied by default in the interstices between the Edward Bevan Wildlife Management Area, the river corridor and the Pinelands that are located just outside the City’s eastern boundary with Maurice River Township. Notwithstanding the reasonable application of some PA5 area to Millville, as it now stands, the State Plan includes perhaps 8 square miles south and east of the City and about 435 acres (the Wawa tract) adjacent to Union Lake. With regard to the Wawa tract, its size actually makes it ineligible to be included in a PA5 area under the State’s own criteria.

The State Plan is currently undergoing the “Cross-Acceptance” process where local plans are reviewed in comparison to the policies and mapping proposed as part of the process that will lead to the third state plan, presently scheduled to be adopted in September 2005. At present, the changes proposed at the staff level to the State Planning Commission could be viewed as more evolutionary in scope rather than changing the state plan to address the issues raised in this statement. It is likely that the issues discussed here will continue with the third State Plan.

APPENDICES

Report Selections: Block First to Last Prop. Class 3B to 3B Zoning All Src: Ssp:
Lot Sptx Code All Net Value All Vet: Dis:
Qual Lmtd Exempt All Wid:
Report Sequence: Block

Block Lot Qual	Property Location	Owner Mailing Address	Cls Bank	Deduc	Sptx	Land	Improve	Exemption	Net
1 45 QFARM	46 SUGARMAN AVE	HAIGHT, JOANNE 46 SUGARMAN AVE MILLVILLE, N J			08332	3B	4200		4200
1 46 QFARM	36 SUGARMAN AVE	RUSKE, CHRISTOPHER J. & BETH W. 36 SUGARMAN AVE. MILLVILLE, N J			08332	3B	3300		3300
1 47 QFARM	MAIN ST W	WILTIN, VAUGHNIE 26 SUGARMAN AVE MILLVILLE NJ			08332	3B	5500		5500
1 48 QFARM	MAIN STREET W	RUSKE, ROGER & MARGARET 1521 BRIDGETON-MILLVILLE PIKE, RT.49, MILLVILLE, NJ			08332	3B	11400		11400
2 2 QFARM	277 SUGARMAN AVE	USHLER, GERALD J. & TRACY LYN 277 SUGARMAN AVE MILLVILLE, N J			08332	3B	6000		6000
2 22 QFARM	160 NABB AVE	SMITH, RALPH & K ANN 610 MONROEVILLE RD MONROEVILLE, N J			08343-2513	3B	7500		7500
2 23 QFARM	122 NABB AVE	SMITH, JOHN B JR & MARILYN SMITH- HARRIS, TRUSTEE, 702 AURA RD. GLASSBORO NJ			08028	3B	10100		10100
2 31 QFARM	2812 MAIN ST W	VASJUTA, GEORGE 6634 BARRETT RD FALLS CHURCH VA			22042	3B	8800		8800
2 35 QFARM	21 SUGARMAN AVE	VASJUTA, GEORGE 6634 BARRETT RD FALLS CHURCH VA			22042	3B	1800		1800
2 36 QFARM	29 SUGARMAN AVE	VASJUTA, GEORGE 6634 BARRETT RD FALLS CHURCH VA			22042	3B	4900		4900
2 37 QFARM	49 SUGARMAN AVE	JONES, PAMELA & WILLIAM JR. 49 SUGARMAN AVE. MILLVILLE, N J			08332	3B	1000		1000
2 47.01	SUGARMAN AVE	MOORE, THOMAS & KATHERINE 1503 W MAIN ST				3B	3300		3300

Block Lot Qual	Property Location	Owner Mailing Address	Cls Bank	Deduc	Sptx	Land	Improve	Exemption	Net
QFARM		MILLVILLE, NJ 08332							
3 1	351 NABB AVE	APRIL, BETTY 220 S LOCUST ST #11G PHILADELPHIA PA 19106	3B			5200			5200
QFARM									
3 54	101 NABB AVE	SOUTH JERSEY HOSPITAL SYSTEM 333 IRVING AVE. BRIDGETON, N.J. 08302	3B			162600			162600
QFARM									
3 55	2700 MAIN ST W	SMITH, RALPH & ANN 610 MONROEVILLE RD MONROEVILLE, N J 08343-2513	3B			2600			2600
QFARM									
3 57	2740 W MAIN ST	VASJUTA, GEORGE 6634 BARRETT RD FALLS CHURCH VA 22042	3B			9800			9800
QFARM									
3 59	49 NABB AVE	VASJUTA, GEORGE 6634 BARRETT RD FALLS CHURCH VA 22042	3B			10400			10400
QFARM									
3 71	301 NABB AVE	APRIL, BETTY 220 S LOCUST ST #11G PHILADELPHIA PA 19106	3B			5200			5200
QFARM									
5 3	4060 CARMEL RD	KONCHAK, MARY 4048 CARMEL ROAD MILLVILLE, N J 08332	3B			3600			3600
QFARM									
5 4	4048 CARMEL RD	KONCHAK, MARY 4048 CARMEL RD MILLVILLE, N J 08332	3B			7300			7300
QFARM									
10 3	HIGHLAND BLVD.	SMITH, JOHN & BRENDA 2022 CARMEL RD MILLVILLE, N J 08332	3B			600			600
QFARM									
14 4	2022-2028 CARMEL RD	SMITH, JOHN & BRENDA 2022 CARMEL RD MILLVILLE, N J 08332	3B			500			500
QFARM									
18 2	LAND EAST OF LAKE	WAWA INC 260 BALTIMORE PIKE WAWA, PA 19063	3B			52600			52600
QFARM									
21 19	1035 CARMEL RD	WINNER, MEREDITH 1035 CARMEL RD. MILLVILLE, N.J. 08332	3B			3100			3100
QFARM									
21	137 MORIAS AVE	APRIL, BETTY & GRACE APRIL	3B			2400			2400

Block Lot Qual	Property Location	Owner Mailing Address	Cls Bank	Deduc Sptx	Land	Improve Exemption	Net
21 QFARM		220 S LOCUST ST #11G PHILADELPHIA PA 19106					
21 58 QFARM	MAIN ST W	TEDESCO, SALVATORE F. P.O.BOX 82 ROSENHAYN, N J 08352	3B 00000		6200		6200
21 66 QFARM	MAIN ST W	TEDESCO, SALVATORE F. P.O.BOX 82 ROSENHAYN, N J 08352	3B 00000		15500		15500
29 78 QFARM	2126 MAIN ST W	CROWLEY, JOHN A III & KATHERINE 2134 W MAIN ST. MILLVILLE, N.J. 08332	3B		3100		3100
29 79 QFARM	2134 MAIN ST W	CROWLEY, JOHN A III 2134 W MAIN ST MILLVILLE, N.J. 08332	3B		3100		3100
32 8 QFARM	413 CARMEL RD	MITCHELL, H. GEORGE & PHYLLIS J. 329 CARMEL ROAD MILLVILLE, N J 08332	3B 00000		6100		6100
35 1 QFARM	CARMEL RD	WAWA INC 260 W BALTIMORE PIKE WAWA, PA 19063	3B		5500		5500
35 10 QFARM	138 CARMEL RD	WAWA INC 260 W. BALTIMORE PIKE WAWA, PA 19063	3B		800		800
36 4 QFARM	MAIN ST W	RUSKE, ROGER J. & CHRISTOPHER J. 1521 BRIDGETON-MILLVILLE PIKE, MILLVILLE, N J 08332	3B		1100		1100
36 6 QFARM	MAIN ST W	HARRIS, MARILYN J., TRUSTEE 702 AURA RD. GLASSBORO, N.J. 08028	3B		24400		24400
36 9 QFARM	MAIN ST W	HOPEWELL NURSERY 54 HARMONY RD BRIDGETON NJ 08302	3B		109200		109200
36 13 QFARM	MAIN ST W	HARRIS, MARILYN J., TRUSTEE 702 AURA RD. GLASSBORO, N J 08028	3B		17600		17600
36 15.01 QFARM	2465 MAIN ST W	SIMPKINS, CLIFFORD C. SR. & ARLENE 2455 W. MAIN ST. MILLVILLE, N J 08332	3B		4000		4000

Block Lot Qual	Property Location	Owner Mailing Address	Cls Bank	Deduc Sptx	Land Improve	Exemption	Net
36 18 QFARM	2441 MAIN ST W	LITVINOV, DMITRI 2441 W MAIN ST MILLVILLE, N J 08332	3B		2600		2600
36 20.01 QFARM	2429 MAIN ST W	CIANCARELLI, DOMENIC P & DEBORAH K 36 LISA MARIE TERR MILLVILLE, N J 08332	3B		1300		1300
36 32 QFARM	MILLVILLE AVE	COOPER, MILDRED 2438 MILLVILLE AVENUE MILLVILLE, N J 08332	3B		5300		5300
37 3 QFARM	2325 MAIN ST W	WILSON, ROBERT & KATRINA 2325 W MAIN ST MILLVILLE NJ 08332	3B		8100		8100
39 1 QFARM	MILLVILLE AVE	COOPER, MILDRED 2438 MILLVILLE AVE MILLVILLE, NJ 08332	3B		1500		1500
39 3 QFARM	MILLVILLE AVE	COOPER, MILDRED 2438 MILLVILLE AVE MILLVILLE, NJ 08332	3B		2000		2000
39 4 QFARM	MILLVILLE AVE	COOPER, MILDRED 2438 MILLVILLE AVE MILLVILLE, NJ 08332	3B		2000		2000
41 1 QFARM	2135 MAIN ST W	PARANYCH, JANET 2135 W MAIN ST MILLVILLE, N.J. 08332	3B		1300		1300
41 2 QFARM	2127 MAIN ST W	PARANYCH, EDWARD 2135 W. MAIN ST MILLVILLE, N.J. 08332	3B		3700		3700
41 68 QFARM	FAIRTON RD	SHEPPARD, PATRICIA 1885 FAIRTON RD MILLVILLE, N J 08332	3B		2500		2500
41 69 QFARM	FAIRTON RD	SHEPPARD, PATRICIA A. 1885 FAIRTON RD MILLVILLE, N J 08332	3B		2200		2200
49 5 QFARM	HOGBIN RD	TORPEY, BONNIE & DAVID 409 HOGBIN ROAD MILLVILLE NJ 08332	3B		16400		16400
49 6 QFARM	508 HOGBIN RD	HILL, JOYCE PO BOX 347 MILLVILLE, N J 08332	3B		8600		8600

Block Lot Qual	Property Location	Owner Mailing Address	Cls Bank	Deduc Sptx	Land	Improve	Exemption	Net
49 6.01 QFARM	518 HOGBIN RD	HILL, JOYCE E PO BOX 347 MILLVILLE, N.J. 08332	3B		1700			1700
49 10 QFARM	544 HOGBIN RD	EISENHARDT, VICTORIA J. 544 HOGBIN RD MILLVILLE, N.J. 08332	3B 00672		900			900
49 13 QFARM	572 HOGBIN RD	NAYDA, WM I & DOCIA NAYDA 572 HOGBIN RD MILLVILLE, N J 08332	3B		4600			4600
49 14 QFARM	10002 BUCKSHUTEM RD W	KASHUBSKI, ARTHUR 767 HOGBIN RD MILLVILLE, NJ 08332	3B		2900			2900
49 14.01 QFARM	10500 BUCKSHUTEM RD W	KASHUBSKI, ARTHUR 767 HOGBIN RD MILLVILLE, N J 08332	3B		2600			2600
49 14.02 QFARM	596 HOGBIN RD	KASHUBSKI, ARTHUR 767 HOGBIN RD MILLVILLE, N J 08332	3B		2600			2600
49 14.03 QFARM	592 HOGBIN RD	KASHUBSKI, ARTHUR 767 HOGBIN RD MILLVILLE, N J 08332	3B		2600			2600
49 14.04 QFARM	584 HOGBIN RD	KASHUBSKI, ARTHUR 767 HOGBIN RD MILLVILLE, N J 08332	3B		2600			2600
49 15 QFARM	10600 BUCKSHUTEM RD W	TAYLOR, CHARLES JR. & MARIE 10600 W. BUCKSHUTEM RD MILLVILLE, N J 08332	3B		1100			1100
49 16 QFARM	BUCKSHUTEM RD W	TAYLOR, CHARLES JR. & MARIE 10600 W BUCKSHUTEM RD MILLVILLE, N J 08332	3B		1400			1400
49 17 QFARM	BUCKSHUTEM RD W	TAYLOR, CHARLES E. JR. & MARIE 10600 W BUCKSHUTEM RD MILLVILLE, N J 08332	3B		2100			2100
51 1 QFARM	655 HOGBIN RD	KASHUBSKI, ARTHUR 767 HOGBIN RD MILLVILLE NJ 08332	3B		500			500
51 1.01	645 BUCKSHUTEM RD W	KASHUBSKI, ARTHUR 767 HOGBIN RD	3B		4700			4700

Block Lot Qual	Property Location	Owner Mailing Address	Cls Bank	Deduc	Sptx	Land	Improve	Exemption	Net
QFARM		MILLVILLE, N J							
51 1.02 QFARM	9301 BUCKSHUTEM RD W	KASHUBSKI, ARTHUR 767 HOGBIN RD MILLVILLE, N J				6400			6400
51 1.03 QFARM	9401 BUCKSHUTEM RD W	KASHUBSKI, ARTHUR 767 HOGBIN RD MILLVILLE, N J				2600			2600
51 1.04 QFARM	9501 BUCKSHUTEM RD W	KASHUBSKI, ARTHUR 767 HOGBIN RD MILLVILLE, N J				2600			2600
51 1.05 QFARM	9601 BUCKSHUTEM RD W	KASHUBSKI, ARTHUR 767 HOGBIN RD MILLVILLE, N J				2600			2600
51 1.06 QFARM	9701 BUCKSHUTEM RD W	KASHUBSKI, ARTHUR 767 HOGBIN RD MILLVILLE, N J				2600			2600
51 1.07 QFARM	9801 BUCKSHUTEM RD W	KASHUBSKI, ARTHUR 767 HOGBIN RD MILLVILLE, N J				2600			2600
51 1.08 QFARM	623 HOGBIN RD	KASHUBSKI, ARTHUR 767 HOGBIN RD MILLVILLE, N J				2600			2600
51 5 QFARM	9001 BUCKSHUTEM RD W	WIL MAR EGG FARM, INC. 9001 W BUCKSHUTEM RD MILLVILLE, N.J.				4600			4600
51 5.02 QFARM	8851 BUCKSHUTEM RD W	WIL MAR EGG FARM&LAW.& B. TAYLOR 9001 W BUCKSHUTEM RD MILLVILLE, N.J.				1000			1000
51 6 QFARM	8201 BUCKSHUTEM RD W	MAYERFELD FARMS & SUPPLY CO. P.O.BOX 249 NORMA, N J				13600			13600
51 6.04 QFARM	8101 BUCKSHUTEM RD W	MAYERFELD FARMS & SUPPLY CO P.O.BOX 249 NORMA, N J				1500			1500
51 6.06 QFARM	7901 BUCKSHUTEM RD W	MAYERFELD FARMS & SUPPLY CO P.O.BOX 249 NORMA, N J				2000			2000
51	HOGBIN RD	VANEMBDEN, NATHAN & CHRISTINA				3800			3800

Block Lot Qual	Property Location	Owner Mailing Address	Cls Bank	Deduc	Sptx	Land	Improve	Exemption	Net
15 QFARM		PO BOX 1641 MILLVILLE, N J							08332
51 17 QFARM	225 HOGBIN RD	KASHUBSKI, ARTHUR 767 HOGBIN RD MILLVILLE, NJ	3B			4700			4700
51 17.01 QFARM	HOGBIN RD	KASHUBSKI, ARTHUR 767 HOGBIN RD MILLVILLE, N J	3B			900			900
51 17.02 QFARM	HOGBIN RD	KASHUBSKI, ARTHUR 767 HOGBIN RD MILLVILLE, N J	3B			400			400
52 23 QFARM	FAIRTON RD	SHEPPARD, PATRICIA ANN 1885 FAIRTON RD MILLVILLE, N J	3B			4100			4100
52 24 QFARM	FAIRTON RD	SHEPPARD, PATRICIA ANN 1885 FAIRTON RD MILLVILLE, N J	3B			3500			3500
52 32 QFARM	FAIRTON RD	SHEPPARD, PATRICIA A. 1885 FAIRTON RD MILLVILLE, N J	3B			2800			2800
52 34 QFARM	FAIRTON RD	SHEPPARD, PATRICIA ANN 1885 FAIRTON RD MILLVILLE, N J	3B			4500			4500
52 40.02 QFARM	1707 FAIRTON RD	STABLEFLEX, LLC 19 PORRECA DR MILLVILLE, N J	3B			1400			1400
52 78 QFARM	CEDAR ST	INDUSTRIAL AIRPARK FARMS,LLC % ROSENBERG, 1555 ZION RD STE 200, NORTHFIELD, N J	3B			51800			51800
52 79 QFARM	RIECK AVE	STABLEFLEX, LLC 19 PORRECA DR MILLVILLE, N J	3B			26400			26400
52 85 QFARM	CEDAR ST	HAMILTON, ROBERT J 2340 CEDAR ST MILLVILLE, N J	3B			5900			5900
52 86 QFARM	CEDAR ST	HAMILTON, ROBERT J 2340 CEDAR ST MILLVILLE, N J	3B			3200			3200

Block Lot Qual	Property Location	Owner Mailing Address	Cls Bank	Deduc Sptx	Land	Improve	Exemption	Net
52 87 QFARM	CEDAR ST	HAMILTON, ROBERT J 2340 CEDAR ST MILLVILLE, N J	3B	08332	3200			3200
52 88 QFARM	2410 CEDAR ST	HERMANN, SUSIE 2410 CEDAR STREET MILLVILLE, N J	3B	00000 08332	5100			5100
52 110 QFARM	CEDAR ST	SCHWARZMAN, SAMUEL INC. & HENRY FEIGENBAUM, 1501 LARCHWOOD AVE., VINELAND, N J	3B	08360	16900			16900
52 115 QFARM	9102 BUCKSHUTEM RD	STABLEFLEX, LLC 19 PORRECA DR MILLVILLE, N J	3B	08332	26000			26000
52 116 QFARM	575 HOGBIN RD	SNIHUR, MICHAEL 575 HOGBIN RD MILLVILLE, N J	3B	08332	7000			7000
52 117 QFARM	HOGBIN RD	STARZEWSKI, MICHAEL 565 HOGBIN ROAD MILLVILLE, N J	3B	08332	19200			19200
52 118 QFARM	505 HOGBIN RD	HARRIS, PAUL 1226 STARLING STREET MILLVILLE, N J	3B	08332	6600			6600
52 120 QFARM	HOGBIN RD	HARRIS, PAUL 1226 STARLING STREET MILLVILLE, N J	3B	08332	9700			9700
52 123 QFARM	HOGBIN RD	TORPEY, BONNIE & DAVID 409 HOGBIN ROAD MILLVILLE NJ	3B	08332	7600			7600
52 131 QFARM	337 HOGBIN RD	SHEPPARD, ALLEN JR. 1808 E. BUCKSHUTEM RD MILLVILLE, N J	3B	08332	5600			5600
89 1 QFARM	COOPER ST	WAWA INC 260 W BALTIMORE PIKE WAWA, PA	3B	19063	300			300
90 3 QFARM	SPRUCE ST	WAWA INC 260 W BALTIMORE PIKE WAWA, PA.	3B	19063	300			300
91 2 QFARM	COOPER ST	WAWA INC 260 W BALTIMORE PIKE WAWA, PA.	3B	19063	200			200

Block Lot Qual	Property Location	Owner Mailing Address	Cls Bank	Deduc	Sptx	Land	Improve	Exemption	Net
125.01 1 QFARM	1321-1323 CEDAR ST	PORRECA, PAUL R & MARIA 19 PORRECA DRIVE MILLVILLE, N J 08332	3B			28600			28600
135 1 QFARM	SILVER RUN RD	BETTER MATERIALS CORPORATION P.O.BOX 196 PENNS PARK, PA 18943-0196	3B			48000			48000
135 2 QFARM	DIVIDING CREEK RD	BETTER MATERIALS CORPORATION P.O.BOX 196 PENNS PARK PA 18943-0196	3B			1100			1100
135 3 QFARM	DIVIDING CREEK RD	BETTER MATERIALS CORPORATION P.O.BOX 196 PENNS PARK, PA 18943-0196	3B			100			100
135 4 QFARM	DIVIDING CREEK RD	BETTER MATERIALS CORPORATION P.O.BOX 196 PENNS PARK, PA 18943-0196	3B			21800			21800
135 5 QFARM	801 SILVER RUN RD	BETTER MATERIALS CORPORATION P.O.BOX 196 PENNS PARK, PA 18943-0196	3B			1600			1600
138 1 QFARM	900 SILVER RUN RD	PETTINOS, GEORGE F LLC 2711 CENTERVILLE RD STE 400 WILMINGTON DE 19808	3B			19300			19300
138 6 QFARM	498 SILVER RUN RD	PETTINOS, GEORGE F LLC 2711 CENTERVILLE RD STE 400 WILMINGTON DE 19808	3B			5000			5000
138 7 QFARM	SILVER RUN RD	PETTINOS, GEORGE F LLC 2711 CENTERVILLE RD STE 400 WILMINGTON DE 19808	3B			300			300
139 1 QFARM	DIVIDING CREEK RD	BETTER MATERIALS CORPORATION P.O.BOX 196 PENNS PARK, PA 18943-0196	3B			21600			21600
139 2 QFARM	DIVIDING CREEK RD	BETTER MATERIALS CORPORATION P.O.BOX 196 PENNS PARK, PA 18943-0196	3B			38500			38500
139 3 QFARM	DIVIDING CREEK RD	BETTER MATERIALS CORPORATION P.O.BOX 196 PENNS PARK, PA 18943-0196	3B			50100			50100
139 4	DIVIDING CREEK RD	BETTER MATERIALS CORPORATION P.O.BOX 196	3B			3600			3600

Block Lot Qual	Property Location	Owner Mailing Address	Cls Bank	Deduc	Sptx	Land	Improve	Exemption	Net
QFARM		PENNS PARK, PA				18943-0196			
139 5 QFARM	1600 BUCKSHUTEM RD W	BETTER MATERIALS CORPORATION P.O.BOX 196 PENNS PARK, PA	3B			15000			15000
139 6 QFARM	1498 BUCKSHUTEM RD W	BETTER MATERIALS CORPORATION P.O.BOX 196 PENNS PARK, PA	3B			13500			13500
139 8 QFARM	1298 BUCKSHUTEM RD W	BETTER MATERIALS CORPORATION P.O.BOX 196 PENNS PARK PA	3B			1200			1200
139 22 QFARM	SILVER RUN RD REAR	BETTER MATERIALS CORPORATION P.O.BOX 196 PENNS PARK, PA	3B			3700			3700
139 25 QFARM	SILVER RUN RD	BETTER MATERIALS CORPORATION P.O.BOX 196 PENNS PARK, PA	3B			1400			1400
140 1 QFARM	1200 SILVER RUN RD	PETTINOS, GEORGE F LLC 2711 CENTERVILLE RD STE 400 WILMINGTON DE 19808	3B			19900			19900
140 7 QFARM	SILVER RUN RD REAR	PETTINOS, GEORGE F LLC 2711 CENTERVILLE RD STE 400 WILMINGTON DE 19808	3B			2400			2400
141 1 QFARM	1201 BUCKSHUTEM RD W	PETTINOS, GEORGE F LLC% US SILICA ACCT MGR PO BOX 187 BERKELEY SPRINGS WV 25411	3B			24500			24500
141 3 QFARM	1751 BUCKSHUTEM RD W	PETTINOS, GEORGE F LLC% US SILICA ACCT MGR PO BOX 187 BERKELEY SPRINGS WV 25411	3B			500			500
236 126 QFARM	SUNSET DR	MAURICE RIVER CO %WAWA INC 260 W BALTIMORE PIKE WAWA, PA 19063	3B			2900			2900
348 10 QFARM	1924 BROAD ST E	ALCORN, ELLEN 3032 ROUTE 47 MILLVILLE NJ 08332-8802	3B			3600			3600
348 15 QFARM	HANCE BRIDGE RD	WILSON, WILLIAM & VIRGINIA 1901 HANCE BRIDGE RD MILLVILLE, N.J. 08332	3B			2100			2100
348	HANCE BRIDGE RD	WILSON, WILLIAM & VIRGINIA	3B			3900			3900

Block Lot Qual	Property Location	Owner Mailing Address	Cls Bank	Deduc Sptx	Land Improve	Exemption	Net
18 QFARM		1901 HANCE BRIDGE RD MILLVILLE, N.J.		08332			
348 20 QFARM	BROAD ST E	PARKER, NEAL & BETSY JO 2204 E BROAD STREET MILLVILLE, N J	3B 00000		5000		5000
408 23 QFARM	2322 NEWCOMBTOWN RD	BAJOR, PETER B. & THERESA L. 2322 NEWCOMBTOWN RD. MILLVILLE, N J	3B		1500		1500
500 10 QFARM	1813 MAIN ST E	JACQUET, FRANCIS & BONNIE 101 SHERMAN AVE MILLVILLE, N J	3B		400		400
500 11 QFARM	EAST MAIN ST	JACQUET, FRANCIS & BONNIE 101 SHERMAN AVE MILLVILLE, N J	3B		700		700
525 1 QFARM	BURNS RD	THOMAS, VIOLET 200 BURNS ROAD MILLVILLE NJ	3B		10100		10100
579 1 QFARM	2ND ST S	BURCHAM, JANICE & JEANETTE 2914 S 2ND STREET MILLVILLE, N J	3B		7100		7100
581 3 QFARM	ORANGE ST	GALETTO REALTY CO 317 W ELMER RD VINELAND, N J	3B		13100		13100
581 39 QFARM	2501-2507 2ND ST S	GALETTO REALTY CO LP 317 W ELMER RD VINELAND, N J	3B		900		900
581 50 QFARM	2701-2709 2ND ST S	BURCHAM, JANICE & JEANETTE 2914 S 2ND STREET MILLVILLE, N J	3B		3100		3100
581 53 QFARM	2711-2723 2ND ST S	BURCHAM, JANICE & JEANETTE 2914 S 2ND STREET MILLVILLE, N J	3B		2700		2700
581 54 QFARM	2ND ST S	BEAN, CLARKSON C & MARTHA 2725 S 2ND ST MILLVILLE, N J	3B		2900		2900
581 63 QFARM	2901-2911 2ND ST S	BURCHAM, JANICE & JEANETTE 2914 S 2ND STREET MILLVILLE, N J	3B		4800		4800

Block Lot Qual	Property Location	Owner Mailing Address	Cls Bank	Deduc	Sptx	Land	Improve	Exemption	Net
581 66 QFARM	2ND ST S	BEAN, CLARKSON C & MARTHA 2725 S 2ND ST MILLVILLE, N J	3B			5900			5900

State of New Jersey
Threatened and Endangered Species

BIRDS			
Endangered		Threatened	
Bittern, American	<i>Botaurus lentiginos</i> BR	Bobolink	<i>Dolichonyx oryzivorus</i> BR
Eagle, bald	<i>Haliaeetus leucocephalus</i> BR **	Eagle, bald	<i>Haliaeetus leucocephalus</i> NB **
Falcon, peregrine	<i>Falco peregrinus</i>	Hawk, Cooper's	<i>Accipiter cooperii</i>
Goshawk, northern	<i>Accipiter gentilis</i> BR	Hawk, red-shouldered	<i>Buteo lineatus</i> NB
Grebe, pied-billed	<i>Podilymbus podiceps</i> *	Night-heron, black-crowned	<i>Nycticorax nycticorax</i> BR
Harrier, northern	<i>Circus cyaneus</i> BR	Night-heron, yellow-crowned	<i>Nyctanassa violaceus</i>
Hawk, red-shouldered	<i>Buteo lineatus</i> BR	Knot, red	<i>Calidris canutus</i> BR
Owl, short-eared	<i>Asio flammeus</i> BR	Osprey	<i>Pandion haliaeetus</i> BR
Plover, piping	<i>Charadrius melodus</i> **	Owl, barred	<i>Strix varia</i>
Sandpiper, upland	<i>Batramia longicauda</i>	Owl, long-eared	<i>Asio otus</i>
Shrike, loggerhead	<i>Lanius ludovicianus</i>	Rail, black	<i>Laterallus jamaicensis</i>
Skimmer, black	<i>Rynchops niger</i> BR	Skimmer, black	<i>Rynchops niger</i> NB
Sparrow, Henslow's	<i>Ammodramus henslowii</i>	Sparrow, grasshopper	<i>Ammodramus savannarum</i> BR
Sparrow, vesper	<i>Pooecetes gramineus</i> BR	Sparrow, Savannah	<i>Passerculus sandwichensis</i> BR
Tern, least	<i>Sterna antillarum</i>	Sparrow, vesper	<i>Pooecetes gramineus</i> NB
Tern, roseate	<i>Sterna dougallii</i> **	Woodpecker, red-headed	<i>Melanerpes erythrocephalus</i>
Wren, sedge	<i>Cistothorus platensis</i>		
**Federally endangered or threatened. BR - Breeding population only; NB - non-breeding population only			

REPTILES			
Endangered		Threatened	
Rattlesnake, timber	<i>Crotalus h. horridus</i>	Snake, northern pine	<i>Pituophis m. melanoleucus</i>
Snake, corn	<i>Elaphe g. guttata</i>	Turtle, Atlantic green	<i>Chelonia mydas</i> **
Snake, queen	<i>Regina septemvittata</i>	Turtle, wood	<i>Clemmys insculpta</i>
Turtle, bog	<i>Clemmys muhlenbergii</i> **		
Atlantic hawksbill	<i>Eretmochelys imbricata</i> **		
Atlantic leatherback	<i>Dermochelys coriacea</i> **		
Atlantic loggerhead	<i>Caretta caretta</i> **		
Atlantic Ridley	<i>Lepidochelys kempii</i> **		
**Federally endangered or threatened			

State of New Jersey
Threatened and Endangered Species

AMPHIBIANS			
Endangered		Threatened	
Salamander, blue-spotted	<i>Ambystoma laterale</i>	Salamander, eastern mud	<i>Pseudotriton montanus</i>
Salamander, eastern tiger	<i>Ambystoma tigrinum</i>	Salamander, long-tailed	<i>Eurycea longicauda</i>
Treefrog, southern gray	<i>Hyla chrysocelis</i>	Treefrog, pine barrens	<i>Hyla andersonii</i>

INVERTEBRATES			
Endangered		Threatened	
Beetle, American burying	<i>Nicrophorus mericanus</i> **	Elfin, frosted (butterfly)	<i>Callophrys irus</i>
Beetle, northeastern beach tiger	<i>Cincindela d. dorsalis</i> **	Floater, triangle (mussel)	<i>Alasmidonta undulata</i>
Copper, bronze	<i>Lycaena hyllus</i>	Fritillary, silver-bordered (butterfly)	<i>Bolaria selene myrina</i>
Floater, brook (mussel)	<i>Alasmidonta varicosa</i>	Lampmussel, eastern (mussel)	<i>Lampsilis radiata</i>
Floater, green (mussel)	<i>Lasmigona subviridis</i>	Lampmussel, yellow (mussel)	<i>Lampsilis cariosa</i>
Satyr, Mitchell's (butterfly)	<i>Neonympha m. mitchellii</i> **	Mucket, tidewater (mussel)	<i>Leptodea ochracea</i>
Skipper, arogos (butterfly)	<i>Atrytone arogos arogos</i>	Pondmussel, eastern (mussel)	<i>Ligumia nasuta</i>
Skipper, Appalachian grizzled (butterfly)	<i>Pyrgus wyandot</i>	White, checkered (butterfly)	<i>Pontia protodice</i>
Wedgemussel, dwarf	<i>Alasmidonta heterodon</i> **		

**Federally endangered or threatened.

MAMMALS		FISH	
Endangered		Endangered	
Bat, Indiana	<i>Myotis sodalis</i> **	Sturgeon, shortnose	<i>Acipenser brevirostrum</i> **
Bobcat	<i>Lynx rufus</i>		
Whale, black right	<i>Balaena glacialis</i> **		
Whale, blue	<i>Balaenoptera musculus</i> **		
Whale, fin	<i>Balaenoptera physalus</i> **		
Whale, humpback	<i>Megaptera novaeangliae</i> **		
Whale, sei	<i>Balaenoptera borealis</i> **		
Whale, sperm	<i>Physeter macrocephalus</i> **		
Woodrat, Allegheny	<i>Neotoma floridana magister</i>		

**Federally endangered or threatened.

KCS-NJ County - Municipality Listing (2001 Edition)

County and Municipality: CUMBERLAND MILLVILLE CITY

County: CUMBERLAND
Municipality: MILLVILLE CITY

A SITES WITH ON-SITE SOURCE(S) OF CONTAMINATION

Site Name Contact	Case Number	Site Address Case Status	Status Date	Site Identifier Control/Remedial Action Type
1211 HIGH STREET BUST	0008246	1211 HIGH ST ACTIVE	- 7/23/99	NJL800503948
306 EAST OAK STREET BFO-S	000221152138	306 E OAK ST ACTIVE	- 11/28/00	NJL800551772
AIRCRAFT PAINTING COMPANY BFO-S	921154	BEACON AVE PENDING	- 12/8/92	NJD096854229
AIRWORK CORPORATION BEECRA	E85529	101 BOGDEN BLVD ACTIVE	- 8/1/91	NJD000574491
BFO-S	950225085051	ACTIVE	- 4/17/95	
BEECRA	E97254	ACTIVE	- 5/20/98	
BEECRA	E98602	ACTIVE	- 2/23/99	
AMERICAN NATIONAL CAN COMPANY BEECRA	E85329	328 TO 330 2ND ST ACTIVE	- 6/28/90	NJD000820167
BEECRA	E88C54	ACTIVE	- 6/28/90	
BFMCR	NJD047315908	ACTIVE	- 6/23/93	
BURCHAM TRUCKING SERVICE BFO-S	9006271549	2735 2ND ST S ACTIVE	- 9/10/99	NJL000050260
CARTER CHEVROLET BUST	0095736	1501 2ND ST N ACTIVE	- 5/24/94	NJD043291772
COASTAL SERVICE STATION MILLVILLE CITY BUST	0011819	HIGH & SPRUCE STS ACTIVE	- 9/15/92	NJL600007819
DELSEA PARKER CORPORATION BFO-S	990108013257	724 ORANGE ST ACTIVE	- 2/2/99	NJL000037473
EAST MAIN STREET & WADE BOULEVARD BUST	0104249	MAIN ST E & WADE BLVD ACTIVE	- 7/2/91	NJL600065460
GARDEN STATE HIGHWAY PRODUCTS BFO-CA	960264	221 FOWSER RD (AKA 2 FOWSER RD) PENDING	- 2/20/96	NJL800142689
BFO-S	960531154401	ACTIVE	- 7/26/96	
HESS SERVICE STATION MILLVILLE CITY BUST	0032140	2ND & MCNEAL STS ACTIVE	- 3/31/89	NJD986577278
HOLLY CITY GULF BUST	0098454	1019 S 2ND ST ACTIVE	- 3/13/97	NJL800204729

KCS-NJ County - Municipality Listing (2001 Edition)

County and Municipality: CUMBERLAND MILLVILLE CITY

A SITES WITH ON-SITE SOURCE(S) OF CONTAMINATION

Site Name Contact	Case Number	Site Address Case Status	- Status Date	Site Identifier Control/Remedial Action Type
INDYG CORPORATION BFO-S	981224053011	1016 COLUMBIA AVE ACTIVE	- 2/8/99	NJL800458689
LAWSEN MARDON WHEATON MOLDING BCM	NJL800298994	625 SHARP ST ACTIVE	- 1/8/98	NJL800298994
LAWSON MARDON WHEATON INCORPORATED BEECRA	E98279	1200 N 10TH ST ACTIVE	- 7/13/98	NJL500048004
MILLVILLE AIRPORT BUILDING 9 BFO-S	981211094220	PETERSON ST ACTIVE	- 1/22/99	NJL800439226
MILLVILLE CITY SOLID WASTE DISPOSAL AREA BFO-CA	9304106	CEDARVILLE RD PENDING	- 6/3/93	NJL000043992
MILLVILLE COAL GAS (SJG) BCM	NJD981084692	1211 N 2ND ST ACTIVE	- 7/11/94	NJD981084692
MILLVILLE LAUNDERERS & DRY CLEANERS BFO-CA	951050	26 W MCNEAL ST PENDING	- 10/16/95	NJD011446465
MULBERRY STREET CHURCH BFO-S	990301140941	14 MULBERRY ST ACTIVE	- 4/16/99	NJL800474926
NASCOLITE CORPORATION BSM	M079	DORIS AVE ACTIVE	- 11/15/84	NJD002362705
OTTOS BAR BFO-IN	NJL800057002-001	MAIN ST ACTIVE	- 5/11/94	NJL800057002
PEPE TOYOTA & LINCOLN MERCURY BFO-S	940727170143	1915 TO 1935 N 2ND ST ACTIVE	- 7/27/94	NJL600120067
R M BACON SCHOOL BFO-IN	931015153654	501 3RD ST S ACTIVE	- 10/15/93	NJL600100648
SICO COMPANY BUST	0104375	2110 RTE 47 (DELSEA DR) ACTIVE	- 1/18/93	NJD986611143
SPINELLI TRUCKING BUST	0307893	WADE BLVE ACTIVE	- 9/3/96	NJL800192601
TEXACO SERVICE STATION MILLVILLE CITY BUST	0074559	2225 S DELSEA DR ACTIVE	- 11/25/88	NJD986580421
TEXACO SERVICE STATION MILLVILLE CITY BUST	970313155722	RTE 49 & SPRUCE ST ACTIVE	- 5/15/97	NJL600197248
US POSTAL SERVICE BUST	920806	302 HIGH ST N PENDING	- 5/25/99	NJ8180000137

KCS-NJ County - Municipality Listing (2001 Edition)

County and Municipality: CUMBERLAND MILLVILLE CITY

A SITES WITH ON-SITE SOURCE(S) OF CONTAMINATION

Site Name Contact	Case Number	Site Address Case Status	- Status Date	Site Identifier Control/Remedial Action Type
WESTERN SCHOOL BFO-IN	0160562	301 HOWARD ST ACTIVE	- 10/4/94	NJL600239982
WHEATON INDUSTRIES INCORPORATED BCM	NJD986566834	3RD & G STS ACTIVE	- 6/1/94	NJD986566834

32 SITES WITH ON-SITE SOURCE(S) OF CONTAMINATION IN MILLVILLE CITY

B SITES WITH UNKNOWN SOURCE(S) OF CONTAMINATION

Site Name Contact	Case Number	Site Address Case Status	- Status Date	Site Identifier Control/Remedial Action Type
MILLVILLE CITY WD AIRPORT WELL 3 BFO-CA	920110-I	BOGDEN BLVD & MILLVILLE AIRPORT PENDING	- 5/22/93	NJL000032821

1 SITES WITH UNKNOWN SOURCE(S) OF CONTAMINATION IN MILLVILLE CITY

C SITES WITH CLOSED CASE(S) WITH RESTRICTIONS

Site Name Contact	Case Number	Site Address Case Status	- Status Date	Site Identifier Control/Remedial Action Type
CONRAIL FACILITY MILLVILLE BFO-S	85062703	LADOW AVE NFA-A	- 11/2/98	NJD000691998 Limited Restricted
KANE BROTHERS SCRAP IRON & METAL CO INC BFO-S	950823100526	100 TO 120 BUCK ST NFA	- 10/30/96	NJD011446028 Limited Restricted
MAUL TECHNOLOGY COMPANY BEECRA BEECRA	E86416 E85709	111 15TH ST S NFA-E NFA-E	- 6/2/98 - 6/2/98	NJD006415186 CEA CEA
MILLVILLE CITY RESCUE SQUAD BUST	0263928	COLUMBIA & BRANDIFF AVES NFA-A	- 8/21/97	NJL600235733 Restricted
PEPE OLDSMOBILE PONTIAC GMC TRUCK BUST	0129666M	220 S 2ND ST NFA	- 11/5/93	NJD982795916 CEA
WEST COMPANY BEECRA	E91058	10TH & G STS NFA-E	- 12/23/97	NJD002331049 Restricted

6 SITES WITH CLOSED CASE(S) WITH RESTRICTIONS IN MILLVILLE CITY