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# MASTER PLAN of the TOWNSHIP OF DEPTFORD

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*First Flight in America*



**Planning Board  
Deptford, NJ**

**November 20, 2007**

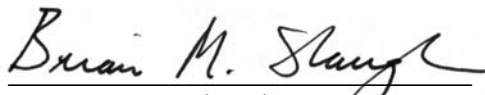
# *Master Plan*

Township of Deptford  
County of Gloucester

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

November 20, 2007

*Prepared By:*



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## Introduction to the Master Plan

Deptford Township is located in northern Gloucester County, New Jersey, about six miles from the center of Philadelphia and ninety miles from New York City. The municipality contains 17.5 square miles and has a population exceeding 30,000 people.

### BRIEF HISTORY

The Township of Deptford dates from the earliest days of English rule over the colonies after Dutch and Swedish claims to the land were eliminated, sometimes by force. New Jersey was the province of James, the Duke of York who was given the land by his brother, King Charles II, in 1664. The Duke of York in turn rewarded two of his loyal courtiers, Sir George Cateret and John, Lord Berkeley, with East and West New Jersey, respectively. Lord Berkeley found himself in financial difficulties and sold West New Jersey to two Quakers in 1673. The part occupied by modern Deptford Township was shortly owned by Edward Byllynge. Byllynge's land was divided into smaller shares of about 20,000 acres each. Byllynge, along with a group of trustees who marketed the shares, established a common document promising religious freedom, representative government, and fair taxation. These provisions were attractive to a group of Irish Quakers who ended up being the first legal settlers in West New Jersey in 1681, a year before William Penn chartered Pennsylvania. Deptford was established in 1695 as a township under the Crown when it was known as Bethlehem. The Township was about 106 square miles when first established. Deptford was formally incorporated on February 21, 1798 by an act of the New Jersey legislature. Woodbury, Westville, Washington, Woodbury Heights, Wenonah and West Deptford at one time were part of Deptford.



Deptford was the landing site of the first hot air balloon flight in North America in January 9, 1793 undertaken by Jean-Pierre Blanchard. The ascent from Philadelphia was

witnessed by then President George Washington, as well as future presidents John Adams, Thomas Jefferson, James Madison, and James Monroe. The landing site is believed to be located next to Big Timber Creek, north of Clements Bridge Road.

The demand for wood for construction and industrial heating from Philadelphia led to felling of forests in Deptford in Colonial times. This wood was floated down the Big Timber Creek and led to the stream's name used today. The forests were also cut to make charcoal used in ironwork, which burned with a more consistent and hotter flame. As the original forest declined and the land was cleared, Deptford became a farming community on the outskirts of Woodbury. A railroad line was established by 1865 in Woodbury that gave more consistent access to markets for agricultural products. The opening of the Walt Whitman Bridge in 1957 and the subsequent construction of Rt. 42 in 1957-59 brought a more direct route to Philadelphia and opened the Township to suburban development. Suburbanizing pressure accelerated with the opening of the Deptford Mall in 1975 and its subsequent retail development that continues to this day.

#### **MASTER PLAN PURPOSE**

The Master Plan is intended to provide a set of policies for Deptford Township that will give guidance to public officials and private citizens on decisions and regulations that apply to the land within the Township's borders. The responsibility for developing the Master Plan lies with the Deptford Planning Board with its authority derived from the planning laws enacted by the New Jersey Legislature.

The structure of planning law in New Jersey requires that zoning and other land use regulations be in substantial consistency with the policies articulated in the Master Plan. Since modern planning law was first established in 1976, the link between a Master Plan and subsequent municipal land use regulations has strengthened in response to environmental and affordable housing law, court cases, and the original adoption of the State Development and Redevelopment Plan in 1992.

This Master Plan is concerned primarily with the physical and natural environment of Deptford as it affects the use of land. The physical manifestations of land use include buildings, roads and utilities. The Master Plan only secondarily concerns operational or programmatic activities. In this document operational issues are found primarily in the Community Facilities Element and in the Open Space and Recreation Element.

The Master Plan was developed under the assumption that the general trends of society and the economy will continue without substantial or long-term disruption. The planning horizon for the Master Plan is twenty years though its policies, assumptions and recommendations will be reexamined within the statutory timetable of six years.

## Organization of the Master Plan

The Master Plan is organized into a set of chapters, referred to as either statements or elements, that are concerned with specific topics. Within each element, background information is presented that describes existing conditions. Where appropriate, projections of trends are analyzed. This leads to a discussion of issues discovered in the analysis. From the issues, recommendations are then made for implementation. This Master Plan includes the following statements and elements:

### GOALS AND OBJECTIVES STATEMENT

The Goals and Objectives Statement is a set of principles, assumptions and standards that form the basis for the substance of the Master Plan. Four main goals are established for the Master Plan, including:

- Protecting natural resources;
- Managing present conditions;
- Envisioning Deptford's future; and
- Improving Deptford's environs.

Within each main goal, objectives are established to provide measures whereby it may be determined in the future that the goal has been reached.

### CONSERVATION ELEMENT

Within the Conservation Element, the natural features of Deptford are listed and described. This environmental analysis provides information on the natural processes that affect the use of land. Criteria for judging the acquisition of land for conservation purposes are established in the element. The concept of greenways is also introduced. The organizing concept of greenways is later used in the identification of potential open space parcels along stream corridors in the Open Space and Recreation Element. The environmental analysis in the Conservation Element also provides support for the assignment of residential densities and non-residential intensity in the Land Use Plan Element.

### OPEN SPACE AND RECREATION PLAN ELEMENT

The Open Space and Recreation Plan Element identifies potential land acquisitions for community open space or the preservation of lands through conservation easements along stream corridors and other significant lands. The element includes an inventory of existing land for open space purposes, including public lands, lands owned by a natural

lands trust and by homeowner's associations. Public active recreation facilities are surveyed along with the number of participants in youth sports organizations that make up the large majority of active recreation programs in the Township. The Township's recreation programs are discussed and compared in the element with the facilities available for hosting them.

### **COMMUNITY FACILITIES ELEMENT**

Community facilities include government buildings, the municipal library, recreational facilities, educational facilities, religious institutions and similar uses that provide services or house programs used by various segments of the public. School enrollment projections are also included in order to plan for orderly improvements under the jurisdiction of the Deptford Board of Education.

### **CIRCULATION ELEMENT**

The Circulation Element discusses the means of moving people and goods in Deptford. It describes the network of roads and classifies them according to standard methods. Problem areas in the road network are identified for potential improvements and several new road segments are proposed. In addition to the street network, the Township's bicycle path and pedestrian system is discussed. Public transportation routes are described and the potential land use effects of an extension of the PATCO High Speed Line system to Gloucester County are acknowledged. The element includes a section on the design of streets with particular attention to traffic calming measures to address motor vehicle speeding and protect pedestrians.

### **LAND USE PLAN ELEMENT**

The Land Use Plan Element synthesizes the information presented in the background studies of the underlying trends and changes in Deptford. Existing land use is classified and mapped in the element. Population and employment trends are explored for the foreseeable future. Major land use issues are identified and discussed. Based on the other elements and statements of the document, land uses are assigned to specific geographic locations at differing densities of development.

### **COMMUNITY DESIGN SUB-ELEMENT**

Functioning as a part of the Land Use Plan Element, the Community Design Sub-element concentrates on the appearance of buildings and streets in Deptford. The focus of the sub-element is the improvement of commercial development and the streetscape, or the attractiveness of the public's view from the street. Streetscape elements include landscaping, paving materials, and street furniture.

**STATEMENT OF PLANNING CONSISTENCY**

A Statement of Planning Consistency with other planning documents in the state and region examines the land development policies of the municipalities surrounding Deptford. It compares the type of use and density of development for adjacent land areas to determine if the policies in the Master Plan create incompatibilities with the land uses in Westville, Bellmawr, Runnemede, Gloucester Township, Washington Township, Mantua, Wenonah, Woodbury Heights, Woodbury and West Deptford. The Master Plan is also compared with the development policies of Gloucester County. Lastly, the Master Plan is analyzed for consistency with the policies of the State Development and Redevelopment Plan.

**HOUSING ELEMENT**

The Township's response to the obligation for affordable housing is on a different planning cycle than the remainder of the Master Plan. It follows the time periods for substantive certification by the NJ Council on Affordable Housing (COAH). The Township's housing element is operating on a ten year period from 2004 through 2013 concurrent with the 'third round' rules adopted by COAH, which guide the development of affordable housing. Two third round housing elements have been produced, one adopted on July 25, 2005 and the second on November 9, 2006. It is anticipated that the second plan will be revised to create a third housing plan in accordance with new rules by COAH that are anticipated to be released by the end of 2007. Therefore, the Housing Element is included by reference but is not otherwise adopted within this Master Plan.

**RECYCLING ELEMENT**

Deptford Township's policy on recycling is embedded in its Recycling Ordinance (codified as Chapter 18-2) that sets forth the types of materials recycled, regulates the disposal of recycled material, and establishes a penalty for failure to comply with these provisions. The Recycling Ordinance is hereby adopted as the Recycling Element of the Master Plan.

## Goals and Objectives

### INTRODUCTION

The Goals and Objectives Statement is the basis for the Master Plan by providing a framework for the analysis and conclusions of the various elements and statements that comprise this work. The goals arose from a series of workshops and public meetings where citizens and officials expressed their opinions about the growth and direction of the Township in the use of land and its physical development.

### GOALS OF THE MASTER PLAN

The goals and objectives are intended as a guide to enhance the quality of life in the Township for its residents, business owners and visitors. The Master Plan has four major strategies for land use: protecting natural resources, managing present conditions, envisioning Deptford's future, and improving Deptford's environs. Each goal is followed by a set of sub-goals, or objectives, by which progress in the implementation of this document may be measured. The objectives are not all inclusive as each individual element of this Plan may also have recommendations pertaining solely to its subject. No ranking or ordering of the objectives should be inferred.

#### *GOAL: PROTECTING NATURAL RESOURCES*

*Preserve the natural heritage of Deptford*

#### *OBJECTIVES*

- Promote the preservation of land for stream corridors, wetlands and flood plains to maintain or improve the quality of air and water.
- Strive to preserve the natural, scenic, historic, and aesthetic aspects of the community and its environment as the municipality nears build-out.
- Match zoning densities to the level of developable land available to avoid utilizing environmentally sensitive lands for development.
- Revise development standards to retain more woodland after construction.
- Build a pedestrian and bicycle network to lessen private automobile use.

*GOAL: MANAGING PRESENT CONDITIONS*

*Maintain the necessary services and capacities to satisfy the needs of present residents and to allow for their well-planned expansion to meet future needs.*

*OBJECTIVES*

- Provide for the efficient movement of people and goods within and through Deptford to support the local economy.
- Maintain streets, parks, police and fire protection, recreational programs and other services sufficient to meet the needs of Deptford residents and business owners.
- Ensure an adequate capital improvement program to maintain existing infrastructure and replace or modernize obsolete facilities.
- Promote conservation of water and other natural resources.
- Provide for continuity of services under emergency conditions.
- Maintain a fair share housing plan and associated development regulations that meet the municipality's state mandate for affordable housing.
- Fine tune residential zoning to be more consistent with the development patterns of established neighborhoods, while maintaining overall residential densities.
- Retain sufficient large lot residential zoning for executive housing.

*GOAL: ENVISIONING DEPTFORD'S FUTURE*

*Build on Deptford's existing assets to create a community with a stronger connections and well balanced amenities.*

*OBJECTIVES*

- Acquire sufficient open space based on the projected population for

leisure and recreational purposes with a particular emphasis on community-wide facilities.

- Target resources towards neighborhood preservation as the housing stock ages.
- Reexamine large scale commercial zones and determine the feasibility of their evolution to mixed-use districts.
- Ensure that as the Township builds-out, that its balance of open space, residential, institutional, industrial and commercial uses will provide sufficient revenue for the provision of public services at a level that meets the needs of its people.
- Facilitate access to a variety of housing to meet the income, aesthetic and personal requirements of the Township's future population. Develop new standards for residential development intended for an aging population.
- Improve east west travel within the municipality through the construction of new road segments.
- Utilize redevelopment statutes sparingly and only within the context of the overall goals and objectives of this document.
- Foster planning with adjoining municipalities to achieve common objectives where problems transcend municipal boundaries.

*GOAL: IMPROVING DEPTFORD'S ENVIRONS*

*Improve the image of Deptford as an attractive, thriving and productive community.*

*OBJECTIVES*

- Establish design standards based on the Community Design sub-element to improve the character of development in Deptford.
- Add attractive signage directing motorists to regional shopping, parking and community buildings.
- Actively foster the planting and cultivation of trees along streets, other public lands and on private property.

- Develop an agreement with other levels of government that allows the installation of street trees on roadways under their jurisdiction.
- Balance the need for people and goods to travel through Deptford with the desire to preserve positive visual characteristics along roads and other transportation systems.
- Replicate the streetscape improvements found on Clements Bridge Road adjacent to the Deptford Mall in other similar and appropriate locations.

These Goals and Objectives pertain to the Master Plan as a whole. Within individual elements, additional recommendations for action and methods of implementation are made specific to their subject.

## Conservation Element

### INTRODUCTION

The Conservation Element of the Master Plan addresses the issues of the preservation and management of environmentally sensitive lands. In this context, environmentally sensitive lands include stream corridors, open water, freshwater wetlands, flood plains, soils with high water tables, steep slopes, aquifer recharge lands and areas with significant vegetative cover, including the urban forest resources of the Township. The preservation of these natural resources constitutes the main objective of the Township's conservation efforts.

This element describes the natural environment, identifies environmentally sensitive lands, and recommends methods of land preservation.<sup>1</sup> In the overall structure of the Master Plan, the Conservation Element is closely allied with the Open Space and Recreation Plan Element. The Master Plan has been deliberately structured to begin with the lands that are to be retained for conservation and other open space purposes. Once these are described and mapped, land for development purposes is discussed in subsequent elements.

### 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 for land use policy relates to the supply of groundwater and the disposal of effluent, but it also affects the formation of soils that in turn support buildings and other structures.

Groundwater use from private wells for drinking purposes and the disposal of effluent in septic systems (onsite disposal) is limited and declining as the Township's Municipal Utilities Authority (MUA) extends mains and interceptors. Deptford has had a consistent policy of extending public water and public sewer within its boundaries to accommodate growth and protect the public health. This policy continues today through the MUA. Towards that end, the Township is entirely within a wastewater management district that is the legal structure for the extension of these public services. Accordingly, since the Township has a well-developed water and sanitary sewer infrastructure, this section focuses on the effect of geology on soil formation instead.

There are two basic types of geologic formations, surficial and bedrock. In Deptford

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<sup>1</sup> - Mapping for this element was provided by Civil Solutions of Hammonton, New Jersey.

Township, only surficial geology is of interest in land planning since bedrock is at a significant depth – too deep to play a part in human activities at the surface. Surficial formations in Deptford consist of unconsolidated sands, silts and clays that formed as layers under the ocean. The rise and fall of the oceans, corresponding to glacial periods, successively inundated the land. Erosion from ancient streams that cut through these previously deposited materials established distinct geological layers.

Deptford Township is located within the Inner Coastal Plain, one of the five major geologic provinces in the State. The land in the Inner Coastal Plain represents deposits made during the Cretaceous period (63 to 125 million years ago). Sediments in the Coastal Plain thicken in a southeastward trend, from approximately 500 feet near Atlantic City to more than 40,000 feet in the Baltimore Canyon Trough out in the Atlantic Ocean. Throughout the Coastal Plan, layers of sediment outcrop at the surface in irregular bands, which trend northeast to southwest.<sup>2</sup>

In the Township, seven geologic formations have been identified. These include the Mount Laurel Formation, Wenonah Formation, Englishtown Formation, Woodbury Formation, Navesink Formation, Hornerstown Formation, and Kirkwood Formation. The map entitled, “Geology” depicts the spatial distribution of the geologic formations in Deptford.

### DESCRIPTION OF FORMATIONS<sup>3</sup>

The following are descriptions of the seven formations in Deptford with the geologic era identified by parentheses.

*Englishtown Formation* - (Late Cretaceous, early Campanian) – Ranging from 20 to 150 feet in thickness, the Englishtown Formation consists of clay, silt and sand. The formation displays lamination, thin- to thick- bedding, and cross stratification. While fossils are scarce within the unit, lignite beach-type sand deposits are present.

*Hornerstown Formation* - (Danian, early Paleocene) – The Hornerstown consists of green glauconitic quartz sand, with cretaceous fossils reworked into the upward basal units. Common fossils include gastropods, pelecypods, and other vertebrate bone material. A drastic change in fauna at the base of the Formation exists, which reflects both a mass extinction and a hiatus in deposition.

*Kirkwood Formation* - (Middle Miocene) – Also known as the Lower Member, the Kirkwood Formation consists of a clayey to silty mudrock, massive sand, and thin pebble

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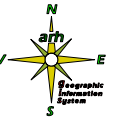
<sup>2</sup> - New Jersey Geological Survey, [www.state.nj.us/dep/njgs](http://www.state.nj.us/dep/njgs)

<sup>3</sup> - Source: U.S. Geological Survey, New York Region, [3dparks.wr.usgs.gov/nyc](http://3dparks.wr.usgs.gov/nyc)

# GEOLOGY

## Deptford Township

### Gloucester County, New Jersey

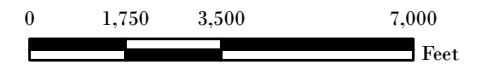
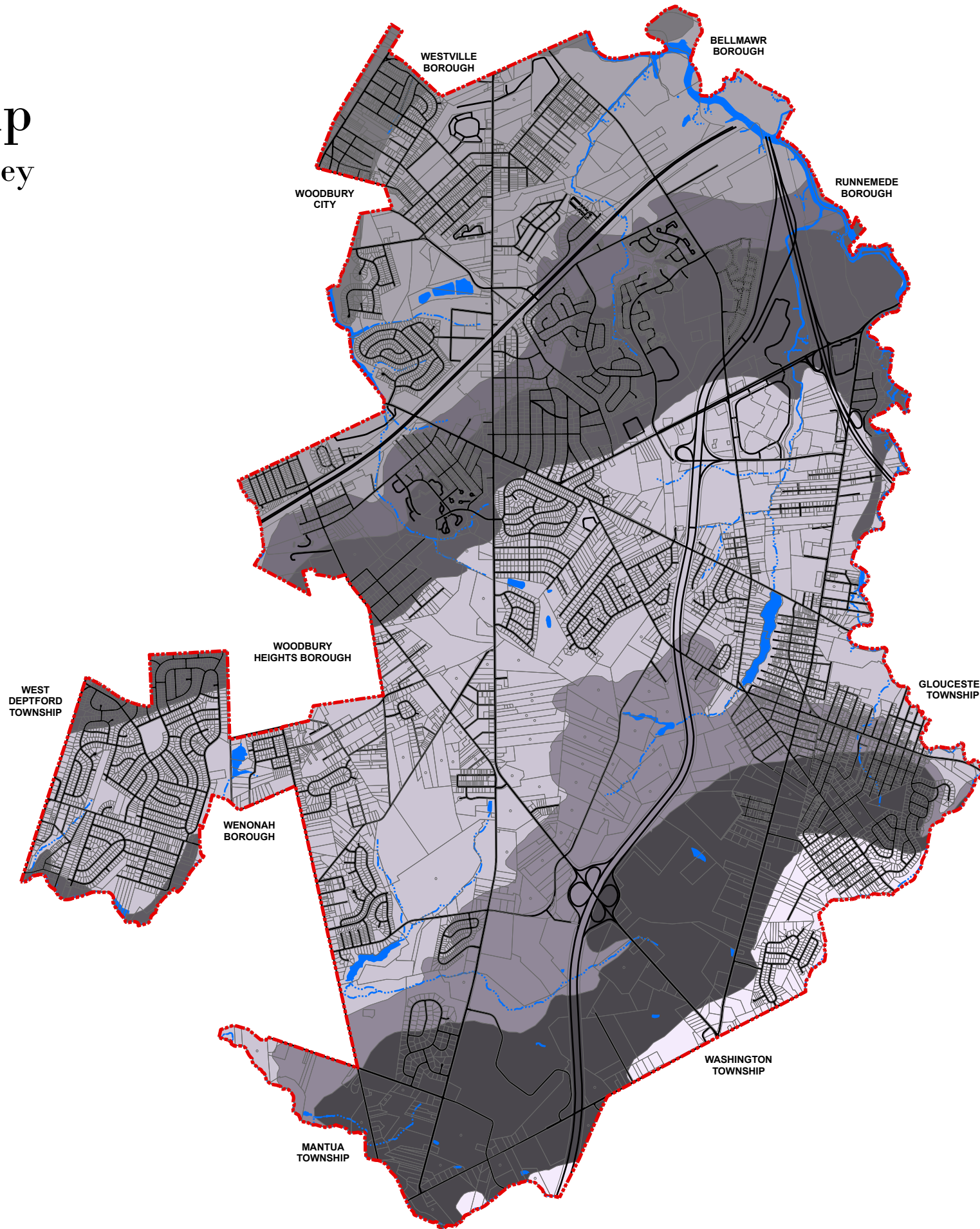


#### Legend

- Municipal Limit
- Parcel Limit
- Roadways
- Streams
- Lakes

#### Soils (as mapped by NRCS)

- Englishtown Formation
- Hornerstown Formation
- Lower Member
- Marshalltown Formation
- Mt. Laurel Formation
- Navesink Formation
- Wenonah Formation
- Woodbury Formation



Note: CS #91-00152  
 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.  
 April 2007

lenses deposited in a sub-littoral to near-shore environments. The Kirkwood contains fossils, as evidenced by the presence of Calvert Cliff's fauna in beach pebbles.

The base of the Kirkwood is located at the top of the older Tertiary era units, and its thickness ranges locally between 100 and 300 feet. In the Woodbury area, the Kirkwood unconformably overlies the Vincentown, Hornertown and Navesink formations.<sup>4</sup> This formation is an important aquifer in the region.

*Mt. Laurel Formation* - (late Campanian, Cretaceous) - The Mt. Laurel is very similar in appearance and composition to the underlying Wenonah Formation. In fact, the boundary between the underlying Wenonah Formation is undifferentiated in most areas east of the coastal area. However, the Mt. Laurel Formation contains more abundant micaceous quartz and glauconitic sand, which is locally cross-bedded. This formation is an important aquifer in the region.

*Navesink Formation* - (early Maastrichtian, Cretaceous) - The Navesink consists of peloidal glauconitic marl and sand that is locally cross-bedded. The formation is locally rich in clay and abundant in fossils. Concentrated along horizons, the fossils are located in the lower and middle portions of the unit, and may include mollusk fossils. The presence of this fauna suggests a marine shelf environment.

*Wenonah Formation* - (late Campanian, Cretaceous) – Ranging in thickness from 70 to 100 feet, the Wenonah consists of micaceous quartz and silt, and is rich in pyrite and organic material, such as silt-sized lignite fragments. The presence of shark teeth, fossil shell molds, and bone fragments of fish, reptiles and swimming dinosaurs is common near the top of the formation. The variation in the sedimentation patterns reflects the impact of storms on the depositional patterns in shallow shelf environments. This formation is an important aquifer in the region.

*Woodbury Formation* - (early Campanian, Cretaceous) – Woodbury Clay has minor thin layers of very fine quartz sand. Dark gray and black were unweathered, yellowish brown to brown were weathered. Layers of up to 40 feet thick are found. The clay is micaceous with some pyrite and carbonaceous material. The formation contains traces of glauconite. This formation grades down into the Merchantville Formation.

In addition to providing the parent material from which soil is created through natural processes, these strata also form underground water holding reservoirs called aquifers. Aquifers are tapped by wells to provide drinking water, irrigation, and industrial processes. In Deptford, ground water is pumped and treated from seven municipal wells for household, commercial and industrial consumption.

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<sup>4</sup> - Meaning that this upper layer shows discontinuities with the underlying strata that are not well understood.

**SOILS**

The parent geologic formations in the previous section play a major role in the formation of different soil types. Soils are developed from mineral and organic matter and generally contain an active population of organisms. Soils reflect the parent material from which they developed and changes imposed by their surrounding environment. Each soil has specific characteristics that impact the type of landforms created, slopes, drainage and vegetation supported. Soils serve as the basis for determining suitable land uses for a particular area.

Soils are made up of varying amounts of clay, silt, sand, and organic matter. The components of soil vary in size, with clay particles being the smallest in diameter and sand particles being largest. A number of the soil classifications have similar characteristics and it is usually the lower horizon of the subsoil that provides the distinguishing series. The general soil series are depicted on the Soils map found on the following page and are described generally in this section.

**Description of Soils<sup>5</sup>**

*Buddtown* – This series consists of fine sandy loams and urban land complex (land developed so that the underlying soil is obscured). Mixed oaks, yellow poplar, sweetgum, red maple, beech, and American holly are the typical trees found in this soil. Understory species include high bush blueberry, spicebush, viburnum, and greenbriar. The slopes range from zero to five percent.

*Colemantown* – This series features loamy soils that are prone to flooding. The presence of these soils is an indicator of freshwater wetlands. Slopes for this soil family range from zero to two percent. Most areas have been cleared and used for crop production. The most common agricultural products are hay, pasture, turf, corn, and soybeans. Wooded areas are dominated by sweetgum, red maple, white oak, American holly, and yellow-poplar, in that order.

*Collington* – This family includes well-drained loamy soils that contain moderate amounts of glauconite (a type of iron rich mica). They have higher glauconite content than Freehold soils, but a lower level than Marlton soils. Native vegetation is a hardwood forest that consists of red oak, yellow poplar, hickory, ash and beech and an understory of viburnum.

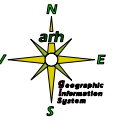
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<sup>5</sup> - National Resources Conservation Services. "NRCS Soils Survey." <http://soils.usda.gov>

# SOILS

## Deptford Township

### Gloucester County, New Jersey

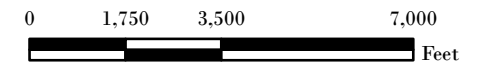
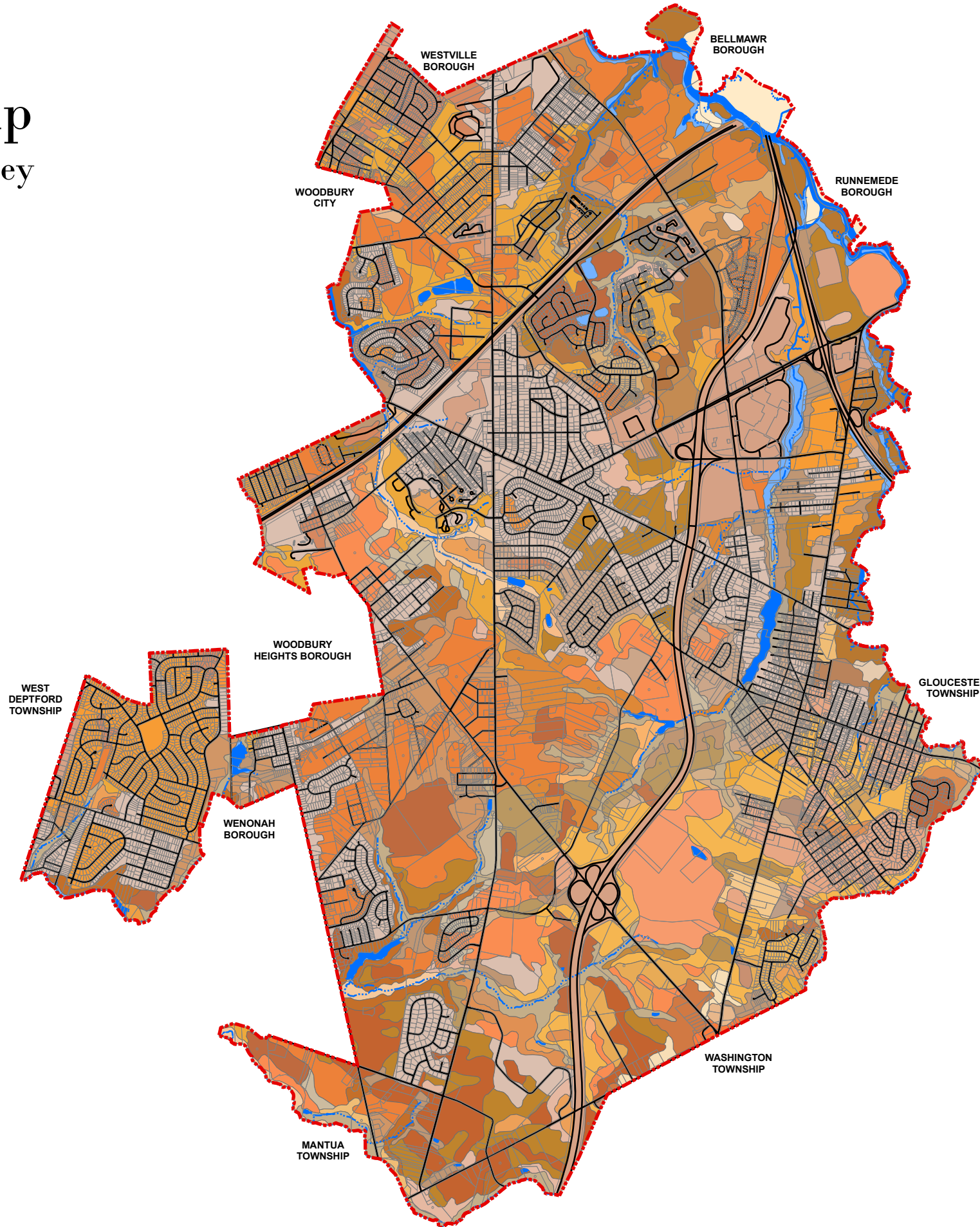


#### Legend

- Municipal Limit
- Parcel Limit
- Roadways
- Streams
- Lakes

#### Soils (as mapped by NRCS)

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April 2007



*Fallsington* – This series consists of nearly level, fine sandy loams that are grayish-colored and distinctly mottled formed from loamy marine and old alluvial sediments. Fallsington soils form in water deposited sediments in low positions, where they receive considerable runoff from higher slopes. Generally, these soils are saturated six to eight months of the year and the water table drops below three feet in the summer, though it may be higher when rains are heavy. Because of the high water table, constraints on development are severe. The presence of Fallsington soils typically serves as an indicator of freshwater wetlands.

*Freehold* – Freehold soils are typically dark grayish-brown, well-drained and sandy. In contrast to other soil types, the soil is low in glauconite. Additionally, Freehold is distinguished by the inclusion of iron among the finer particles, which gives it a reddish cast in the lower horizons. Freehold soils occupy higher elevations and are extremely acidic. The natural vegetation, typically on slopes, consists of red oak, beech, and yellow poplar. Freehold soils generally present few constraints for development.

*Hammonton* – The Hammonton soil is a loamy sediment created by large scale water that is fairly well drained. The soil has a moderately high degree of permeability and is capable of producing fruit, vegetables, row crops, and nursery stock. The native vegetation is mixed hardwood forest, including scattered pitch pine, shortleaf pine, loblolly pine and Virginia pine. The soils are found down slope from Sassafras, Downer and Evesboro soils.

*Manahawkin Muck* – This soil generally has an organic content of less than 18% by volume, but may also include individual layers of mucky peat with a higher organic level, especially at the soil surface. These characteristics give the soil a high water bearing capacity. The presence of this soil is also a strong indicator of wetlands. The Manahawkin Muck is prone to flooding and has low to moderate levels of runoff. The slopes range from zero to sixty percent. Natural vegetation includes mixed hardwood with some shortleaf and Virginia pine.

*Marlton* – This soil family is a very deep sandy loam with slopes that range from two to fifteen percent, though more commonly found with five percent or less slope. It is moderately well drained with slow permeability that results in medium to high runoff. Marlton soils have high levels of glauconite. Soils with high levels of glauconite were called ‘marl’ identified by its distinctive green color and it gave the village of Marlton its name. The native vegetation includes mixed oaks, hickory, sweetgum, yellow poplar, American beech, and red maple. Some southern areas in former agricultural uses have growths of Virginia pine and red cedar.

*Sassafras* – This soil type is a very deep, fine sandy loam with slopes that range from five to forty percent. It is moderately well drained. While the soil has slow permeability, the

runoff value is low to moderate. The native vegetation includes mixed oaks, with some shortleaf and Virginia pine.

*Tinton* – This family of soils consists of a loamy mix of sand, fine sand and loam sand. The slopes range between zero and twenty five percent. The soil is well drained and not prone to flooding. It is classified as having moderate to moderately rapid permeability. Agricultural uses consist mostly of fruit and vegetable production, generally irrigated. The dominant vegetation is white oak, black oak, red oak, and chestnut oak, with scattered Virginia pine. Abandoned fields support Virginia pines in the early stages of secondary succession.

*Udorthents* – This is a general term for soils that have been placed as dredge spoil material, with varying degrees of coarseness found in the soil. The soil, being a man-made material, has no characteristics that can be used to fully describe it. The soil has more variable characteristics because it usually consists of varying amounts of material from the subsoil and substratum of nearby soils. Slopes range from zero to ten percent.

*Westphalia* – The series is comprised of very deep, fine, sandy loam. The soils are well drained and feature slopes ranging from zero to fifty percent. The soil was formed in unconsolidated coastal plain sediments that contained fine and very fine sands. While the soil is capable of sustaining field crops, truck crops and tobacco, its native vegetation is Red, White, and Black Oaks, Hickory, Ash, Locust, Yellow Poplar, Holly and Dogwood.

*Woodstown* – This soil series is comprised of fine loamy mix with slopes fluctuating between zero and thirty percent. The soil is moderately well drained with moderate permeability. The native vegetation is oak and hardwoods with occasional Virginia pines.

#### **WATER QUALITY AND STORM WATER MANAGEMENT**

As noted above, the Municipal Utilities Authority operates seven wells that penetrate into the Potomac-Raritan-Magothy aquifer (from 261 to 355 feet deep). This aquifer is not included as part of the strata that make up the geology of Deptford because no part of it outcrops (rises to or near the surface) in the Township. It is separated from the Englishtown formation by a confining clay layer. Pumping from this aquifer is limited by the state in order to avoid excessive depletion of groundwater. In 2006, about 55% of total water consumption in Deptford came from groundwater. The remaining water came from the Delaware River through the New Jersey American Water Company's Tri-County system. Water consumption in Deptford Township increases by about 40% in the summer compared to the winter. The difference can largely be attributed to the irrigation of landscaping, the filling of swimming pools, and agricultural uses. The Township's water quality meets the standards set by the NJ Department of

Environmental Protection. All wells and the water obtained from the Delaware River tested low in susceptibility for pathogens, nutrients, pesticides, volatile organic compounds and radium. The only item noteworthy was a slightly higher sodium level than desirable found in some tests, but this effect would be negligible compared to the sodium intake in a normal diet.

Protection of water supplies is a very important part of governmental regulation. For example, a gallon of gasoline will render a million gallons of water unfit to drink. Improving the quality of water that percolates into aquifers and enters streams is a critical part of this protection system. Water gets into aquifers through slow migration down through geological layers. Since some strata have high clay content, water can take a very long time to migrate through the layer. The water in the PRM aquifer may have fallen as rain 10,000 years ago. When withdrawal from a well exceeds its replenishment, it is essentially mining a natural resource that was created before civilization reached this area. When aquifers are over pumped, water quality can be diminished. Shallow homeowner wells, which in Deptford tap the Mt-Laurel-Wenonah formation, may be adversely affected by agricultural chemicals and industrial wastes that were applied or dumped on the surface as rain carries the pollution into the aquifer (the deeper municipal wells would not be affected). These effects have resulted in new regulations that seek to ensure that stormwater is properly filtered and given time to seep into the ground to ensure future supplies of water.

Efforts towards conservation of water should continue to be encouraged. For example, drip irrigation for vegetable and small horticultural plants uses less water than spray irrigation.

#### **FRESHWATER WETLANDS**

Jurisdiction for the regulation of freshwater wetlands was transferred from the U.S. Army Corps of Engineers to the New Jersey Department of Environmental Protection on July 1, 1988. Transitional buffer standards were instituted on July 1, 1989. The final transfer from federal to state control of Section 404 permits, pertaining to the federal Clean Water Act, occurred in 1994, thereby completing New Jersey's assumption of wetlands protection. This jurisdictional history still has effects in Deptford where certain long standing development approvals, for example in Locust Grove, may exempt projects from transitional buffer regulations.

Freshwater wetlands are determined by three main factors: 1) the land at least periodically and predominantly supports hydrophytes (a type of vegetation adapted to water saturated soils); 2) the soil substrate is primarily an undrained hydric soil typically characterized by 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 season.<sup>6</sup>

The NJDEP uses the U.S. Fish and Wildlife's classification system, which is based on a definitive study and a nomenclature by Cowardin, et al.<sup>7</sup> The classification tool consists of five systems that encompass a wide variety of wetlands ecologies: Marine, Estuarine, Riverine, Lacustrine, and Palustrine. 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. There are three classifications for freshwater wetlands and deep water habitats (water over two meters in depth). Riverine wetlands, as its name suggests, are characterized as those that are river or stream based. Lacustrine wetlands are based in lakes, reservoirs or large ponds. Palustrine encompasses forested wetlands, marshes, swamps, bogs, and small ponds.<sup>8</sup>

Deptford Township is home to all three types of freshwater wetlands - Riverine, Lacustrine, and Palustrine. 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. The major undisturbed wetland types are described below.

### **Lacustrine**

Lacustrine wetlands are located in topographic depressions. These wetlands are most extensive near lakes, reservoirs and large ponds. The wetlands typically lack trees, shrubs, and persistent emergents with less than 30 percent areal coverage. The wetlands typically extend shoreward from the boundary of the system to a depth of two meters below water or to the maximum extent of non-persistent emergents if these grow deeper than two meters. In Deptford Township, Lacustrine wetlands are located near the Almonesson, Glen, and Stewart Lakes.

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<sup>6</sup> - The three parameter approach to classifying wetlands is from the definition of a wetland by the U.S. Fish and Wildlife Service.

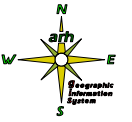
<sup>7</sup> - L. M. Cowardin, V. Carter, F.C. Golet and E.T. La Roe, *Classification of Wetlands and Deep-water Habitats of the United States*, 1979, U. S. Fish and Wildlife Service.

<sup>8</sup> - 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.

# WETLANDS

## Deptford Township

### Gloucester County, New Jersey

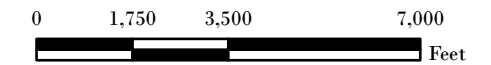


#### Legend

- Municipal Limit
- Parcel Limit
- Roadways
- Streams
- Lakes

#### Wetlands (as mapped by NJDEP)

- Agricultural Wetlands (modified)
- Coniferous Scrub/shrub Wetlands
- Deciduous Scrub/shrub Wetlands
- Deciduous Wooded Wetlands
- Disturbed Wetlands (modified)
- Former Agricultural Wetland (becoming Shrubby)
- Freshwater Tidal Marshes
- Herbaceous Wetlands
- Managed Wetland In Built-up Maintained Rec Area
- Managed Wetland In Maintained Lawn Greenspace
- Mixed Scrub/shrub Wetlands (coniferous Dom.)
- Mixed Scrub/shrub Wetlands (deciduous Dom.)
- Phragmites Dominate Coastal Wetlands
- Phragmites Dominate Interior Wetlands
- Wetland Rights-of-way



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**Riverine**

Riverine wetlands are restricted to non-persistent emergent wetlands, aquatic beds, and un-vegetated shallow water or exposed areas. These wetlands are most extensive in tidal freshwater areas, such as those contained within the Delaware River and its tributaries, and consist of low marsh and high marsh. The low marsh is flooded at least once daily by tides. High marsh areas are flooded less often by tides and may also be classified as Palustrine wetlands. Vegetation characterizing the majority of Riverine tidal marshes is pure and mixed strands of wild rice, spatterdock and arrow arum. In Deptford, Riverine wetlands are located near Big Timber Creek, and its associated tributaries.

**Palustrine**

Palustrine wetlands are the most diverse of the five classifications in terms of the type of vegetation found and the amount of water saturation. Water saturation ranges from permanently flooded to seasonal and temporarily flooded. There are two major Palustrine types of wetlands that occur in Deptford.

**PALUSTRINE EMERGENT** - On the Freshwater Wetlands Map these are identified as Herbaceous and Coniferous Scrub/Shrub Wetlands. They are tidally influenced but are protected behind 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.

**PALUSTRINE FORESTED** - The mapping classifies these wetlands as Deciduous Scrub/Shrub, Deciduous Wooded, Disturbed Wetlands, and Former Agricultural wetlands. This is the most common type of wetland in Deptford Township. Deciduous trees are commonly red maple, sweetgum, black gum (tupelo), and holly. Coniferous trees only include pitch pine, as other evergreens require drier soil. The understory vegetation in forested wetlands typically includes pepperbush, high bush blueberry, swamp azalea, and arrowwood.

**Wetlands Regulations that Affect Development**

The delineation of wetlands noted on the Freshwater Wetlands Map are not “regulatory” in the sense of being accepted as definitive for the placement of buildings or establishing wetlands transition areas. Each individual site must be surveyed and the results submitted for a “Letter of Interpretation” (LOI) which is a formal acceptance of the mapping by NJDEP. This is a common practice in the site design and approval process.

State law preempts any local freshwater wetlands regulation, including determining or regulating transition areas or buffers. State law sets up three categories of wetlands,

"exceptional resource value", "intermediate resource value", and "ordinary resource value". Exceptional resource value wetlands typically harbor endangered species or are related to trout production (not a factor in Deptford) and require a 150 foot buffer. Intermediate resource value wetlands are all wetlands which are neither exceptional nor ordinary. Intermediate wetlands require a 50 foot buffer. Ordinary wetlands are generally man-made and have no transition area. Bodies of water and water courses with no fringe of associated wetlands are called "state open waters" and also require no transition area. State regulations allow certain limited types of fill in wetlands and averaging of transition areas.

Municipalities have been pre-empted by the state from regulating freshwater wetlands. However, setback requirements from a stream or pond for aesthetic purposes may be implemented locally to provide greater protection for natural resources as well as to promote a better visual environment.

#### **FLOOD PRONE AREAS**

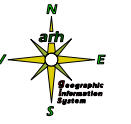
"Flood Prone" is a measurement of the danger or probability of flooding. This can result from the overflowing of a body of water onto adjacent land, but can also occur as the result of a rise in the water table, so that land becomes soaked at the subsurface level. The level or nearly level areas on either side of a water course or body created by successive and cyclical inundation and erosion is typically classified as a flood prone area. The DEP 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 Deptford are depicted on the FEMA Flood Hazard Areas 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 normal stream bed of the stream and contains normal flows; 2) the floodway, which is the area on either side of the stream which must be kept free of obstruction in order to contain 100-year flood flows; and 3) the flood fringe or 500-year level.

# FEMA FLOOD HAZARD AREAS

## Deptford Township

### Gloucester County, New Jersey

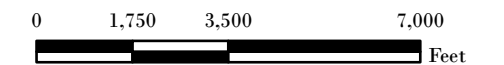
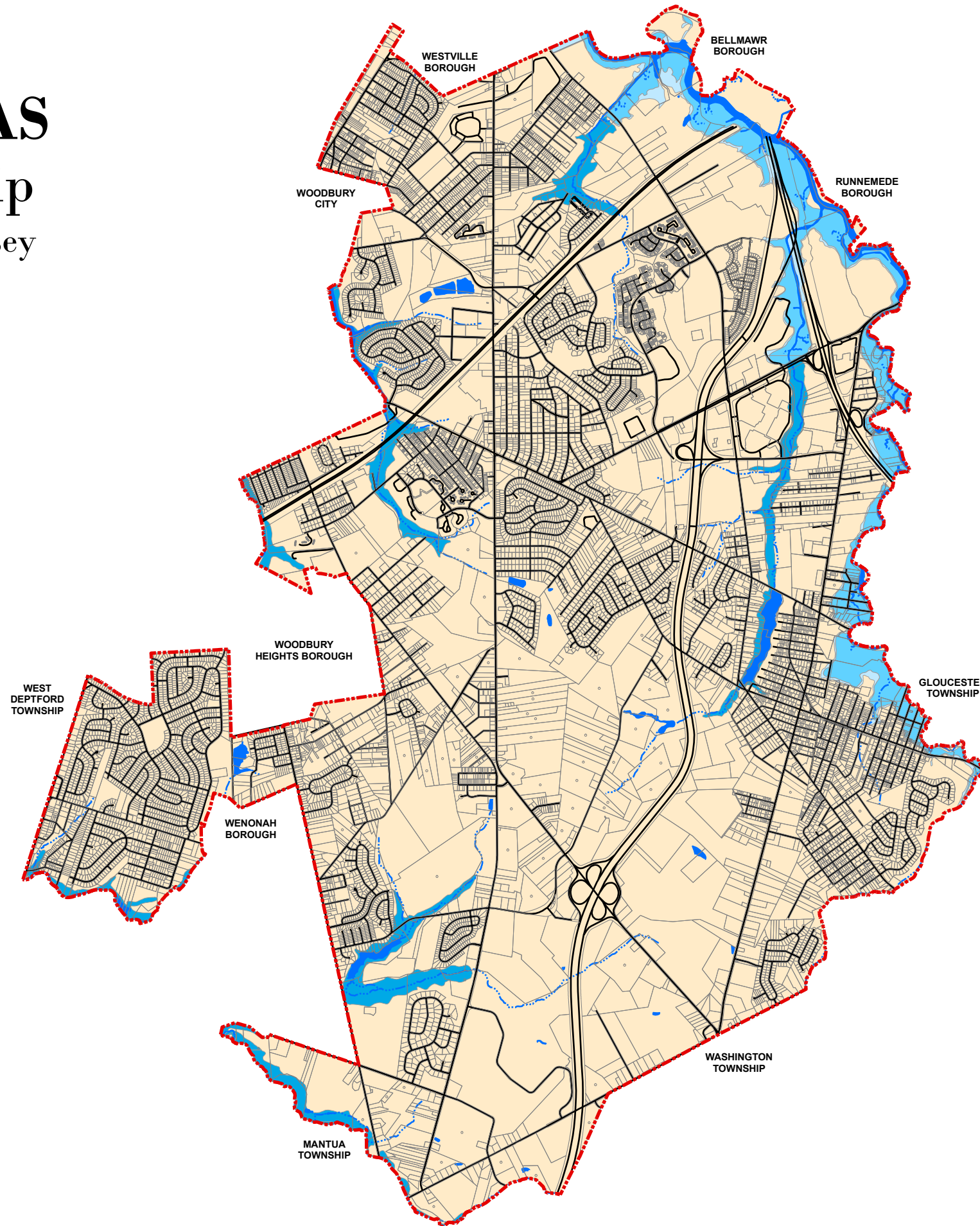


#### Legend

- Municipal Limit
- Parcel Limit
- Roadways
- Streams
- Lakes

#### FEMA Flood Zones

- Zone A: 100 year flooding (No BFEs)
- Zone AE: 100 year flooding (with BFEs)
- Zone X500: 100 & 500 year flooding



Note: CS #91-00152  
 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.

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The State allows a certain amount of fill or construction in flood fringe areas – flood prone areas outside of the flood hazard corridor – but otherwise has established a policy of no construction in flood prone areas.

Municipalities are required to adopt ordinances that enforce the state statutes, including engineering details to minimize flood damage and adhere to net fill requirements. Deptford has adopted an ordinance, codified as Chapter XV, Flood Damage Prevention, that sets standards sufficient to allow residents to participate 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, called “ponding”. Flood prone areas are best suited for conservation and passive recreational purposes. In the Land Use Plan, significant portions of Big Timber Creek are earmarked for open space purposes, partially to reduce damage from flooding.

### **URBAN FORESTS**

Trees located along streets and within parks and yard areas create an “urban forest” in the Township, which has become an important natural resource in developed areas. The Township also has beneficial woodlands in many areas of the municipality (*see Existing Land Use map, p. VII-5*). It has been shown that trees in an urbanized environment, such as the developed portions of Deptford, have a positive influence on the local and regional climate. Trees assist in sequestering carbon from the air and help to moderate what would otherwise be faster global warming. They modify the local climate by reducing urban “heat island” effects as the leaves limit reflections off of impervious surfaces, such as parking lots and roofs. Deciduous trees admit sunlight for heating in the cooler months. Urban trees also provide significant benefits by improving air quality, reducing noise, and by providing habitat for birds and other wildlife. Studies have consistently shown that a well-established street tree canopy supports property values and positive perceptions of a town’s quality of life.

Deptford Township recognizes the significant benefits of an urban forest, and has taken steps to encourage the development and preservation of a tree canopy. The Township included tree protection standards in its Unified Development Ordinance. The regulations promote the protection of trees in the development process as a method for controlling flooding, preventing soil erosion, reducing air and noise pollution, protecting the public health, safety and welfare of residents, and fostering quality development in the Township.

The Ordinance requires a tree management plan at the time of a minor subdivision, preliminary major subdivision or site plan application for properties with an area equal to or less than an acre. The plan is to be assessed by the Environmental Committee and reviewed on the basis of existing drainage patterns, soil erosion and increased dust,

impact on vegetative screening, woodland corridors, stream corridors, greenways and wildlife. Under the Ordinance, trees that are permitted to be removed must be replaced with trees approved by the Environmental Commission. Criteria for new trees include species longevity, native to area, hardiness, low maintenance and care, high wildlife values, size at maturity, soil retention, and value as a noise buffer. While the tree protection standards provide a good start to creating and preserving an urban forest, Deptford could expand the application of the regulations to include tree removal that is not subject to the development approval process to further the retention of woodland.

Urban forestry could be promoted without substantial cost. For example, the Township could undertake an inventory of street trees through the Environmental Commission and volunteers. It could encourage tree planting with a matching grant program for residents who want to plant a tree. Eventually, the Township could work up to applying for Tree City USA status, like 150 other municipalities in New Jersey. Tree City USA is a cooperative program between the Arbor Day Foundation and the USDA's Forest Service Urban and Community Forestry Program, which sets standards for designation as a Tree City.

#### **CONSERVATION LAND**

The imposition of environmental regulations over the past two decades has greatly reduced or eliminated the development of certain types of environmentally sensitive land. Most of the regulation of environmentally sensitive land has reverted to the state level, including stream encroachment (development within the flood plain), freshwater wetlands, water withdrawals and effluent disposal. Some municipalities also administer complementary requirements that prohibit development or site disturbance next to streams, open bodies of water, net fill in floodplain areas and other types of environmental regulation.

Conservation efforts should not be limited to environmentally sensitive areas. Development affects ecosystems in multiple ways, including interruption of wildlife habitat, effects on stormwater runoff, erosion, light pollution, and the heat island effect. Deptford Township has the opportunity to mitigate the extent of these impacts through preserving strategic pieces of property, such as wildlife corridors and high volume aquifer recharge areas. Preventing the use of inappropriate lands for construction purposes eliminates future problems and preserves substantial ecological benefits. The Open Space and Recreation Element discusses several techniques, including cluster development, sale or donation of development rights, conservation easements and site design techniques that should be considered to enhance preservation of open space and environmentally sensitive lands.

**GREENWAYS**

The greenways concept has gained prominence in planning for recreation and conservation lands. Originally greenways were linear parks along rivers, interconnected open space in planned unit developments, or trails converted from abandoned railroad lines. The original concept has been broadened to encompass the linking of recreational areas, civic institutions and residential districts with open space corridors and walking paths. This approach has gained new adherents as residents and government officials alike have discovered the benefits of greenways. Benefits include creating new recreational opportunities, increasing public awareness of the area's natural resources and their need for conservation, and retaining scenic vistas.

On a parallel track, environmental awareness and the evolving understanding of the importance of natural areas in controlling pollution and other man-made impacts have greatly increased. For example, providing more than one means of reaching a recreational attraction reduces passenger vehicle travel and hence air pollution. The necessity for conserving environmentally sensitive land is now well established by the scientific community.

The benefits of interconnection and reducing environmental impacts converge in greenways, which may be defined as any of the following: <sup>9</sup>

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

Much of the recent emphasis on creating greenways has focused on the preservation of stream corridors, and similarly, this has been emphasized as part of the Township's open space preservation efforts. Stream corridors include the water course or body, flood plain and flood fringe area, and often include freshwater wetlands and in some cases associated uplands. Establishing greenways along stream corridors allows the creation of an interconnected open space system. In this document, preservation of the stream corridor along Big Timber Creek is the primary emphasis for the creation of a greenway.

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<sup>9</sup> - From *Greenways for America*, Charles E. Little, John Hopkins University Press, Baltimore, 1990.

Even though the regulation of certain environmentally sensitive land is preempted by state law, separating buildings from stream corridors also has aesthetic benefits. Greenways can eventually be established by regulation through increased setback requirements from a stream or pond. Increased setback requirements further define the relationship between buildings, site improvements, and natural resources. Additionally, 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 zoning regulations governing minimum standards for usable yard area can be created.

Stream corridor management also has an important role in wildlife management. Stream shading, for example, is important in controlling water temperature and maintaining the fish population. Deer and other fauna use stream corridors as migration routes, as well as water sources.

The State Planning Commission examined the distance requirements for various stream functions as part of its technical background for the first State Plan<sup>10</sup>. A review of research reports resulted in the establishment of these guidelines:

<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

These and other related technical standards can provide an additional basis for the establishment of setbacks of development from stream corridors. In examining the buffer widths suggested to maintain important stream functions, the majority of the benefits occur from a setback of 100 feet. Consideration for adopting a standard for stream setback should be made in the implementation of the Master Plan.

<sup>10</sup> - *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

**CONSERVATION PLAN**

The Conservation Plan found at the end of this document is a synthesis of environmentally sensitive land described in the natural resources section. It indicates land that is particularly well suited for conservation purposes or where development needs to be designed with extra precaution to reduce environmental impacts. In the review of land development applications, this plan can serve as a means of flagging projects in areas of important natural resources.

**SUMMARY AND RECOMMENDATIONS**

The following recommendations are divided into subsections around individual topics and together can aid in implementing the preservation of land as outlined in the Conservation Plan.

**LAND PROTECTION**

- 1) Examine the means to include clustering in the Unified Development Ordinance that provides significant public benefits to the municipality – unlike previous attempts at cluster development.
- 2) Preserve additional conservation and other open space by encouraging developer contributions and dedication of conservation easements.
- 3) Site design should maximize the quantity and quality of open space. The Planning Board shall continue to protect environmentally sensitive land in the development review process.

**PRESERVATION OF THE URBAN FOREST**

- 1) Expand the tree protection standards to apply to tree removals outside of the development approval process.
- 2) Require planting of native and well-adapted non-native species of trees and promote good installation practices.
- 3) Create a tree management plan that outlines tree maintenance standards and procedures.
- 4) Maintain existing street trees along with other parts of street infrastructure.

**GREENWAYS AND STREAM CORRIDOR BUFFER AREA**

- 1) Create a greenway along the Big Timber Creek stream corridor, which will serve as passive recreation and conservation lands. In doing so, coordinate

activities with the NJ Department of Environmental Protection who is also acquiring lands.

- 2) Establish a stream corridor buffer area in the Township's Uniform Development Ordinance.







# CONSERVATION PLAN

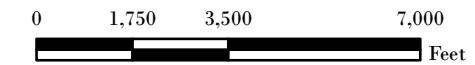
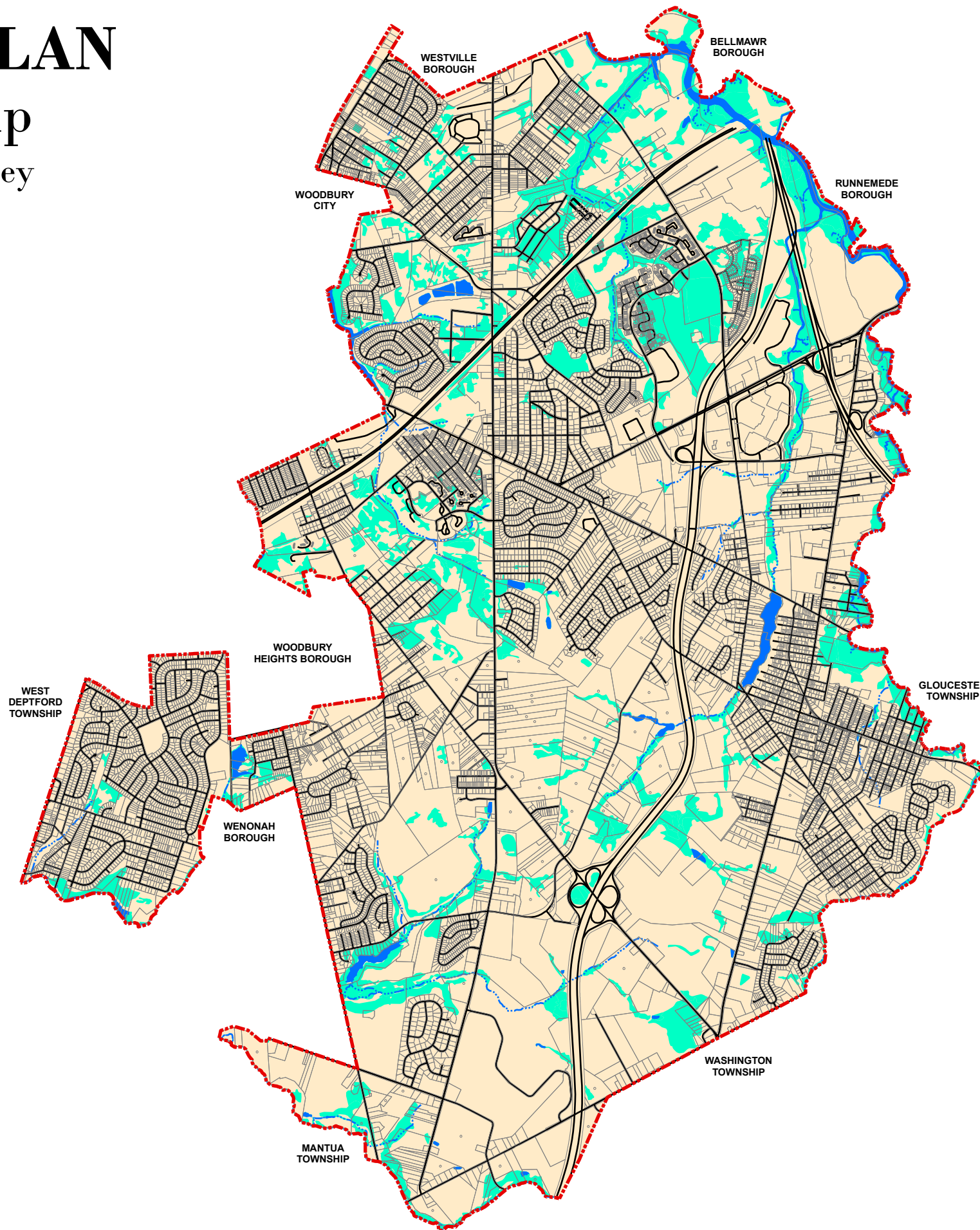
## Deptford Township

Gloucester County, New Jersey



### Legend

-  Municipal Limit
-  Parcel Limit
-  Roadways
-  Streams
-  Lakes
-  Environmentally Sensitive Lands



Note: CS #91-00152  
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.  
April 2007

# Open Space & Recreation Plan Element

## INTRODUCTION

The Open Space and Recreation Element is closely related to the Conservation Element and the Community Facilities Element. Open space includes active recreation, passive recreation, and conservation lands. This represents a continuum of use from the most to least intensively used land, respectively. Preserved farmland is in one fashion also open space, but in Deptford, farming is a relatively minor economic activity and there is no longer a critical mass of farmland that could be preserved. A critical mass is necessary for a host of operational and social factors that make fragmented farmland uneconomic in the long run. Consequently, this element will focus on the first three types of open space.

Master plans, of which this element is a part, often analyze and recommend how land should be developed or redeveloped in response to economic, social and cultural factors. Open space, on the other hand, is land that is not intended to be developed, or rather minimally developed for active recreation and leisure facilities. Open space produces many benefits to the municipality. It provides opportunities for recreation, land for the preservation of wildlife habitats and other natural environments, a gathering place for community events and visual relief from urbanization. Setting aside land for these purposes also supports property values.

Active recreation consists of organized sports or leisure activities that usually require specialized fields or equipment to play games. Baseball, football, soccer and tennis are examples of active recreation. Deptford has many youth sports organizations devoted to active recreation, as will be described further below. Passive recreation includes less formal activities, such as kite flying, bird watching and hiking. Conservation areas are intended to be left in their natural state for wildlife refuges, as buffers between developments or to protect environmentally sensitive land and water resources. Conservation areas are identified by making a natural resource inventory of the municipality (found in the Conservation Element). In this element, the stream corridors identified in the Conservation Element are replicated in the Open Space and Recreation Plan and are identified for conservation purposes. In time, these will be related to Township land development policies and are further anticipated to dovetail with state-wide environmental policies and regulations.

This element will begin by examining Deptford's existing recreation uses and open space lands. The Township's recreation programs and other sports associations will be described in brief. The amount of land devoted to recreation will be compared to

state and national standards. Techniques for preserving open space and funding sources are discussed. Lastly, recommendations are proposed to complete the element.

**PARKS, RECREATIONAL FACILITIES, AND OPEN SPACE INVENTORY**

The Township currently owns more than 530 acres of open space that is intended for recreation and conservation purposes. Deptford Township has a diverse variety of park and recreation facilities ranging from small neighborhood playgrounds to large athletic facilities to tranquil natural areas. Most of the parks in Deptford’s inventory are used for active recreation. Their location is shown on the Open Space and Recreation Plan, found at the end of this element. The following is a description of each park. This information is summarized in Table I. Table II lists land held by other governmental or land trust entities and Table III includes open space privately held by homeowners’ associations.

**ALLEN PARK, MAIL AVENUE** – Located in the Jericho section of the Township, Allen Park is a medium sized community park containing tennis courts, basketball courts, a playground, and restroom facilities.

**ALMOLIND PLAYGROUND, ELGIN STREET** – A small neighborhood playground located just south of Cooper Street. In addition to the playground, and basketball court, the park also has small baseball field.

**ALMONESSON PARK/ ALMONESSON CREEK PARK, COOPER STREET** – These two adjoining parks located off of Cooper Street together comprise more than 25 acres and combine passive and active recreation. They consist of a ball field along with wooded areas and a walking trail that parallels Almonesson Creek. They include Almonesson Lake, a man-made water body that is Deptford’s largest.

**CARSON PLAYGROUND, CARSON AVENUE** – A small neighborhood playground that is located in the Woodbury Gardens neighborhood off of Peterson Boulevard. The park consists of a basketball court and playground. The park also provides access to Stewart Lake, formed by the damming of Woodbury Creek and shared by the City and Deptford.

**CHURCH STREET PARK, CHURCH STREET** – A neighborhood park located at Mail Avenue and Church Street. The park contains a large open field and fenced in basketball courts.

DEPTFORD TOWNSHIP BASEBALL COMPLEX/STAUFFER FIELD SOFTBALL COMPLEX/ RECREATION CENTER, MONTAGUE LANE – One of the newest facilities in the Township’s park and recreation system is the large baseball, softball and recreation complex located off of Almonesson Road in the northeastern portion of the Township in between the NJ Turnpike and Heritage Village. This large 193 acre site contains 8 baseball fields and 6 softball fields including two lighted fields. The site serves as the centerpiece of the Township’s little league and softball programs and is heavily used. The new recreation center building, located on the same property, contains an indoor basketball court, wrestling room, and all-purpose room along with shower facilities.

DEPTFORD TOWNSHIP SOCCER COMPLEX, CATTEL ROAD – Opened in 2005, this large, 127-acre facility contains seven regulation size soccer fields, including one with lights, and three mini-fields. It serves as the home for the Township’s popular youth soccer program.

CHARLES FASOLA PARK – This 58-acre park is one of the largest and most centrally located parks in the Township. Devoted to both active and passive recreation, it contains softball fields, football fields, playgrounds, a pond and gazebo, picnic pavilion, and restroom facilities. The property abuts Deptford Township High School to the east. An expansion of the park has been proposed, which would encompass the bulk of the wooded land to the south and further connect the park to the recreation facilities at the high school.

HARVEY PLAYGROUND, HARVEY AVENUE – A small neighborhood playground located in the southern portion of the Oak Valley neighborhood on Harvey Avenue. It contains a playground and a small lawn area.

KATHLEEN MAIER PLAYGROUND, MONMOUTH ROAD – A small neighborhood playground located behind the Municipal Building on Monmouth Road. The park contains swings and a playground area surrounded by almost an acre of open area.

LAKE TRACT PLAYGROUND, WARD DRIVE – This small neighborhood playground is located just east of Highland Avenue and is across the street from the Township Library. The park contains a basketball court and a playground area.

LARKIN PARK, LARKINS STREET – This small neighborhood park is located in the East Wenonah section of the Township. The park consists of an open field and has sufficient room for a baseball or football field.

LEADBEATER PLAYGROUND, PINE AVENUE – A small neighborhood playground located in the Blackwood Terrace neighborhood. The park contains swings, a playground area and a basketball court.

MARION PLAYGROUND, MARION AVENUE – A small neighborhood playground located in the Westville Oaks neighborhood in the northern portion of the Township just south of I-295. The park contains a playground area and a basketball court.

MONTCLAIR PLAYGROUND, MONTCLAIR COURT – A small neighborhood playground located in Oak Valley. The park contains swings and a basketball court.

OAK VALLEY LITTLE LEAGUE, PRINCETON BOULEVARD – This almost 22 acre facility, run by the Oak Valley Little League organization, consists of three well maintained baseball fields, bleachers, and a concession building. It is located in the eastern section of Oak Valley adjacent to the railroad tracks.

PARK AVENUE PLAYGROUND, PARK AVENUE – This small neighborhood playground is located in the North Woodbury neighborhood. The park contains a basketball court and playground equipment.

PRINCETON PLAYGROUND, PRINCETON BOULEVARD – One of three small neighborhood playgrounds located in the Oak Valley neighborhood. The park contains swings, a playground area, and a basketball court.

STEWART LAKE PARK (CARSON/LAKEBRIDGE SECTIONS), CARSON COURT-KELLY DRIVE – Together these two areas comprise more than 32 acres of wooded land adjacent to Stewart Lake. Access is via the Lakebridge neighborhood or Carson Playground. A walking trail generally follows the bank of the lake.

TAYLOR'S FIELD FOOTBALL COMPLEX, FOX RUN ROAD – This 8 acre facility is the home of the Township's Pop Warner football program. It contains a lighted main field and a smaller practice field. An adjacent parcel across Fox Run Road that also abuts the Township High School's fields has been identified as a site for possible expansion of the facility.

TIMBER CREEK PARK, HURFFVILLE ROAD – This almost 28 acre parcel adjacent to Big Timber Creek, just south of Cooper Street, contains hiking trails and picnic tables and provides nice views of the creek. The site is contiguous with the Old Pine Farm Natural Land Trust's parcels located just to the south. The Township has also been

considering the purchase of additional land along the stream just north of Cooper Street and connecting those parcels to Timber Creek Park. Such a connection would be a good beginning to the creation of a true greenway network along this section of the Creek and would complement the efforts of the land trust.

WOODBROOK PARK, CRESTVIEW DRIVE – This 2.5 acre mini-park, located just off of Good Intent Road, is mostly comprised of an open field. It contains a playground and swings.

**PARK CLASSIFICATIONS**

The National Recreation and Park Association (NRPA) is an organization devoted to promoting and developing recreational opportunities that has categorized parks into three types based on size and service area. The categories of parks are mini-parks, neighborhood parks and community parks. Mini-parks are usually playgrounds, tot lots, or other small scale parks within close proximity to residences. A mini-park is categorized by the NRPA as one acre or less in size, though larger areas are common in the Township. The NRPA recommends that neighborhood parks be 15 acres or larger. Such parks commonly constitute home parks for youth sports organizations and serve a development of homes. Community parks should be at least 25 acres but preferably larger and are commonly multifunctional entities intended for a wide variety of recreation. Aside from these active and passive recreation categories, an additional park type for conservation has also been included in the following tables. Table IV-1 provides a summary of municipal parks and types.

**Table IV-1. Summary of Existing Municipal Parks, Conservation & Other Township Lands.**

<b>Name of Site</b>	<b>Acres</b>	<b>Park Type</b>	<b>Facilities/Character</b>
Allen Park	17.83	Neighborhood Active	Tennis courts, basketball court, football field, double bay swing set, playground unit designed for children 2-12 yrs of age, double bay swing set and restroom facilities.
Almolind Playground	1.73	Mini-Park Active	Basketball court, small ball field, double bay swing set, playground unit designed for children 2- 12 yrs of age.
Almonesson Creek Park	9.88	Passive Recreation	Park consists of wooded walking trails and a gazebo.
Almonesson Park	15.42	Neighborhood Active	Ball field; Park connects to Almonesson Creek Park.

Name of Site	Acres	Park Type	Facilities/Character
Carson Playground	4.44	Mini-Park Active	Basketball court, double bay swing set, playground unit designed for children 2-12 yrs of age.
Church Street Park	3.06	Mini-Park Active	2 basketball courts
Deptford Twp. Baseball Complex	146.10	Community Active	8 baseball fields (one lighted)
Deptford Twp. Recreation Center	0.51	Community Active	Full size basketball gymnasium w/bleachers, wrestling room, all-purpose room, restroom facilities w/showers.
Deptford Twp Soccer Complex	126.90	Community Active	7 Official Soccer fields (one w/lights), 3 mini-fields
Fasola Park	58.34	Community Active and Passive	4 softball fields, football field, pavilion for picnics, pond w/fountain, 2 playgrounds designed for children 2-12 yrs of age, double bay swing, restroom facilities.
Harvey Playground	1.12	Mini-Park Active	Double bay swing set, designed for children 2-12 yrs of age.
Kathleen Maier Playground	0.91	Mini-Park Active	Double bay swing set, playground unit designed for children 2-12 yrs of age.
Lake Tract Playground	0.75	Mini-Park Active	Basketball court, double bay swing set, playground designed for children 2-12 yrs of age.
Larkin Park	2.60	Mini-Park Passive	Primarily open space
Leadbeater Playground	0.23	Mini-Park Active	Basketball court, double bay swing set, playground unit designed for children 2-12 yrs of age.
Marion Playground	0.29	Mini-Park Active	Basketball court, double bay swing set, playground designed for children 2-12 yrs of age.
Montclair Playground	0.51	Mini-Park Active	Basketball court, double bay swing set.
Oak Valley Little League Complex	21.90	Neighborhood Active	2 little league fields, a major league field.
Park Avenue Playground	0.21	Mini-Park Active	Basketball court and playground unit designed for children 2-12 yrs of age.
Princeton Playground	1.54	Mini-Park Active	Basketball court, double bay swing set, designed for children 2-12 yrs of age.
Stauffer Field Softball Complex	46.34	Active Recreation	6 softball fields (one lighted)
Stewart Lake Park (Carson Avenue Side)	17.40	Conservation	Deptford side bank of Stewart Lake
Stewart Lake Park (Lakebridge Side)	14.80	Conservation	Deptford side bank of Stewart Lake

Name of Site	Acres	Park Type	Facilities/Character
Taylor's Field Football Complex	8.34	Community Active	Lighted game field, a practice field
Timber Creek Park	27.52	Neighborhood Passive	Picnic tables, benches, wooded hiking trails along Big Timber Creek
Woodbrook Park	2.46	Mini-Park Active	Double bay swing set, playground unit designed for children 2-12 yrs of age
<b>Total Acres</b>	<b>531.13</b>		

Source: Deptford Township Department of Recreation

In Table IV-2, several purchases along the stream demonstrate the state’s interest in the preservation of the Big Timber Creek’s stream corridor. The largest of these is Block 1.03, Lot 1, known as the Delaware River Greenway Wildlife Management Area located between Almonesson Road and Big Timber Creek in the extreme northern part of the Township. While called a wildlife management area here, the NJ Department of Environmental Protection has not officially designated it as such. The State purchased this property in February 1999. In 2005, NJDEP also purchased additional property between Rt. 41 and Big Timber Creek for preservation purposes as noted in Table IV-2. Lastly, the Old Pine Farm Land Trust has purchased land that for the most part is contiguous to the Township’s Timber Creek Park. Land trusts are non-profit groups that seek to preserve lands for ecological, environmental, scenic, agricultural and other purposes.

**Table IV-2. Other Governmental and Land Trust Open Space.**

Name of Site	Acres	Type	Comments
Delaware River Greenway WMA	53.00	Conservation	NJDEP owned future Wildlife Management Area
Big Timber Creek	14.50	Conservation	NJDEP owned/NJ Natural Lands Trust managed conservation land, including island, adjacent to Big Timber Creek
Old Pine Farm Natural Lands Trust	49.13	Conservation	Preserved land along Big Timber Creek and additional parcels along South Branch of Big Timber Creek; Conservation land with some hiking trails.
Besser Tract	7.03	Conservation	Recently purchased by the municipality at the headwaters of a Mantua Creek tributary in Oak Valley.
<b>Total Acres</b>	<b>123.66</b>		

Source: Deptford Township Tax Assessment Records

Table IV-3, Homeowners’ Association Open Space, reveals that the privately held open space accounts for a significant portion of the preserved lands in Deptford.

Created through the development review process, these lands serve as many functions as the Township’s parks with private recreation and conservation lands.

**Table IV-3. Homeowners’ Association Open Space.**

Homeowners’ Association	Block	Lot(s)	Acreage	Access
Heritage Village	1.10	28	8.90	Almonesson Rd.
	1.15	34	4.58	Juneberry
Nicole Court	4.01	2	12.35	Caulfield Rd.
Locust Grove Common Facilities	5	2	13.13	Clover Dr.
	5	7	12.72	Village Blvd.
	5	16	39.64	Valley Forge
	5	17	24.97	Caulfield Rd.
	5.04	1	0.50	Voyager Dr.
	5.04	55	14.58	Caulfield Rd.
	5.04	76	0.34	Caulfield Rd.
	5.07	35	2.10	Voyager Dr.
	5.17	1	0.44	Betsy Ross
	5.18	22	1.75	Revere Dr.
	5.23	1&2	1.22	Locust Grove Blvd.
5.24	1	2.91	Locust Grove Blvd.	
Washington Crossing	5.11	73	3.32	Caulfield Rd.
Liberty Place	5.21	19	6.14	Locust Grove Blvd.
Villages at Rittenhouse	5.39	1	16.53	Rittenhouse
	5.41	85	10.92	Locust Grove Blvd.
	5.42	62	2.34	Locust Grove Blvd.
Lakebridge Community Services	82.01	11.01	2.28	Mullray Ct.
	82.11	11	1.64	Knollwood Dr.
Willow Ridge	386.02	16	3.82	Jasmine Way
	386.04	25	0.55	Bluebell Lane
	386.07	39	1.66	Bluebell Lane
Loucroft Farms	399.08	7	24.00	Tall Pines Dr.
Bridlewood	399.10	2	6.00	Trellis Lane
Orchid Court	641	25	3.06	Cooper St.
Lakes at Bankbridge	656	39	1.89	Carly Ct.
Heritage Woods	662	9	21.82	Bull Run
<b>Total Acres</b>			<b>246.10</b>	

Source: Deptford Township Tax Assessment Records

The open space identified in Table IV-3 may include storm water management facilities. Locust Grove Common Facilities Homeowners Association and Lakebridge

Homeowners Association also include active recreation and community centers. The total acreage under homeowner association control is expected to grow with the development of several approved residential neighborhoods including Landings at Cooper Street, Maple Ridge, Fox Trail Estates, and Reserve at Willow Ridge.

Deptford's total area is about 11,224 acres (17.56 square miles). Adding together the municipal, state, county, land trust and homeowners association open space lands Deptford has a total of 900.89 acres in some form of protected status. Municipally owned parks and recreation land is equal to 4.73% of the total area. Lands owned by the State and the Old Pine Farm Land Trust for conservation add 1.09% and homeowners associations another 2.18%. The open space total (not including recreation areas associated with public schools) is 8.0%. Recreation land that is part of public and private school facilities is excluded from this calculation because their primary purpose is educational and the land could be converted to this principal use as needed.

#### **GUIDELINES FOR THE ADEQUACY OF OPEN SPACE**

There are several guidelines against which the adequacy of the amount of open space and recreation facilities in the Township may be measured. The adequacy is determined by comparing the Township's population to its open space.

#### **NEW JERSEY GREEN ACRES PROGRAM**

The Green Acres program recommends a desirable goal of 8 acres of land per 1,000 persons for conservation, passive and active recreation open space earmarked for municipal purposes. Application of the guideline results in a desirable standard of 246 acres for the current estimated population of nearly 31,000 people. The Township, which has 531 acres of open space, easily meets the minimum standard, without including the 116 acres of other open space and 246 acres of land held by homeowners' associations.

The Green Acres guidelines also suggest that a minimum of 3% of the municipal land area be set aside for all types of open space; the municipal total is close to 5%. By both of these broad measures, the Township meets the minimum suggested guidelines established at the state level.

#### **NATIONAL PARK AND RECREATION ASSOCIATION GUIDELINES**

The NRPA has published a number of standards for "developed" open space. While the organization has moved away from a gross acreage basis for determining recreational needs (preferring a survey of users, instead), a range of 6.25 to 10.5 acres

of developed park land per 1,000 residents had been previously used by them in estimating the necessary land area. The population estimate for Deptford at the end of 2006 was 30,723 persons.<sup>1</sup> By calculation, the amount of active recreation space should be a minimum of 192 to 323 acres of developed park land. By these standards, the Township is above this range, with 412 acres, or 13.42 acres per 1,000 people.<sup>2</sup>

It should be noted that these standards are exclusive of recreational facilities provided by school districts or non-active open space. A minor amount of land that has been included as active recreation, particularly in the larger parks, also contains environmentally sensitive land that should be preserved from development, such as the east end of the Deptford Recreation complex on Montague Lane which adjoins the Big Timber Creek. The amount devoted to active recreation would still fall within the recommended range even if this land was excluded from the calculation.

Because of the higher household incomes in New Jersey on average (compared to the U. S. average) many households are able to purchase their recreational needs from commercial providers. For example, indoor soccer facilities and ice hockey rinks are provided by commercial operators in South Jersey. In Deptford, there is a commercial indoor volleyball facility. This situation lessens the need for the municipality and school district to provide certain active recreation facilities.

#### **ACTIVE RECREATION NEEDS**

This statistical information would seem to suggest that Deptford's recreational needs have been satisfied and that active recreational space, at least, is amply found in the Township. However, as noted in Table IV-4, the number of youth sports participants is large, nearing 2,500, and growing. Most of the club sports, such as football, baseball/softball and soccer, require large fields of play. In addition, lacrosse is a sport of growing interest in southern New Jersey and it is likely only a matter of time before there is a youth sports organization devoted to lacrosse, which also uses a large field. Table IV-4 lists the existing youth sports organizations in Deptford and the number of participants in 2006.

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<sup>1</sup> - From p. 21 of the November 9, 2006 Housing Element.

<sup>2</sup> - Excludes passive recreation and conservation land from total municipal open space. Fasola Park was assumed to be half active and half passive recreation.

Table IV-4. Youth Sports Organizations, Participants, 2006.

Organization	Location	Number of Participants
Deptford Softball	Stauffer Fields (Almonesson Rd.)	320
Deptford Basketball	Recreation Center (off Almonesson Rd)	350
Deptford Little League	Little League Complex (Almonesson Rd.)	330
Deptford Wrestling	Recreation Center (Almonesson Rd.)	74
Oak Valley Basketball	Oak Valley School (College Blvd.)	100
Oak Valley Little League (Baseball & Softball)	OAAA Complex (Princeton Blvd)	315
Deptford Football & Cheerleading	Taylor's Field (Fox Run Rd)	421
Deptford Soccer	Soccer Complex Cattel Rd.	560
<b>Total Participants</b>		<b>2,470</b>

Source: Deptford Department of Parks and Recreation

While some sports can share fields because they are currently in different seasons, there is a trend towards year round or three season outdoor sports in the region, with, for example, fall and spring soccer. Proper maintenance also requires that fields periodically rest to aerate the soil and keep grass growing. Because of the pressure on field use, field resting rarely occurs and consequently field conditions become rough and maintenance costs rise. Additional factors include a strong trend in Deptford towards more sports participation by girls and efforts to involve more adults in active sports as the value of better fitness becomes more apparent over time.

### RECREATION PROGRAMS

Recreation programs are administered by the Deptford Department of Parks and Recreation and a number of youth sports organizations. The Township Council has also appointed a Recreational Advisory Committee made up of eight regular and four non-voting ex-officio members. The Recreational Advisory Committee helps to promote and coordinate recreational and park services and plays an active role in overseeing the program budget for the municipality.

Recreational programs offered by the Department include Deptford Day with a parade and fireworks, Living Arts trips to cultural events, and activities for seniors at

the Senior Center on Tanyard Road (see Community Facilities Element). The Department also organizes a summer camp for youths 6-12, coordinates the scheduling and registration for the various youth sports, and offers a family movie night on a monthly basis. It also sponsors trips for Deptford residents to nearby attractions.

### **OPEN SPACE NEEDS**

Open space is more than the active recreation described so far. Open space provides benefits for the ecology of the Township and region by supporting environmentally sensitive lands such as flood plains, freshwater wetlands, aquifer recharge areas, and the biota that depends on natural systems. Open space creates vistas of scenic beauty; preserves view sheds of historic properties, and provides a setting for buildings and people. Maintaining and preserving open space in the face of development pressure is very difficult, because by their democratic nature, governments are slower to act than commercial interests. The land remaining undeveloped in Deptford is sought for many different and often competing purposes. The estimated population of Deptford is in excess of 30,000 people and the Housing Element projects more than 36,000 people by the Year 2014. Naturally this projection will depend on many factors, but it demonstrates that the Township is likely to be “built-out” within the next 20 years. At that point the ability to acquire open space will be severely limited and the opportunities today will not exist in 2027. Investment in open space today will yield far reaching benefits for the future.

An achievable goal is to set aside 10% of Deptford’s land area in preserved open space, or 1,125 acres, with the large majority controlled by the municipality. Counting open space held by private groups, the Township has nearly 8% of its land area preserved. With 893 preserved acres identified, the Township would need to obtain an additional 232 acres to meet this goal.

In Table IV-5, nine sites have been identified for potential preservation as open space. Larger parcels have been favored for several reasons. By their size, they have the ability to retain attractive vistas, can serve a larger population, meet the need for the three major kinds of open space and are easier to administer and operate efficiently. Some sites were included to address the lack of recreation in specific neighborhoods. Much emphasis was also placed on the ability to expand existing parks, such as Fasola, Taylor Fields and the Deptford Soccer Complex. The Friends of Israel site is identified for preservation through the purchase of development rights or outright by the state to expand the Delaware River Greenway. Lastly, two new community-sized parks have been identified for the sections of the Township that do not presently have them. If these two new parks are obtained, the Township would then have five community-sized parks that are evenly distributed throughout the municipality:

Whispering Lakes, Deptford Recreation Complex, Fasola Park, Deptford Soccer Complex and Five Points.

**Table IV-5. Sites Identified for Preservation and Open Space.**

Name of Site	Acres	Comments
Block 1.03, Lot 2-4, 7-10	137.35	Friends of Israel. Intended for conservation. Located on Almonesson Road north of the NJ Turnpike and on Big Timber Creek, next to NJDEP-owned land.
Block 82, Lots 1-7, 11, 16; Block 82.13, Lots 1-2; Block 453, Lots 1-2, 4; Blocks 454, Lot 4	140.47	Whispering Lakes. Includes three small lakes located at the intersection of Deptford Ave. and Delsea Dr. for active recreation and community events.
Block 14, Lot 1; Block 15, Lot 1-2; Block 16, Lot 4; Block 22, Lot 1; Block 23, Lot 1-2; Block 24, Lot 2; Block 27, Lot 1	30.86	Andaloro Farm. The last remaining potential tract for park use in the neighborhood. Located on Andaloro Way, it is still farmed by the Andaloro family.
Block 387.01; Lots 19, 26, 31-34, 36 & 50	131.16	Five Points; adjacent to closed Kinsley landfill, could provide both passive and active recreation
Block 493, part of Lot 3; Block 494, Lot 1, Block 496, Lot 1; Block 497, Lot 8; Block 498, Lot 1; Block 499, Lot 3	13.53	McGroarty; undeveloped parcels adjacent to big Timber Creek; some Township owned; others associated with historic Perce-Jaggard House
Block 499, Lot 2; Block 383, Lot 8	3.16	Connection to Timber Creek; wooded area, could provide a trail connection from Township owned parcels along Big Timber Creek next to McGroarty across Cooper Street to Timber Creek Park
Block 233, Parts of Lots 38, 39, 40, 41, 44, 45, 69	47.94	Fasola Park Expansion; could provide expanded community use and a better connection to facilities at Deptford High School
Block 398, Lot 32	85.81	Former Phase II of Lakes of Bankbridge development. Adjoins Deptford soccer complex to the south.
Block 84, Lots 1, 15	26.87	The Rizzutto property is located on Tanyard Rd. across street from Gateway Regional H.S. Alternate use is for age-restricted housing.
<b>Potential Additional Open Space</b>	<b>617.15</b>	

If all of the land identified in Table IV-5 is obtained or easements procured, either by local or regional authorities, then the 10% goal would be exceeded by a fair margin – 13.43% of the total land area of the municipality.

Municipal parks and recreational facilities, Township-owned open space, public or community recreation sites, and potential open space sites are depicted on the attached Open Space and Recreation Plan at the end of this document.

### **STREAM CORRIDOR PRESERVATION AND GREENWAYS**

Much effort has been expended in preserving stream corridors in New Jersey through environmental regulation. The stream corridor is generally considered to be the flood prone areas, steep slopes, freshwater wetlands and their transition buffers associated with the stream itself. Stream corridors are a form of “greenway”. Greenways also include linear parks, recreation trails, undeveloped open space connectors, and parkways. Conceptually greenways provide open space links between community facilities and the Township’s park system. Depending on their environmental sensitivity, recreational trails may be constructed in greenways (see following section). In this context, stream corridor preservation is mainly for conservation purposes. The interaction between land and water is usually the most biologically productive surface on the planet – the main reason stream corridors have been targeted by state and federal regulation.

Deptford has the beginnings of a greenway network along parts of Big Timber Creek, Almonesson Creek and Bull Run. Conservation land is usually best protected through public ownership, though lesser forms of control may be suitable. It is intended that land would be deed restricted for conservation purposes. Another potential avenue involves the protection of stream corridors through an easement provided voluntarily by the developer during the land subdivision process.

### **RECREATIONAL TRAILS**

Development of hiking trails and bicycle paths within greenways is a way of expanding recreational opportunities in the Township. Establishing this system will involve the municipal government and perhaps adjacent municipalities, conservation and recreation organizations, and landowners. A successful program will require close cooperation among these groups towards the goal of producing recreational trails. In the planning process, connecting existing open space parcels should be the main objective in their creation. Secondly, Deptford has a large number of neighborhoods that are physically disconnected from each other, usually because of stream corridors that prevented connecting streets. Recreational trails can be designed to link neighborhoods through the stream corridor and where feasible interconnect with trails traveling alongside the stream itself. Trails of this type are indicated on the Circulation Plan in the Circulation Element. Each trail segment should stand on its own and should be useable in its entirety when completed. As land or easements are acquired, linear trails parallel to a stream could be created that

instituted endpoints, or trailheads, in logical locations, such as a major street, park, or community facility.

### **CONSERVATION TECHNIQUES**

There are a number of methods of preserving open space apart from direct purchase by government or by a private nonprofit conservation organization. Purchasing large tracts of land in fee simple is expensive and other avenues may be explored in order to fulfill the Township's open space goals.

Techniques discussed here to conserve land include cluster development, purchase or donation of development rights, conservation easements, and site design.

#### **CLUSTER DEVELOPMENT**

Deptford has had a mixed level of success with clustering ordinances. In some instances, clustering preserved portions of stream corridors, but in others the Township ended up with open space that was merely the left over pieces of land after the subdivision process. Clustering is a form of development that concentrates buildings on a smaller portion of a site while preserving the remainder in open space. Properly structured in the zoning ordinance, clustering can be beneficial in preserving stream corridors as greenways. Additionally, if upland is also obtained at the same time, clustering can allow for a recreational trail design that sits above the flood plain.

A zoning technique called mandatory clustering, which has been upheld in a number of municipalities in the state, could also be employed by Deptford. More typically, clustering is an option that may be exercised by an applicant, but in mandatory clustering, the municipality specifies precisely where development must be clustered. The clustering is typically linked to meeting farmland preservation or environmental goals and in Deptford's case, the Township has goals to preserve its stream corridors, freshwater wetlands, and important forested areas (see Conservation Element).

#### **PURCHASE OR DONATION OF DEVELOPMENT RIGHTS**

Under the "bundle of rights" theory of property ownership, development rights are an additional right inherent in a property along with the better known air, water, and mineral rights. Development rights may be separated from the property and sold or donated to governmental agencies or conservation organizations. The sale of development rights requires the landowner to pay federal capital gains taxes which may be offset depending on the individual landowner's tax situation. The donation of these rights, however, can be treated as a charitable contribution and provide the donor with a tax deduction. The sale of development rights also reduces the property

assessment for tax purposes. Since development rights are less than fee simple ownership, their cost is substantially less.

#### CONSERVATION EASEMENTS

The dedication of easements is a technique sometimes used to preserve wetlands and other environmentally sensitive areas. While retaining ownership in private hands, conservation easements effectively protect lands of ecological importance. Donation of an easement and donation of development rights have similar tax advantages. Donations may include other general benefits, such as public access. Private nonprofit conservation organizations in the state are substantially involved in identifying prospective properties and working with interested land owners in securing conservation easements.

#### SITE DESIGN

Site design – the layout of buildings, circulation, and utilities – is the single largest factor in the preservation of environmentally sensitive lands. To achieve the best results, design should be guided by a development suitability map that shows the environmental constraints of the land. From this starting point, a design sensitive to the preservation of natural and environmentally sensitive features may be produced.

#### FACILITY NEEDS

The Recreation Advisory Committee and the Recreation Department have identified the need for an additional indoor recreational facility that would allow for multiple purposes. The new recreational complex on Montague Lane is an excellent facility, but was designed primarily for basketball and wrestling. The senior center on Tanyard Road is only geared towards the older segment of the population. An indoor center that was also set up for leisure time activities, as well as active recreation, would fill a need within the Township.

The Gloucester County Institute of Technology, located in the south end of Deptford on Tanyard Road, has an aquatics and fitness center that is also open to local residents for a fee, which is generally lower than for-profit fitness centers. This center already aids the community in that it is used by the high school swim team for practice and meets. While this facility is centered around athletics, both the GCIT and Gloucester County Community College, located on the same campus, present the possibility for addressing local residents' needs for recreation and leisure time activities in a joint county government/county school district/municipal partnership. Promotion of a shared use facility would lower the cost for the municipality while taking advantage of its physical proximity to Deptford residents.

**FUNDING FOR OPEN SPACE ACQUISITION**

Purchasing the acreage necessary to establish additional parks and other open space represents a significant financial cost to the Township. Costs may be reduced through donation of land or funds for open space and utilizing existing land owned by the municipality or other governmental entities not already earmarked for open space. The traditional method of funding acquisitions is through the State Green Acres Program, which provides low cost loans (typically 2% interest per annum). In 1998, a voter-approved state referendum established a \$98 million per year fund for a ten year period towards the acquisition of parks, other open space, farmland preservation and historic preservation. Yet, even with state funding at a historically high level, applications to the Green Acres program have exceeded the available funding. The Green Acres Program has promoted the Planning Incentive Grant Program that eases the acquisition process when the Township has adopted a document, such as this element, that sets out goals and priorities for open space. However, it is only available when municipalities have passed their own local open space tax. Deptford officials had previously sought voter authorization for a dedicated open space tax; however, it was not approved.

Gloucester County established an open space and farmland preservation levy at a rate of one cent per \$100 of total county equalized real property value in 1993 after voter approval. Voter approval was also gained to increase this twice to a total of four cents per \$100 today. Deptford's interest has been in open space acquisition, rather than farmland preservation, as discussed in the introduction. The County Land Preservation Office operates two programs, one where the County is the lead agency and the other where the municipality pursues acquisition. In both instances, the County enters into a cost sharing agreement with the municipality. Where the County is the lead agency, the County typically pays 75% of the acquisition with the municipality paying 25%. When the municipality is the lead government, these percentages are typically reversed. Deptford has not yet taken advantage of either program.

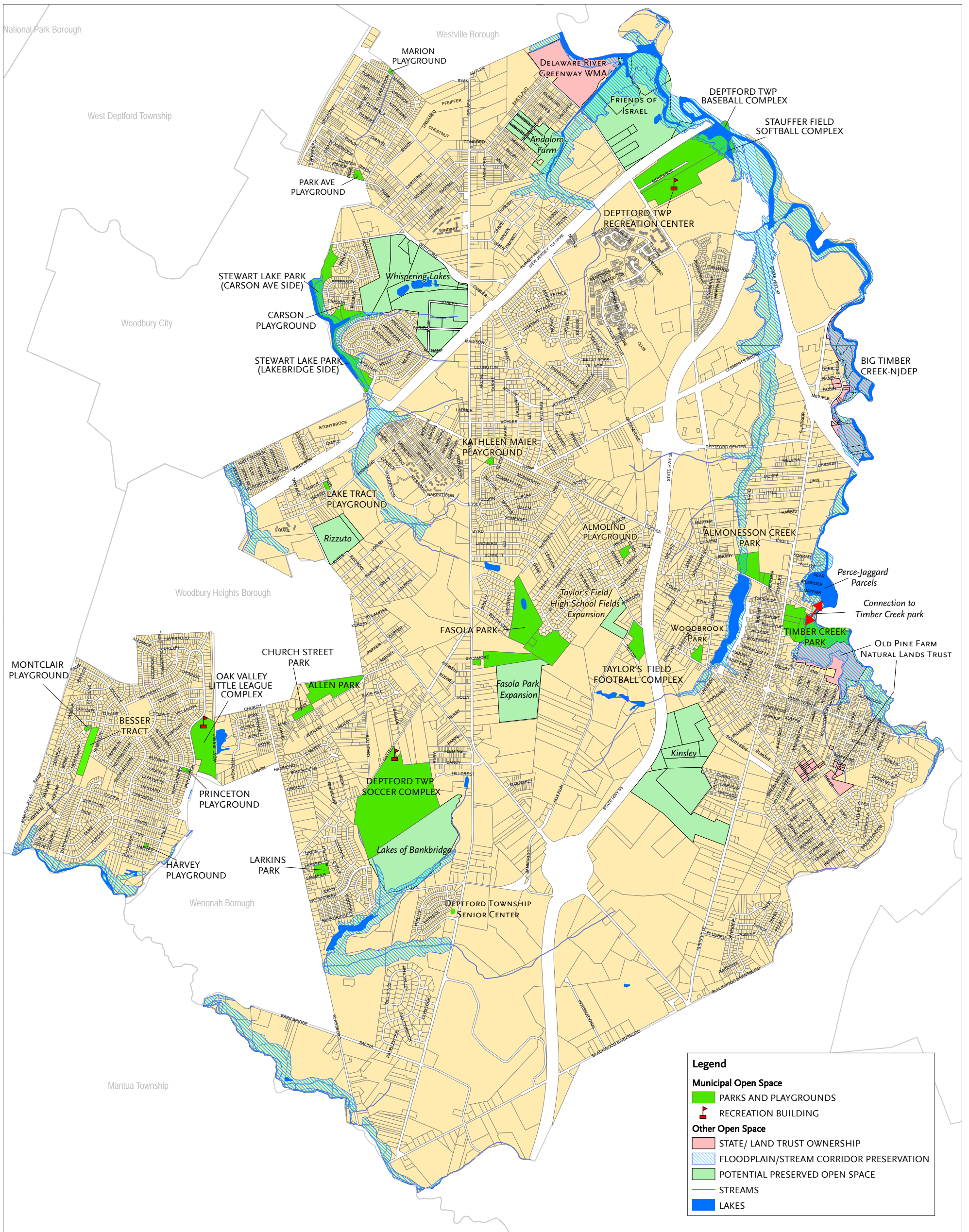
**RECOMMENDATIONS FOR OPEN SPACE AND RECREATION**

The following recommendations are made to fulfill the goals and objectives for open space in Deptford:

- 1) Seek to share the costs of open space acquisition through funding from Gloucester County and the Green Acres Program.
- 2) Survey park users to gain a profile of the people using the facility. Use this survey to project existing needs and trends for future programs and

facilities. Meet the demand for recreation in the future through adequate budgeting for capital improvements and maintenance of facilities and the imposition of fees where appropriate.

- 3) Use the land development process and capital improvements to establish both greenways and recreational trails in concert with the Conservation Plan and the Circulation Plan.
- 4) Continue the roles of the Recreation Advisory Committee in the planning for recreation and open space acquisitions in relation to this document.
- 5) Preserve environmentally sensitive land in the development of active recreation sites.
- 6) Restructure the zoning ordinance to enable better residential clustering to meet the goals of open space preservation where needed.
- 7) Explore joint facility needs with the Gloucester County Institute of Technology and Gloucester County Community College.



# Recreation & Open Space Plan

Deptford Township, Gloucester County, NJ November 20, 2007

Clarke Caton Hintz ●●●  
 Architecture  
 Planning  
 Landscape Architecture

## **Community Facilities Element**

### **INTRODUCTION**

The Community Facilities Element examines the public buildings and other structures used by local government and other institutions of society that provide for public, social or civic services. These facilities include schools, medical services, fire safety, policing and emergency services, libraries, community and senior centers, and municipal buildings. In addition, certain institutional uses are also included that provide the basis for community or religious life in the Township.

The Community Facilities Element has much in common with the Open Space and Recreation Plan Element. Buildings designed for recreational and leisure purposes fall equally into both elements.

This element examines the adequacy of community facilities for Deptford Township, emphasizing those owned by the municipal government. Determining adequacy depends on the goals and objectives of the municipality, its demographic characteristics, and the expectations of residents and workers for the delivery of services. For example, a rise in the elderly population might require an emphasis on senior services and facilities to meet these needs. A projected school student increase might necessitate expanded educational and recreational facilities. Future capital expenditures can be planned in a rational manner based on demographic factors and residents' expectations for services.

### **PUBLIC EDUCATIONAL FACILITIES**

The public school system represents one of the largest investments in public facilities required by a community. The Township's future, to a large extent, depends upon the community's ability to provide a sound, quality educational program in adequate facilities.

Deptford Township School district operates nine public schools and serves about 4,400 students. The following is a description of each of the schools:

**CENTRAL EARLY CHILDHOOD CENTER** – Opening in 2003, the school is a pre-kindergarten through second grade facility located on Delsea Drive next to the municipal building. It is the larger of two early childhood centers in the district, serving approximately 560 students.

**PINE ACRES EARLY CHILDHOOD CENTER** – Pine Acres, located on Purdue Avenue in the Pine Acres section of Deptford, serves approximately 250 students in pre-kindergarten, kindergarten, first and second grade. The school also features a class specifically

addressing learning disabilities. While originally constructed in 1964 as an elementary school, it was renovated and expanded in 2003 to meet the need for new services necessitated with its redesignation as an early childhood center.

**GOOD INTENT ELEMENTARY** – Originally constructed in 1960, the school expanded in 1967 and most recently in 1996. The school is responsible for educational programs for students in grades two through six, and is one of three such schools in the system. The facility also serves as the district’s specialized school offering educational support for elementary students whose primary language is not English. The school is located on Good Intent Road.

**LAKE TRACT ELEMENTARY** – Located on Fox Run Road, the school serves grades two through six. Over 400 students attend Lake Tract. The building was originally built in 1964 and expanded its facilities in 1973 to meet the needs of increased enrollment.

**OAK VALLEY ELEMENTARY** – Established in 1955, the school is located on College Boulevard and educates students in grades two through six. In 2007, the school enrolled 363 students.

**SHADY LANE ECC & ELEMENTARY** – Located on Peach Street, the school operates as both an early childhood center and an elementary school, hosting pre-kindergarten through six grade classrooms. The structure was originally completed in 1957, and expanded in 1973 and again in 2003, when it opened as an early childhood center.

**MONONGAHELA MIDDLE SCHOOL** – Located on Bankbridge Road, the school serves over 600 students in seventh and eighth grades. The facility was first built in 1964, and expanded in 1967 and 2001. In 2003, the building underwent a third renovation, adding an art suite, upgraded music facilities and handicapped accessibility improvements.

**DEPTFORD HIGH SCHOOL** – Located on Fox Run Road, the high school has approximately 1,200 students. While the building was originally constructed in 1959, the high school underwent an \$8.8 million dollar building and renovation project in 2003, which included the conversion of classrooms, an expansion of the cafeteria, upgraded music and athletic facilities and the addition of a new gymnasium.

**NEW SHARON** - The school is devoted exclusively to special education students ranging in ages from 8 to 21 years old. The school is located on Delsea Drive. The building first opened in 1924 as a one-room schoolhouse, and has subsequently expanded to a two story building with four classrooms. The District is reviewing New Sharon’s capacity to meet the needs of its special education population, and may opt to sell the facility in the near future.

The Deptford Township school system has undergone a steady increase in enrollment, rising almost 14% since 1998. In Table V-1, Deptford School Enrollment Trends, 1998-2006, the change in school enrollment is documented.

**Table V-1. Deptford School Enrollment Trends, 1998-2006.**

School Year*	Total Enrollment	% Increase
1998 – 1999	3,826	-
1999 – 2000	3,752	-1.9%
2000 – 2001	3,803	1.4%
2001 – 2002	4,035	6.1%
2002 – 2003	4,125	2.2%
2003 – 2004	4,183	1.4%
2004 – 2005	4,263	1.9%
2005 – 2006	4,285	0.5%
2006 – 2007	4,352	1.7%
<b>Total Increase 1998 – 2006</b>	<b>526</b>	<b>13.9%</b>

\* - As of October 15 of the school year.

Sources: NJ Dept. of Education, Deptford Board of Education

The Deptford Township Board of Education is responsible for the construction and operation of public educational facilities in the municipality. A number of buildings were expanded and renovated in 2003, as noted in the school descriptions. Though the Board of Education is serving nearly 4,400 students with the facilities it currently has, a number of schools are over capacity and the district as a whole is over capacity. The Board of Education is readying a response to school crowding.

In Table V-2, Deptford School Capacities, March 2007, a comparison of the design capacity of each school is compared with existing enrollment. Design capacity is determined through formulae developed by the NJ Department of Education that assigns necessary space for the functions carried on in the school district. The functions in turn are the result of the state mandated and optional educational programs run by the Board of Education.

**Table V-2. Deptford School Capacities, March 2007.**

School	Grades	2007 Enrollment	Design Capacity	Remaining Capacity	Date Built
Central Early Childhood Center	PK – 2	569	510	-59	2003
Pine Acres Early Childhood Center	PK – 2	259	214	-45	1964
Shady Lane EEC & Elementary	PK – 6	506	447	-59	1957
Good Intent Elementary	3 – 6	403	365	-38	1960
Lake Tract Elementary	3 – 6	406	430	34	1964
Oak Valley Elementary	3 – 6	363	374	11	1955
Monongahela Middle School	7 – 8	630	655	25	1964
Deptford High School	9 – 12	1,191	727	-464	1959
New Sharon	N/A	29	42	71	1924
<b>Total</b>		<b>4,356</b>	<b>3,764</b>	<b>-524</b>	

Source: Deptford Township Board of Education.

As noted above, Deptford Township's public school facilities have been expanded and renovated in recent years; however, due to rising elementary enrollments and space requirements for mandated programs such as special education, the District anticipates a need for additional facilities. Under the March 2007 enrollment levels, the following schools are operating beyond capacity: Central Early Childhood Center, Pine Acres Early Childhood Center, Shady Lane, Good Intent Elementary, and Deptford High School. The High School has the largest mismatch between its design capacity and enrollment. Its enrollment is 63.8% higher than its design capacity. Further, though the elementary schools and middle school have additional capacity, their enrollments will climb in the future due to the number of students that are in the early childhood centers today.

The Deptford Township Board of Education is reviewing the need for expanded facilities. It is currently proposing the following capital projects for a bond referendum requiring voter approval that is scheduled for December 11, 2007:

**MONONGAHELA MIDDLE SCHOOL** - The project will include a new 114,000 square foot addition to the existing middle school, which will house the seventh and eighth grade students. The addition will create 32 new classrooms, four science labs, a new gymnasium, a new cafeteria/stage with a satellite lunch operation, an administrative/nurse's suite, music and art rooms, and additional conference and faculty areas. After construction, the fifth and sixth grade students will be moved from the elementary schools to the middle school to create a fifth through eighth grade complex. The current building will also undergo renovations totaling 15,000 square feet. The target area will include the gym locker rooms, restrooms, and select classrooms.

SPECIAL EDUCATION ANNEX AT MONONGAHELA MIDDLE SCHOOL – An 11,000 square foot annex is proposed to replace the New Sharon facility. The addition to the middle school will create four classrooms, a multipurpose room, a nurse’s area, speech and testing rooms, a kitchen, a greenhouse, restrooms and storage areas. This will allow the better integration of special needs students with mainstream students.

DEPTFORD HIGH SCHOOL - The high school will add 30,000 square feet through the addition of a two story wing. The top level of the addition will hold eight new classrooms while the first floor will house five classroom science labs. The addition also includes the expansion of the present music area, providing space for new practice areas, an instrumental music room, an instrument storage facility, and a new dressing area. Moreover, the project also consists of an 8,000 square foot renovation project, which includes the reconfiguration of the band room area, the kitchen area, restrooms, and classrooms. The enrollment figures suggest that an additional expansion of the High School will be necessary beyond the immediate needs identified in the proposed bond referendum.

LAKE TRACT ELEMENTARY – The school will expand its kitchen.

The Deptford Township Public School District does not anticipate the need for additional athletic and recreational amenities, such as playing fields, at this time.

The siting of new educational facilities is the most crucial aspect of the master plan for the municipality. As presently disclosed, no new locations will be necessary to meet the current needs of the school district. Examining the High School property, most of the land is already earmarked for specific uses. A future major expansion of the school would require displacement of athletic fields or the acquisition of additional land. The High School joins Good Intent Elementary at the rear for a contiguous school property. The High School also adjoins Fasola Park. An ‘L’-shaped property adjacent to the high school has been identified as a potential open space acquisition in the Open Space and Recreation Element. Further, land to the south of Fasola Park has been identified for park acquisition. There may be a means for shared use of facilities to meet the goals of both the Township Council and the Board of Education for land uses in this area of Deptford.

#### **GLOUCESTER COUNTY INSTITUTE OF TECHNOLOGY**

Deptford hosts a number of specialized schools operated by the Gloucester County Board of Education that are located in association with the Gloucester County College campus between Tanyard Road and Rt. 55, south of Bankbridge and north of Salinas Roads. The Gloucester County Institute of Technology (GCIT) is a vocational education facility that

combines academic course work with hands on training in a multiplicity of fields and trades. The school offers coursework in the following fields of study: transportation technology, construction, culinary arts, cosmetology, law enforcement, fire science, and graphic technologies.

In addition to operating as a high school, GCIT offers adult programs for persons seeking to earn their high school diploma after being in the work force and post-secondary courses to improve and learn new skills. This is known as the Adult Regional High School in GCIT. GCIT is also home to two special education services, Bankbridge Regional School and the Alternative High School.

#### **PRIVATE AND PAROCHIAL SCHOOLS**

Deptford Township is home to four parochial schools which provide Deptford residents with alternative options to the public school system. These are Bethany Baptist Christian School, Delaware Valley Junior Academy, Most Holy Redeemer, and St. John of God.

Founded in 1997, Bethany Baptist Christian School offers academic programs from kindergarten through high school. During the 2006-2007 school year, the facility enrolled 14 students. Bethany Baptist Christian School does not currently have any plans for expansion.

The Delaware Valley Junior Academy, located on Sickel Lane, was established in the 1950's as an educational facility associated with the Seventh Day Adventist Church. The school serves students in kindergarten through eighth grade. The school's 2006-2007 enrollment is 47 students. The Academy does not anticipate the need for expansion in the coming years.

Located on Delsea Drive, Most Holy Redeemer is a Roman Catholic school that serves kindergarten through eighth grades. The school enrolled 175 students in the 2006-2007 academic year. The Camden Archdiocese has moved ahead with plans to merge Most Holy Redeemer with St. Patrick's in Woodbury and St. Matthew's in National Park. The consolidated school will operate out of the current Most Holy Redeemer facility. The enrollment for the 2007-2008 academic year is 100 pupils higher, or 275 in total. While the existing facility meets the needs of its current enrollment, a number of modular classrooms will be added to accommodate this increased student population. The school estimates that it will utilize the modular classrooms for up to three years. In that time period, the Diocese will evaluate enrollment trends and the need for a permanent expansion.

St. John of God Special Education Day School on Delsea Drive is a fully accredited day school that provides intensive educational programs for students with disabilities. The

school offers traditional academic activities in conjunction with life skills and community based instruction. The students range in age from 3 to 21.

### **HIGHER EDUCATION**

Gloucester County College is located on the same campus as the Gloucester County Institute of Technology. Accredited by the Middle States Commission on Higher Education, the College offers over 90 certificate and degree programs. The diverse courses of study include nursing and allied health programs, business and technical studies, health, physical education, and recreation, arts and sciences, and public safety. The Gloucester County College also offers continuing education programs to residents within and outside of the County. The College conveys associate degrees with a normal matriculation of two years.

The 270-acre college campus is home to an early childhood education center, the Virginia N. Scolt Center for Science and Technology, and the Police Academy. The College emphasizes the connection between academic programs and local businesses through its role in the Business and Industry Training Center, which is located in West Deptford. An important economic development tool for Gloucester County, the Business and Industry Training Center serves as a business incubation program.

In the Fall 2006 semester, Gloucester County College enrolled 5,800 students. While the enrollment numbers remained constant between the 2005/2006 academic year and the 2006/2007 academic year, more students shifted from part time to full time enrollment. Thus, while enrollment rates remained steady, the College experienced a 1.5% growth in credit hours over the past year.

This shift in enrollment status is contributing to the College's growing demand for additional classroom space. Gloucester County College currently meets its facility needs via creative scheduling and partnerships with the nearby Gloucester County Institute of Technology and the Special Services District. Through the partnership, the College gains access to additional classroom space during off peak hours. While the College is currently operating at capacity, Gloucester County is in the process of developing a shared facility plan to address its capacity shortfalls. Design studies are in their preliminary conceptual stage for future buildings. Though the College plans an expansion, it is envisioned that all of the necessary construction can take place on the existing campus. The College anticipates presenting its plans to the Deptford Planning Board in 2007.

## MEDICAL SERVICES

Residents of Deptford Township are located in close proximity to the Underwood Memorial Hospital in Woodbury. Serving Gloucester County and portions of Salem and Camden counties, Underwood Memorial Hospital is a 305-bed, acute care facility that provides diagnostic, therapeutic, and rehabilitative services. The hospital employs over 1,700 full and part-time staff, which includes 400 individuals who specialize in medical dentistry.<sup>1</sup>

The Underwood Memorial Hospital launched a campus redevelopment initiative with a budget of \$46 million. The project will result in the expansion of the emergency department and the department of physical medicine and rehabilitation, the construction of a new medical office building that will house the family practice center, nursing education and outpatient ambulatory patient services, and the creation of a new parking garage.

Additionally, residents of Deptford Township have access to the Cooper University Hospital health system, which operates three locations in Gloucester County for outpatient care. The Cooper University Hospital health system offers a network of comprehensive services, including prevention and wellness, primary and specialist physician services, ambulatory diagnostic and treatment services and home health care.<sup>2</sup> The three medical complexes are located in Thorofare (West Deptford Township), Washington Township, and Woodbury. Each office offers a distinct menu of services.

The Kennedy Health System also services Gloucester, Camden, and Burlington Counties. Kennedy is an integrated healthcare system that provides a wide range of services, ranging from acute-care hospital to outpatient services.<sup>3</sup> Kennedy has hospital locations in Cherry Hill, Stratford, and Washington Townships, and employs over 3,500 persons.

## PUBLIC SAFETY SERVICES

The Deptford Township Police Department is charged with the responsibility of providing for safety and security in the Township. The Department utilizes a multi-faceted approach to policing, which includes a traffic safety unit, a patrol division, a detective division, community policing, and a school resource office program. The Department uses this integrated strategy to prevent crime and enforce laws. The Department recently announced, in partnership with the Gloucester County Prosecutor's office, a training program for governmental personnel named Gloucester County on

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1 - <http://www.umhospital.org/about/index.html>

2 - <http://www.cooperhealth.org/content/AboutUs.htm>

3 - <http://www.kennedyhealth.org/About+Us.htm>

Patrol (GCOP). The program trains existing personnel outside of the police force to be alert to suspicious activity and to report it to law enforcement.

The Township's Police Chief oversees the Department's personnel, which includes 71 full time sworn police officers and five civilian employees. Of the 71 officers, eight have completed the Special Law Enforcement Officer, Class One, Program (SLEO I) and have become SLEO I officers.

While the Police Department is headquartered at the municipal building, the Department has a substation located at the Deptford Mall. Three officers and a supervisor are stationed at the mall, and the sub-station and its personnel are funded entirely by the mall management. The Police Department and the management of the Deptford Mall are exploring the possibility of opening a larger sub-station at the Mall, which would house the Special Operations Division. If the sub-station is expanded, it would house four additional officers, for a total of eight officers. This expansion at the Mall would free up office space at the municipal building. Even with the operations planning effort underway (see below), it is not anticipated that the Police Department would need an expanded facility at the municipal building.

The Deptford Township Police Department currently has 40 vehicles, the majority of which are Ford Crown Victoria patrol cars. Under the current budget, the Police Department has allocated resources for ten new Dodge Charger police cars.

The Department is also in the process of completing a five year plan that addressing the residential and commercial population growth in the Township. The plan identifies the need for additional officers, and possible funding mechanisms for the proposed increase in personnel totals.

### **EMERGENCY SERVICES**

The Deptford Township Emergency Services Division provides 24 hour service. Based in the municipal complex, the Division dispatches crews to Underwood Memorial Hospital, Kennedy Health System, and Cooper University Hospital for Level 1 trauma cases.

Emergency Services evolved from an all-volunteer organization into a professionally staffed municipal agency in 1996. In 1997, the EMS Division received licensure and certification from the New Jersey Department of Health. Emergency Services is overseen by the Deptford police chief and operates under the direction of the Director and Deputy Director of Emergency Services, along with four other supervisors. The Division's staff is composed of 10 full time and 25 part time employees. Throughout the week, the Division enlists two paid crews between 8 a.m. and midnight, and one paid

crew between midnight and 8 a.m.

The Deptford Township Emergency Services Division operates on an annual budget of \$725,000. The Division has five ambulances to service the entire Township and to provide mutual aid to surrounding municipalities. Emergency Services is currently able to meet the demand for its services which average 3,900 incidents per year. The Service has indicated the capital need for a regular program of ambulance replacement.

Gloucester County has announced its intention of creating a county-wide EMS service and hopes to include all 24 existing EMS organizations, including Deptford's; however, joining the system would be voluntary. Two municipalities, Glassboro and Clayton, have expressed interest.

**FIRE SAFETY SERVICES**

Deptford Township is protected by a 121 person Fire Department, consisting of 100 volunteer firefighters and 21 career personnel, which include the Department Chief and the Fire Marshall. Four fire fighting battalions operate in eight fire stations located throughout the Township. Three of the stations are staffed by both professional and volunteer firefighters. The remaining five stations employ volunteers only.

The career personnel work between 6 a.m. and 6 p.m., with volunteers manning the stations after 6 p.m. While the Township has a long history of a volunteer-based fire safety unit, the Fire Department has noticed a decline in new volunteer numbers – a trend observed throughout the state. In fact the Board of Fire Commissioners cited a critical lack of volunteer personnel at the Mail Avenue Station, which may lead to its future consolidation with another station.

Table V-3, Battalion Deployment by Station, breaks down the location of the Township's firefighters by staffing status.

**Table V-3. Battalion Deployment by Station.**

<b>Battalion</b>	<b>Station</b>	<b>Staffing Status</b>
Battalion 1	Oak Valley Fire Co. No. 1 595 Princeton Blvd.	Volunteer Only
Battalion 2	Tacoma Fire Co. of Westville Grove 768 Tacoma Blvd.	Professional/Volunteer
	Helping Hand Fire Co. 94 Fischer Street	Volunteer Only
Battalion 3	Union Volunteer Fire Co. No. 1 2401 Good Intent Road	Professional/Volunteer
	Almonesson Lake Volunteer Fire Co. No. 1 1700 Almonesson Road	Volunteer Only
Battalion 4	New Sharon Volunteer Fire Co. No. 1 1370 Delsea Drive	Professional/Volunteer
	Jericho Fire Co. Mail Avenue	Volunteer Only
	Community Volunteer Fire Co. No. 1 630 Tanyard Road	Volunteer Only
Board of Fire Commissioners 1370 Delsea Drive		Elected

Source: Deptford Township Fire Department, 2007.

Each of the members of the Fire Department is certified by the New Jersey Division of Fire Safety and new recruits are required to attend an NJDFS certified training program at the Gloucester County Fire Academy held locally at Gloucester County College. Additionally, Table V-4, Specialized Fire and Emergency Services Training, 2007, lists specialized training areas and the number of Township firefighters who participated in the training.

**Table V-4. Specialized Fire and Emergency Services Training, 2007.**

<b>School</b>	<b>2007 Enrollment</b>
First Responder Medical Training	32
Emergency Medical Technician	25
Defibrillator Certification	25
Heavy Rescue/Extrication	42
Confined Space Rescue Training	32
High Angle Rescue Training	25
Marine Rescue Training	25
Ice Rescue Training	20
Certified Fire Inspectors	21
Fire Investigation	10
N.J. Certified Instructors	21
Structural Collapse Rescue	32

*Source:* Deptford Township Fire Department, 2007.

The Board of Fire Commissioners, which was created by Township Council in 1965, governs the Fire Department. The Commission is comprised of five commissioners, who are elected to serve staggered three year terms. The Commission is responsible for overseeing the funding for the Township's fire district and for identifying the Department's apparatus needs.

Currently, the Fire Department's fleet of apparatus consists of twelve engines, nine cars, two power wagons, two ladder trucks, three marine vehicles, one rehab unit, one foam trailer, one utility truck, one quint truck, one maintenance truck, one canine unit and one safety officer vehicle. The Department adheres to an Apparatus Replacement Schedule, which governs the Department's capital investment in equipment until 2025. The Schedule recommends that the Department purchase one truck per year or two trucks every two years. The Township Council continues to follow this schedule and does not expect additional equipment needs.

In 2006, the Deptford Township Fire Department responded to 1,552 calls for assistance, which is a 12% increase since 2005 and a 90% increase since 2001. As the level of residential and commercial development in the Township increases, the Fire Department will require additional personnel and stations. In fact, the Department is currently evaluating the prospective need for transitioning to 24 hour professional staffing within the next five to seven years. The change will be based primarily on volunteer recruitment, the possible addition of a rail station in the Township, and commercial growth.

The Fire Department is also assessing its facility needs. The Fire Administration building, located on Delsea Drive, does not meet the Department's needs. The Board of Fire Commissioners is looking for property to construct a new fire administration building that would allow the Department to consolidate the fire administration with a new or expanded station.

Moreover, the Department also anticipates the need for new fire stations. Owned by the volunteer fire companies, the current fire stations date back to as far as 1912. While outdated, the stations currently meet the Department's needs. However, if the Department transitioned to 24 hour professional staffing, the stations would not be available for use, as the volunteer fire companies are unwilling to sell the properties. The Board of Fire Commissioners is developing a plan to address future stations needs, which could involve either leasing the space from the existing stations or constructing new stations throughout the Township.

#### **LIBRARY**

The Deptford Township Public Library, located on Ward Drive, boasts a healthy resource collection, including 65,000 volumes, 200 periodicals, 2,000 videos/dvds, and 3,000 audio books. The library also has eight public computers with Internet access. Additionally, the facility serves as a community center. The library provides meeting space for community meetings, educational and recreational programs, and information on Township programs and resources.

The publicly funded library is governed by the Deptford Library Board of Trustees. The facility employs approximately 7 full time staff members and 12 part time staff.

The library currently occupies an 11,253 square foot structure. The building was originally designed as a 5,000 square foot senior center. The library moved into the building in 1970. In 1988, the building was expanded to its current size to accommodate its growing collection. The Deptford Library Board of Trustees is planning a 3,000 square foot addition within the next two to three years. The expansion will house a new computing center for Township residents.

#### **MUNICIPAL BUILDING**

Located on Cooper Street, the municipal building houses the Township's fifty administrative staff and professionals, the Emergency Services Division and the Police Department. The 30,000 square foot facility was opened in 1980 and currently meets the Township's needs for space. The Township does not anticipate the need for expansion. Renovation and replacement is expected to be limited to mechanical systems

and cosmetic improvements.

### **MUNICIPAL RECREATION FACILITIES AND SENIOR CENTER**

Deptford Township offers a host of recreational amenities, which are discussed in more detail in the Parks and Recreation Element. Additionally, the Township provides indoor recreational outlets at the Township Recreation Center, which is located on Montague Lane, just off Almonesson Road. The Center includes a basketball gym, wrestling room, an all purpose meeting room and office space, bathrooms and shower facilities. Deptford recognizes that there is increasing demand for indoor recreational amenities, specifically the need for a health and wellness facility. The Township is also experiencing a growing demand for additional basketball facilities.

Deptford also provides recreational programming for its senior population at the Township's Senior Center. Located on Tanyard Road, the Senior Center serves as a gathering place for seniors and is equipped with a pool table, piano, TV area, kitchen facilities, and a bocce ball court. Programming at the Center includes Tai Chi, a card club, and line dancing among others.

The municipal senior center is supplemented by two private facilities, one located in Lakes of Bankbridge and the other in Heritage Village. Both of these centers are owned by their respective homeowners' associations and are in age-restricted neighborhoods.

The Locust Grove homeowners' association also operates a community center for its residents, along with outdoor recreational facilities.

Despite these public and private efforts, demographic trends in Deptford as elsewhere herald the need for additional community center space. Fasola Park has been identified as a potential location for another community facility because of its central location within the municipality. Another potential location would be at Whispering Lakes should the Township be successful in acquiring this parcel for open space purposes.

### **RELIGIOUS AND FRATERNAL ORGANIZATIONS**

Adding to the social fabric of Deptford is its strong network of religious and fraternal organizations. Table V-5, Religious Organizations, lists the religious organizations with buildings in Deptford. Table V-6, Fraternal Organizations, indicates the fraternal organizations established in the municipality.

Table V-5. Religious Organizations.

Religious Organizations	Address
Almonesson United Methodist Church	1300 Hurffville Road
Bethany Baptist Church and School	439 Delsea Drive
Bethel Community Church	439 Oak Avenue
Blessed Hope Community Church	115 Andaloro Way
Calvary Bible Church	1428 Delsea Drive
Campbell AME Church	220 Park Avenue
Delaware Valley Junior Academy	240 Sickel Avenue
First Baptist Church	981 Mail Avenue
Friends of Israel Gospel Ministry	1129 Almonesson Road
Gospel Church of God in Christ	940 Boundry Road
Guru Nanak Sikh Society	1960 Delsea Drive
John 3:16 Assembly of God, Deptford	1114 Tanyard Road
Most Holy Redeemer Roman Catholic Church and School	1215 Delsea Drive
Mt. Zion Wesley United Methodist Church	1470 Glassboro Road
New Life Bible Church	1003 Jericho Lane
New Sharon Methodist Church	1831 Delsea Drive
Seventh Day Adventist Church	Good Intent Road
St. John of God School	1185 Delsea Drive
St. John Vianney Roman Catholic Church	2907 Good Intent Road
The Greater Promise Prim Baptist Church	900 Tanyard Road
United Methodist Church	1674 Almonesson Road
Victory Baptist Church	777 Maple Road

Source: Deptford Township Tax Assessment Records.

Table V-6. Fraternal Organizations in Deptford.

Fraternal Organizations	Address
Semper Fi Detached Marine Corp. League	344 Harvey Avenue
Veterans of Foreign Wars, Post 2174	640 Tacoma Blvd.
Deptford ELKS, Lodge No. 2708	733 Highland Avenue

Source: Deptford Township Tax Assessment Records.

**SUMMARY AND RECOMMENDATIONS**

The Township has employed an incremental approach to the provision of municipal services as the population has grown. This is a fiscally prudent course and provides the services as they are needed. Subsequently, the facilities operated by the municipality, except in a few instances, are sufficient for the needs of residents. Several recommendations, however, are included for future planning efforts by the municipality. These are listed below.

- 1) Work closely with the Deptford Township Board of Education on land uses, transportation and recreation facilities around the Deptford High School to facilitate shared use.
- 2) Examine the need and placement of new fire stations in the Township based on potential reorganization and future growth in conjunction with the Board of Fire Commissioners.
- 3) Identify funding mechanisms for the expansion of police personnel.
- 4) Institute a Township survey of indoor recreational facilities, their capacity, and current and future demand for alternative amenities, such as a health and wellness facility. This might be accomplished through the Township's newsletter or website.
- 5) Promote the use of Gloucester County College as a resource for future business development activities and incubator space.
- 6) Decide on the need for an additional community center and determine its best location, if the need is warranted.

# Circulation Element

## INTRODUCTION

Circulation is the ability to travel by motor vehicle, bicycle, and foot in and through Deptford. The Circulation Element examines the transportation network of streets, sidewalks and pathways that provide mobility for commuters, residents, business owners and visitors. Deptford is embedded in a metropolitan area within a regional transportation network that influences travel behavior and land use. While cognizant of this regional network, this document takes a more local view of the transportation system and its influence on the policies of the Land Use Plan Element. In the Circulation Element, the focus is mostly on the street network but it also includes a description of existing and proposed public transportation and the bicycle/pedestrian system.

## DEPTFORD'S REGIONAL PLACEMENT

Deptford Township is located in the heart of the New Jersey sub-area of the Philadelphia Metropolitan region. Deptford has become a crossroads and is the locus of main through routes from Philadelphia to southern New Jersey shore destinations as well as the northeast corridor highway system. The Township is bisected by every major highway in southern New Jersey with the exception of the Garden State Parkway. Interstate 295 runs along the northern boundary of Deptford. Partial interchanges at Broad Street (Route 45) in next door Woodbury and at Evergreen Avenue (Rt. 551) in Deptford provide access to the northbound lanes of the interstate. Nearby interchanges at N. Delsea Drive (Route 47) in Westville provide additional access to the highway. Route 42, the North-South Freeway, skirts the northeastern portion of the township and the equivalent of a full interchange is provided by ramps at Clements Bridge Road (Rt. 544) and Hurffville Road (Rt. 41) near the Deptford Mall. Route 55, one of the newest limited access highways in the state system, runs north to south through the entire length of the Township providing direct access to Camden and Philadelphia just to the north and to the Millville-Vineland areas and eventually the Cape May County shore points to the south. The New Jersey Turnpike also traverses the northerly half of the Township, but the closest exit, no. 3, is located in Runnemede in Camden County and does not provide any local benefit.

Within the southern New Jersey region, Deptford's convenient location along major commuting routes has created the conditions for its regional concentration of retail centers. With the opening of the Deptford Mall in 1976, significant secondary shopping centers surrounding it have been constructed in two different waves, one in

the late 1980's and the other one from the early 2000's to today. Commuting traffic creates congestion during the weekdays and this concentration of retail services in Deptford's northeast quadrant has also instigated highly congested conditions during weekends, especially during the end of year holiday buying season.

High rates of growth, especially in central and southern Gloucester County have led to increasing levels of commuter traffic on Route 55 and on other major north-south arterials like Hurffville Road and Delsea Drive, particularly during peak periods. The popularity of the Jersey Shore, some 30-50 miles to the east, also creates highway congestion during summer months. The County as a whole has lacked east-west routes because of the radial pattern of development that fanned out from Philadelphia to the Atlantic Coast. Periodic attempts to create a better system for east-west mode of travel have floundered either on myopic highway planning in the 1950s (the I-295 kink; no I-295 north to Rt. 42 south ramp) or from determined local opposition (the Rt. 322 freeway). Residential and commercial growth has also made the Township's relative lack of east-west roads more apparent as streets like Cooper Street (Rt. 706) and Clements Bridge Road now experience heavy levels of traffic.

#### **LAND USE, TRANSPORTATION AND CONGESTION**

In transportation planning, it is a well established doctrine that how land is used affects the circulation system. Rural areas dominated by agriculture clearly have less traffic than a shopping center. 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 Classifications, below, and the Land Use Plan Element). This is evident in Deptford where the retail concentration that characterizes the municipality's non-residential development is clustered around the convergence of highways in its northeast region.

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 by the number of vehicles attempting to use it. During the weekday, one hour within the time frame of 7:00 to 9:00 a.m. is usually the morning peak hour and another hour within the 4:00 to 6:00 p.m. is the afternoon peak hour. Traffic in the afternoon on a weekday typically

has a longer time when congestion occurs. During the school year, congestion in mid-afternoon starts with school dismissal. Congestion also extends later due to commuters stopping at stores before heading home for the evening. On the weekends, however, the peak hour usually occurs in the 12:00 to 2:00 p.m. time slot. With the extension of store hours on Sundays, Sundays and Saturdays now have similar travel characteristics.

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 signal. Most, if not all signals in Deptford are under the jurisdiction of the state or Gloucester County. Which segments and intersections of the Township's road system have the greatest capacity constraints has not been systematically studied; however, two have been identified as needing further study and likely improvement: Almonesson Road with the Intersection of Rt. 55 off ramp/Deptford Center Road and Five Points (Rts. 41 and 47 with Barnsboro-Blackwood Road).

#### **ACCIDENT DATA AND IDENTIFIED CONGESTION POINTS**

Another means of identifying congestion problems is through the analysis of accident data. Accident data can also be used to identify road segments that have geometric problems. These might include poor sight distance, sharp curves, or inadequate shoulders, as examples. Signal timing may be at issue where inadequate time is given for cross traffic or left hand turns, resulting in ill-judged attempts to traverse an intersection that causes an accident.

The Deptford Police Department along with the New Jersey Department of Transportation compiles crash and accident data for all roads and intersections in the Township. This information is important for determining where engineering or other improvements are necessary to improve safety and traffic flow. Crash statistics compiled for the last 5 years (2002-present) reveal that over 10,000 crashes occurred on Deptford Roadways as well as on private property like the Deptford mall. The table below present the 10 most dangerous intersections in Township based on the number of crashes over the last 5 years:

**Table VI-1. Highest Accident Locations in Deptford, 2002- July 2007.**

Rank	Road Name	Cross Street	Number of Crashes
1	Almonesson Road (CR 621)	Clements Bridge Road (CR 544)	250
2	Delsea Drive (Route 47)	Cooper Street (CR 534)	249
3	Hurffville Road (Route 41)	Deptford Center Road	218
4	Hurffville Road (Route 41)	Clement Bridge Road (CR 544)	184
5	Almonesson Road (CR 621)	Deptford Center Road	180
6	Hurffville Road (Route 41)	Cooper Street (CR 706)	162
7	Delsea Drive (Route 47)	Hurffville Road (Route 41)	157
8	Clements Bridge Road (CR 544)	Route 42 ramp	138
9	Delsea Drive (Route 47)	Bankbridge Road	101
10	Cooper Street (CR 534)	Clement Bridge Road (CR 544)	75

*Source:* Deptford Township Police Department

With the exception of Delsea Drive and Bankbridge Road all other intersections on the top ten list are located in the vicinity of the Deptford Mall and near the Township's retail concentrations along Cooper Street, Almonesson Road, and Clements Bridge Road. As these roads are the most highly traveled in the Township, it is not surprising that they would experience the most accidents. What is surprising, however, is the high overall number of crashes in the Township given Deptford's size. 10,000 accidents over 5 years equates to an average of more than 5 a day. Further analysis is recommended, particularly at the most dangerous intersections, to see if safety improvements, ranging from retiming signals, to improving road geometries, could reduce accident rates and create safer conditions.

### ROAD JURISDICTION

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 Deptford. Private roads such as those serving apartment buildings, townhouse developments and office 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-2 below enumerates the total number of miles under each level of government.

**Table VI-2. Road Miles by Governmental Jurisdiction in Deptford.**

<u>Jurisdiction</u>	<u>Number of Miles</u>
U.S. & New Jersey	22.27
Gloucester County	26.41
Deptford Township	<u>80.62</u>
Total	128.58

*Sources:* NJDOT, 1989 Deptford Master Plan, and CCH calculations.

Table VI-3 lists the roads under state and county jurisdiction in Deptford. These include the following:

**Table VI-3. Federal, State and County Roads in Deptford.**

NATIONAL HIGHWAY SYSTEM ROADS:

Interstate 295  
 New Jersey Turnpike  
 Route 42 (North-South Freeway)  
 Route 55

NEW JERSEY STATE ROADS:

Route 41 (Hurffville Road)  
 Route 42 (North-South Freeway)  
 Route 45 (Mantua Pike)  
 Route 47 (Delsea Drive)  
 Route 55

GLOUCESTER COUNTY ROADS:

Good Intent Road/Cooper Street (County Route 534)  
 Clements Bridge Road (County Route 544)  
 Woodbury-Glassboro Road (County Route 553)  
 Blackwood-Barnsboro Road (County Route 603)  
 County House Road/Almonesson Road (County Route 621)  
 Tacoma Boulevard/Andaloro Road (County Road 644)  
 Caulfield Avenue (County Route 645)  
 Deptford Avenue/Turkey Hill Road (County Route 646)  
 Fox Run Road/Bankbridge Road (County Route 647)  
 Tanyard Road (County Route 663)  
 Cooper Street from Good Intent Road to  
 Camden County line (County Route 706)

*Source:* NJDOT

Cattell Road (formerly County Route 665) is now under the jurisdiction of the Township.

Road jurisdiction roughly reflects the functional relationship between governments in the use of streets and highways. 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. However all systems are based on the principal of balancing mobility with access. In addition, they are all organized around a sliding scale; the higher the order of roadway, the greater emphasis is placed on mobility, the lower the order of roadway, the greater emphasis is placed on access to abutting land. The first system, utilized by the Master Plan, creates a system of roads labeled as Principal Arterial, Major Arterial, Minor Arterial, Major Collector, Minor Collector, and Local as these roads function within the municipality. The road designations are shown on the Circulation Plan at the end of this document. A second classification of roads is based on the Federal Highway Administration's (FHWA) definitions.<sup>1</sup> This classification is highway oriented covering the interstate and regional highway network. The character of the traffic using this system determines its classification. The FHWA classification is extended in this element to cover Gloucester County's classification of their road network. The third 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. RSIS roads form the large majority of the streets under Deptford's jurisdiction.

### **CIRCULATION PLAN CLASSIFICATION**

For the purposes of the Master Plan, all roadways in the Township have been divided into one of six categories in a scheme similar to that of the FHWA, but in a more precise manner better suited to a Township-level analysis.

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<sup>1</sup> - Under the Municipal Land Use Law, the Circulation Element is required to consider the FHWA classification scheme.

CIRCULATION PLAN-PRINCIPAL ARTERIALS

Principal arterials, as their name suggests, act as the primary thoroughfares to move large volumes of traffic on a regional scale through the Township. Generally, principal arterials are designed for and carry a volume of traffic that exceeds 25,000 vehicles per day on an annualized basis (AADT). Also included is Rt. 45 which has a lower volume of existing traffic but which is designed with a capacity able to handle more than 25,000 vehicles AADT. Rt. 45 carries 18-19,000 vehicles per day. Table VI-4 lists the principal arterials in the Township.

**Table VI-4. Principal Arterial Roads in Deptford Township.**

<u>Name</u>	<u>Segment</u>	<u>No. of Lanes</u>	<u>Jurisdiction</u>
Interstate 295	Entire Length	6	State
NJ Turnpike	Entire Length	4	State
Route 42	Entire Length	6-8	State
Route 55	Entire Length	4	State
Route 45	Entire Length	4	State
Clements Bridge Road	Locust Grove Blvd. to County Line	2-4	County

CIRCULATION PLAN-MAJOR ARTERIALS

Major Arterials carry heavier levels of traffic, typically in excess of 10,000 but less than 25,000 vehicles AADT, and constitute the main routes of travel for commuters and shoppers through the Township. They may have more than two lanes of traffic or may be expanded to that size. Examples include Cooper Street, Hurffville Road, and Delsea Drive. Table VI-5 lists the major arterials in the Township.

**Table VI-5. Major Arterial Roads in Deptford Township.**

<u>Name</u>	<u>Segment</u>	<u>No. of Lanes</u>	<u>Jurisdiction</u>
Woodbury-Glassboro Rd.	Entire Length	2	County
Delsea Dr.	Entire Length	2	State
Hurffville Rd.	Entire Length	2-4	State
Almonesson Rd.	NJ Turnpike to Deptford Center Rd.	4-5	County
Cooper St.	Entire Length	2-4	County
Clements Bridge Rd.	Cooper St. to Locust Grove Blvd.	2-4	County
Deptford Center Rd.	Entire Length	4	Municipal
Blackwood-Barnsboro Rd.	Entire Length	2	County

## CIRCULATION PLAN-MINOR ARTERIALS

Minor arterials carry lesser levels of traffic, typically greater than 3,000 ADT but less than 10,000 ADT and are usually two lanes. 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, though intersection improvements are warranted in certain circumstances to add stacking lanes for left hand turns. Most minor arterial roadways in the Township are under the jurisdiction of Gloucester County. Table VI-6 lists the streets designated as minor arterials in Deptford Township.

**Table VI-6. Minor Arterial Roads in Deptford Township.**

<u>Name</u>	<u>Segment</u>	<u>No. of Lanes</u>	<u>Jurisdiction</u>
Broadway	Entire Length	2	County
N. Evergreen Avenue	Entire Length	2	County
Ogden Road	Entire Length	2	Municipal
Tacoma Blvd.	Woodbury City to Deptford Ave.	2	County
Deptford Ave.	Tacoma Blvd. to Delsea Dr.	2	County
Almonesson Rd.	Westville Border to NJ Turnpike	2	County
Almonesson Rd.	South of Deptford Center Rd.	2	County
Good Intent Rd.	Entire Length	2	County
Tanyard Rd.	Entire Length	2	County
Cattell Rd.	Entire Length	2	Municipal
Bankbridge Rd.	Entire Length	2	County
County House Rd.	Entire Length	2	County
Salina Rd.	Entire Length	2	Municipal

## CIRCULATION PLAN- MAJOR/MINOR COLLECTORS

Collector streets play the critical role of connecting local, residential streets with arterial highways as well as other residential streets. Collectors are in the middle of the mobility-access scale and thus provide both land access and traffic circulation in residential, commercial, and industrial areas. Unlike arterials, they penetrate residential neighborhoods and distribute and channel trips between those neighborhoods and larger roads. Most of the larger collector roads in the Township are maintained by the County while the smaller collector roads tend to be under the Township's jurisdiction. Tables VI-7 and VI-8 below, list the major and minor collector roads in the Township.

**Table VI-7. Major Collector Roads in Deptford Township.**

<u>Name</u>	<u>Segment</u>	<u>No. of Lanes</u>	<u>Jurisdiction</u>
Tacoma Blvd.	Deptford Ave. to Delsea Dr.	2	County
Deptford Ave.	Tacoma Blvd. to Woodbury City	2	County
Turkey Hill Road	Entire Length	2	County
Caulfield Avenue	Entire Length	2	County & Municipal
Locust Grove Blvd.	Entire Length	2	Municipal
Highland Ave	Entire Length	2	Municipal
Fox Run Road	Entire Length	2	County

**Table VI-8. Minor Collector Roads in Deptford Township.**

<u>Name</u>	<u>Segment</u>	<u>No. of Lanes</u>	<u>Jurisdiction</u>
Andaloro Way	Entire Length	2	County
Village Blvd.	Entire Length	2	Municipal
Clover Dr.	Entire Length	2	Municipal
Narraticon Pkwy./ Merrimac Way	Entire Length	2	Municipal
Mail Avenue	Entire Length	2	Municipal
Boundry Road	Entire Length	2	Municipal
College Blvd.	Entire Length	2	Municipal
Princeton Blvd.	Entire Length	2	Municipal
Bark Bridge Rd.	Entire Length	2	Municipal
First Avenue	Entire Length	2	Municipal
Pennsylvania Ave./ Chestnut Avenue	Entire Length	2	Municipal
International Avenue	Entire Length	2	Municipal

These form the roadway classification scheme found on the Circulation Plan at the end of this document. Following are two other classification schemes, the Federal Highway Administration and the Residential Site Improvement Standards and their relationship to the master plan.

#### **FHWA CLASSIFICATION SYSTEM**

The Federal Highway Administration classifies roadways based on their functional characteristics and their location within either a rural or urban setting. Accordingly, roadways in areas defined as “urban”, like Deptford, fall into one of four categories- Principal Arterial, Urban Minor Arterial, Urban Collector, or Local. The FHWA categories have important implications for the distribution of federal highway dollars, and are utilized by the New Jersey Department of Transportation (NJDOT) to

determine highway design and funding priority. However, they have little practical application when focusing on the more local system described in the preceding section. This system is important, nonetheless, when recommendations and action items are identified that involve FHWA approval and funding. The design and construction of the Deptford Center Road extension (see below) is the one project proposed that involves NJDOT and the FHWA because of the changes it requires at the Rt. 55 interchange. The following paragraphs discuss how the roadway system in Deptford is categorized based on the federal classification system.

#### FHWA-PRINCIPAL ARTERIALS

Principal Arterials are intended to handle large volumes of regional and through traffic. Principal Arterials include Interstate 295 and the New Jersey Turnpike. In addition, the FHWA also considers Rt. 55, Rt. 42, Rt. 45 (Mantua Pike), Clements Bridge Road (County 544) and Cooper Street (County 534 from Clements Bridge to the Woodbury line) to be Principal Arterials. Highways of this type are intended for large volumes of traffic in urban areas, such as Deptford. The fundamental characteristic of the principal arterial's function is to carry through traffic. All of the highways noted above are designated as Urban Principal Arterials. Daily traffic counts indicate the high usage of these roads. For example, Rt. 55 carries about 64,500 vehicles per day in Deptford in the vicinity of the Deptford Mall and Clements Bridge Road carries approximately 17,000 vehicles per day (2005 count). Principal Arterials are part of the National Highway System. 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.

#### FHWA-URBAN MINOR ARTERIALS

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. According to the FHWA, urban minor arterial streets provide intra-community travel, do not cut through neighborhoods, and are generally spaced no more than 1 mile apart in fully developed areas. In Deptford, these roads are largely under Gloucester County's jurisdiction. As discussed above, this category is divided into two classes for the purposes of the Circulation Plan: Major and Minor Arterials. However, the FHWA combines these categories into only the Urban Minor Arterial category. Examples of urban minor arterials are Glassboro Road and Delsea Drive.

#### FHWA- URBAN COLLECTORS

Collector streets are the next lower step in the street hierarchy. Collectors also distribute traffic between urban minor arterial streets. Urban collector streets provide access to individual lots and provide traffic circulation within neighborhoods

in larger subdivisions such as Oak Valley. 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).

#### FHWA – LOCAL

All other streets are considered local streets by the Federal Highway Administration. These constitute by far the highest percentage of lane miles in the United States.

#### 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 preempts 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.

The RSIS established a hierarchy of streets attuned to residential development. The RSIS classifications have some commonality with the FHWA terms, but are defined somewhat differently. All of the streets noted in this section are considered either urban collectors or local streets in the FHWA classification system. The RSIS establishes the following street hierarchy:

The highest order of residential street is called a *Major 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 Deptford, most neighborhoods have been designed without major collectors due to the comparatively small number of housing units in any one location. Many of the Township's residential areas were constructed before the hierarchy of streets concept was established. The best example of a properly designed major collector is Locust Grove Boulevard, where traffic from the development is collected from minor collectors or sub-collectors and distributed to the arterial order of street.

*Minor Collector* is a middle order residential street. 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 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. College Boulevard is an example of a minor collector.

*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.

#### **STATE HIGHWAY POLICY**

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 is presently undergoing a comprehensive study and review by NJDOT. 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 in suburban areas. The HAMC changed state policy from one that emphasized access to abutting property to providing mobility for people and goods. In other words, it gave priority to moving traffic rather than allowing curb cuts for driveways.

Each state highway has been classified for different levels of access, depending on existing conditions and NJDOT's functional plans for the highway system. All of the limited access highways in Deptford, I-295, Rt. 42 and Rt. 55, are Access Level 1. Access is only achieved through grade-separated interchanges. Route 41 and Route

47 are the only state highways where abutting land has direct access. Both Rts. 41 and 47 are designated Access Level 4, which allows driveway interconnections to the state highway. Left turns are accommodated via the use of left-turn lanes.

NJDOT has also established an ultimate highway development classification called Desirable Typical Sections (DTS). This indicates how wide the state road, under ideal circumstances, would become in the future. No expansions are proposed for the freeway system.<sup>2</sup> Rt. 41 is designated with a DTS of 4D from the Five Points intersection to Cooper Street, 4C from Cooper Street to McKee Avenue, and 4F from McKee Avenue to the Runnemede Borough line. DTS 4D has a right-of-way width of 78 feet, 4 undivided travel lanes and no shoulders. DTS 4C has a 102 foot right-of-way and 4 undivided travel lanes with shoulders or parking lanes. Finally, DTS 4F has a 116 foot right-of-way that includes 4 undivided travel lanes, shoulders, and a 14 foot wide two-way left turn lane (effectively a five-lane cross-section).

Route 47 has a DTS of 4C (see previous paragraph) from the Five Points intersection to approximately Brenner Avenue and 4E from that point to the Westville Borough line. DTS 4E has a 102 foot right-of-way and 4 undivided travel lanes with shoulders or parking. All of the DTS cross-sections are wider than the current rights-of-way; however there are no current plans for widening either road in Deptford.<sup>3</sup> Finally, it should be noted that the DOT is considering reevaluating the DTS designations statewide for the first time in many years, to bring the current designations into line with changing local and regional priorities, especially for municipal “main streets” such as Woodbury’s Broad Street (Rt. 45).

#### **GLOUCESTER COUNTY HIGHWAY POLICY**

The Gloucester County Highway Master Plan provides a comprehensive analysis of the County’s roadway system. The Master Plan includes an ultimate right-of-way circulation plan for its highway system that functions in much the same way as NJDOT’s DTS standard. When a developer submits an application for development the County often requires a dedication of land for right-of-way purposes if the road is substandard in width. In most circumstances, the County’s right-of-way policy may result in the dedication of additional land in Deptford. The table below lists the County routes and compares the existing and proposed rights-of-way.

<sup>2</sup> - A major reconstruction of the I-295, I-76 and Rt. 42 interchange may result in the acquisition of new right-of-way to construct ramps from northbound I-295 to southbound Rt. 42 across land in the extreme northeast part of Deptford.

<sup>3</sup> - The Delaware Valley Regional Planning Commission, the region’s designated Metropolitan Planning Organization, is currently studying Rt. 47 for congestion mitigation measures that may result in future intersection widening.

**Table VI-9. Comparison of Proposed County R.O.Ws with Existing R.O.Ws**

No.	Road Name	Proposed R.O.W.	Existing R.O.W.
534	Good Intent Road/Cooper Street:		
	Woodbury line-Good Intent Road	88'	85'
	Cooper Street – Camden County	76'	50'
544	Clements Bridge Road	88'	74'
553	Glassboro Road	88'	66'
603	Blackwood – Barnsboro Road	76'	70'
621	Almonesson Road/ County House Road:		
	Westville Line – NJ Turnpike	76'	50'
	NJ Turnpike – Cooper Street	88'	50'-77'
	Cooper Street – Camden County Line	76'	40'-49.5'
644	Tacoma Boulevard/Andaloro Way:		
	Woodbury Line – Delsea Drive	76'	50'-60'
	Delsea Drive – Almonesson Road	64'	50'
645	Caulfield Avenue	64'	55'
646	Deptford Avenue	76'	50'
647	Fox Run Road	64'	40'
663	Tanyard Road	76'	50'-70'
706	Cooper Street	88'	50'-105'

Source: Gloucester County Highway Department and Deptford tax assessment maps.

The County has expressed interest in devolving jurisdiction of Fox Run Road to the municipality in the future. The municipality is interested in turning its ownership of Deptford Center Road to a higher level of government, either county or state. The County views its transportation responsibility as providing travel routes between municipalities and as connections from higher order roads (typically part of the state and federal systems) to significant regional attractions such as employment centers and shopping areas. Their rationale for the width of roads is to permit four or six lanes of travel with appropriate left turn lanes at intersections either with or without medians. Normally concessions are made in areas that are already developed, such as Good Intent Road, where no wider right-of-way is contemplated. The County also seeks municipal support before proceeding with a project. Nonetheless, road construction impacts within the proposed right-of-way would be significant.

**SIDEWALK POLICY**

As portions of the Township have grown into more intensely developed areas, so too has the need to provide sidewalk connections. Sidewalk connections are important not only for the safety of pedestrians, but also to encourage more residents of the Township to walk or bicycle to their destinations rather than drive. Currently the Township officially requires sidewalks on all streets. However, in practice, this requirement is routinely decided on a case by case basis when an applicant is proposing development on an existing street that lacks sidewalks. Rather than continue with a somewhat haphazard approach to sidewalk construction, the Township should create a long-term unified vision for its pedestrian transportation network. It is recommended that the Township develop a sidewalk plan that is based on the following principles:

- 1) *Sidewalks should continue to be required on all residential streets consistent with RSIS standards.* The only exceptions to these requirements should be where an applicant is proposing minor infill development on a residential street that does not have existing sidewalks. An example of minor infill development is a minor subdivision.
- 2) *Sidewalks should be provided on both sides of arterial highways and collector roads that provide direct access to adjacent commercial, civic, or recreation uses.* Many residents of the Township live in close proximity to the major commercial uses, schools, and parks but have no safe means to travel to them other than by automobile. This policy would provide sidewalks on roads like Clements Bridge Road, Almonesson Road, and Deptford Center Road in the vicinity of the Mall, as well as on roads like Cooper Street, Hurffville Road, Delsea Drive, and Good Intent Road. Requiring pedestrian connections along these types of routes would provide significantly enhanced pedestrian mobility and would “open up” the Township to those in the community who cannot drive or have no automobile. Since many of these routes are along county roads and would usually be in the county right-of-way, the Township would need to establish an agreement for their installation.
- 3) *A sidewalk prioritization list should be created that ranks recommended sidewalk locations.* In order to determine where to allocate scarce funding, a sidewalk plan should be developed that ranks the Township’s sidewalk priorities based on factors like traffic volume/speed, presence of pedestrian-friendly-destinations, connection to the existing sidewalk network and dangerous pedestrian conditions, etc. For example, the

sidewalk system around the Deptford Mall is virtually nonexistent, yet paths worn in the perimeter landscaping provide evidence of the demand for sidewalks. Particularly on Deptford Center Road, a connection from the Deptford Mall proper to the secondary retail development on Rt. 41 is critical for pedestrian safety. The heavy vehicular traffic makes the need for a safe pedestrian system all the more important.

- 4) *Evaluate when bicycle paths are preferred over sidewalks.* Bicycle paths are typically paved in asphalt to provide a smooth surface and sidewalks are concrete. Bicycle paths are usually between 6 and 8 feet wide in order to allow for shared use with pedestrians. Sometimes there will be insufficient width in the right-of-way to allow for this wide of a path. Other municipalities have successfully applied for bicycle path construction funds based on an adopted plan (see below).
- 5) *A capital improvement plan to construct missing links.* With the priority list in item no. 3, the Township can pursue bicycle funding through NJDOT, which has pass-through money from the federal government for larger projects. Also, with modest, but consistent multi-year funding, the priority list could be utilized to complete missing links in the pedestrian system. This would operate like the road improvement program, but on a much smaller scale. Residents could be encouraged to recommend sidewalk projects that could then be evaluated and placed on the priority list.

#### **STREAM CORRIDOR TRAIL CONNECTIONS**

One of the most successful strategies for both improving bicycle/pedestrian mobility and increasing park and recreation amenities is to develop multi-purpose trails along stream corridors. These ribbons of green form linear parks that can be used to create greenways connecting open space parcels and other places of interest, such as a community center. Deptford has several such corridors that run through much of the Township. These facilities are often relatively inexpensive to construct and provide significant benefits to the community. The following stream corridors should be studied further to assess the feasibility of developing multi-purpose trails.

**MONONGAHELA BROOK AND TRIBUTARIES** – This stream flows from East to West in the southern portion of the Township in close proximity to Gloucester County College, the GCIT High School/Middle School campus, and several residential subdivisions. It eventually flows into Wenonah. A tributary of the creek flows through the Lakes of Bankbridge tract that is adjacent to the Township's soccer

complex. A trail along this corridor could provide a connection between all of these locations.

**BIG TIMBER CREEK AND TRIBUTARIES** – The Big Timber Creek forms the eastern boundary of the Township. Several large tracts of land along its banks are already parkland or in public ownership, including Timber Creek Park, land owned by NJDEP east of Route 42, as well as lands under stewardship of the Old Pine Farm Natural Lands Trust. That group has already begun to assemble land along the Creek and a tributary that runs in the vicinity of First Avenue. The Old Pine Farm National Lands Trust is committed to providing a greenway all the way down the Creek to the Delaware River. Pursuing additional open space acquisitions along this water body could turn into a publicly accessible path system along the creek.

**ALMONESSON CREEK** – Almonesson Creek flows south to north in an area east of Almonesson Road and west of Hurffville Road. It passes by many of the most intensely developed commercial properties in the Township as well as some residential areas south of Cooper Street. Some trails already exist near its banks in the vicinity of Almonesson Creek Park. Further investigation will be necessary to determine if a viable trail could be established along this waterway that would provide a pedestrian connection to the commercial uses in this area. The steepness of the stream corridor embankment will likely prove to be a challenge.

**WOODBURY CREEK** – Woodbury Creek and its tributaries flow north and west into Stewart Lake. Some of the tributaries are physically cut off by the New Jersey Turnpike. However, one tributary begins near the Whispering Lakes proposed open space parcel and flows between the Lakebridge neighborhood and Carson Avenue. This corridor holds the potential to link the Whispering Lakes open space with the existing park at Stewart Lake, which is shared with the City of Woodbury.

Any trail system must be maintained. Trails lend themselves to volunteer involvement. Once constructed, maintenance consists of removing encroaching vegetation, picking up trash, and periodically adding new path material, whether it is wood chip, gravel or sand. There are many examples of volunteer organizations in the metropolitan area that adopt a section of trail and undertake these activities. Trails need to be designed to prevent use by ATV's and dirt bikes that would tear up the path, accelerate erosion, and be a hazard to pedestrians using it. Access would need to be controlled at trailheads, which is where trails intersect with the road system. Certain trails might be earmarked for mountain biking as well as pedestrian use. These typically would need to be wider than pedestrian only trails.

Trails through stream corridors often encounter environmentally sensitive lands, such as freshwater wetlands and their transition areas and flood plains (see Conservation Element). Activities and disturbances in freshwater wetlands and flood plains are regulated by the New Jersey Department of Environmental Protection (NJDEP). NJDEP has established rules for wetlands disturbance, and in many cases has created a process for combination permits that include both wetlands and stream encroachment (activities in flood plains). These are called general permits. Activities that do not fall under any of the general permits require an individual permit, which is difficult to obtain. Fortunately, NJDEP has devised a permit specifically for the creation of trails in wetlands and transition areas, General Permit 17. Trails being built by local governments, as compared to private interests, have some additional advantages in being able to create a comprehensive system. In some narrow circumstances, General Permits 10A and 10B, which are for road crossings, may be required if the municipality anticipates any motorized vehicle for maintenance purposes.

**DESCRIPTION OF BUS ROUTES**

Bus service in Deptford is provided by New Jersey Transit, an agency of the state government. Eight different routes operate in the Township, serving primarily as a commuter service to Camden and Philadelphia, with some access to major destinations like downtown Woodbury and the Deptford Mall. These are described below:

**ROUTE 400 –SICKLERVILLE-PHILADELPHIA**

- Primarily runs along Black Horse Pike in Camden County
- Serves the Deptford Mall via Clements Bridge Rd., Deptford Center Road, Route 41, and then back to Black Horse Pike in Runnemede.

**ROUTE 401 –SALEM-PHILADELPHIA AND ROUTE 402 –PENNSVILLE-PHILADELPHIA**

- Skirts the northern edge of the Township along Broadway in the Westville Grove neighborhood.

**ROUTE 408 –MILLVILLE-PHILADELPHIA**

- Runs along the full length of Delsea Drive from the Township's northern border at I-295 to the southern border at Five Points.

## ROUTE 410 –BRIDGETON-PHILADELPHIA

- Travels along the western edge of the Township on Route 45 (Mantua Pike) in Oak Valley and after traversing Woodbury, continues on Broadway in Westville Grove.

## ROUTE 412 –GLASSBORO-PHILADELPHIA

- Runs along Woodbury-Glassboro Road (Rt. 553) from southern border with Mantua Twp.
- Continues on through Woodbury and eventually back to Deptford via Broadway in Westville Grove.

## ROUTE 455 –CHERRY HILL MALL-WOODBURY-PAULSBORO

- Enters Township on Cooper Street from Woodbury.
- Runs along Cooper Street to Clements Bridge Road.
- Runs along Clements Bridge Road to Almonesson Rd. and Deptford Center Road (stops at mall).
- From Deptford Center Road the route continues to Route 41 and back to Clements Bridge Road and into Runnemedede.

## ROUTE 463 –WOODBURY-AVANDALE PARK AND RIDE

- Enters Township from Egg Harbor Road at Five Points.
- Travels south on Barnsboro-Blackwood Road.
- Stops at Gloucester County College Campus
- Goes through campus to Tanyard Road.
- Runs north along the length Tanyard Road into Woodbury.

The bus routes that serve Deptford tend to function more as commuter routes and thus provide good access to the major employment centers located in Camden and Philadelphia to the north, as well as in Glassboro to the south. However, they do not provide as convenient access to the Township's major shopping areas. Increased service along Almonesson Road, Hurffville Road, and Clements Bridge Road would provide residents an additional means to access the plethora of retail stores and services in the Township.

**PROPOSED RAIL TRANSIT SERVICE**

The *Southern Jersey to Philadelphia Transit Study*, released in October 2005 by the Delaware Rive Port Authority, examined the feasibility of extending rail transit to serve the commuter market in southern Jersey, specifically along the Camden-

Glassboro-Millville Corridor. The study identified three “short-list” alternatives for a proposed extension of the Port Authority Transportation Corporation (PATCO) high speed line that would serve Deptford Township. PATCO presently operates a commuter heavy rail line from Lindenwold, New Jersey to Philadelphia via the Ben Franklin Bridge over the Delaware River. From its inception, this line was to be one of three lines that would serve the three metropolitan counties in New Jersey: Burlington, Camden and Gloucester Counties. Growth in Gloucester County and the continued heavy commuting traffic in the region’s highway corridors have contributed to a renewed effort to examine the feasibility of the rail line. The Delaware River Port Authority (DRPA) has reached a consensus of moving forward both with river dredging, mainly benefiting the Pennsylvania members, and the high speed line study, supporting the New Jersey members, of the bi-state agency.

A summary of the short-listed study alternatives is presented below:

**ALTERNATIVE ALIGNMENT 1 - WILLIAMSTOWN TO PHILADELPHIA (ONE STATION IN DEPTFORD)**

Alternative 1 would provide heavy rail service from Williamstown to Philadelphia via new tracks constructed in the median of the Atlantic City Expressway, Route 42, and I-676. This alignment would have one station in Deptford at the junction of Routes 42 and 55 in the form of a large park-and-ride facility. The study does not identify the specific parcel in the township that would be utilized for this station but does state that DRPA/PATCO would need to acquire land in this area in order to construct the facility.

**ALTERNATIVE 2- MILLVILLE/GLASSBORO TO PHILADELPHIA VIA ROUTE 55 (3 STATIONS IN DEPTFORD)**

Alternative 2 would provide heavy rail service on new tracks along the median of Routes 42 and 55 and would be built in two phases. Phase I would extend existing PATCO service in Camden along Routes 42 and 55 south to Glassboro near exit 50 of Rt. 55. Phase II would extend the service further south to Millville. In Deptford stations and adjacent park-and-ride facilities are proposed for the junction of Routes 42 and 55, the Deptford Mall (exit 58), and at Gloucester County College (Rt. 47). Sufficient right-of-way exists in the median of Route 55 to accommodate the rail alignment, however the study notes that land would need to be acquired by the DRPA for the park-and-ride facilities.

**ALTERNATIVE 3-PATCO-STYLE SERVICE FROM MILLVILLE/GLASSBORO TO PHILADELPHIA VIA CONRAIL (NO STATIONS IN DEPTFORD; 4 STATIONS IN PROXIMITY)**

Alternative 3 would utilize existing Conrail tracks and extend service from Philadelphia and Camden to Glassboro and Millville. Phase I of this alternative would

provide service south to Glassboro and phase 2 would extend service all the way to Millville. As this route follows the existing Conrail alignment, it bypasses the heart of Deptford but would provide several stations located just beyond the Township's boundaries. Specifically a station and park-and-ride is proposed at I-295 near Old Broadway. The study does not specify the exact piece of land that would be utilized; however, this station would likely be located just beyond the municipal line in Westville. Moving south, the next several stations would be located at Cooper Street in Woodbury, Elm Avenue in Woodbury Heights, Mantua Avenue in Wenonah, and a park ride would be located at Route 55 in Mantua Township near Tylers Mill Road.

Of the three alternatives, both numbers two and three would provide a benefit to residents of Deptford. The main difference between them is that Alternative 3 follows existing tracks and serves the historical downtowns of Gloucester County. Alternative 2, however, by running directly on Route 55, would bring the greatest benefit to the Township by reducing congestion on the Route 55 corridor and bringing transit service to the areas of Deptford and the County that are experiencing the highest rates of growth. Further, Gloucester County has identified the Rt. 55 highway corridor as the new employment growth engine that would be facilitated by intermodal transportation.

#### **NEW ROAD SEGMENTS**

The Township's roadway network does not provide for sufficient east-west movement. As a result, drivers are often forced to take circuitous routes and funnel through the relatively few roads and intersections that provide connections between the concentration of retail stores and services in the northeastern portion of the Township and the residential areas in the western and southern areas. The following proposed road segments seek to provide enhanced east-west connections and alleviate congestion at overburdened intersections.

#### **DEPTFORD CENTER AND CAULFIELD ROADS EXTENSIONS**

Many of the intersections in the vicinity of the Deptford Mall are routinely congested and overburdened. Although the area is heavily developed, a unique opportunity exists to create a new connection between several key roadways as development occurs on the south side of Clements Bridge Road west of Rt. 55. This road segment is a refinement of a planned extension that has been on the Township's Circulation Plan since 1989 and also incorporates a project promoted by the Township to NJDOT (and originally proposed as part of the construction of Rt. 55). The Master Plan road continues the extension of Caulfield Avenue from Clements Bridge Road to Cooper Street from the 1989 Plan. In addition, it would include extending Deptford Center Boulevard west and north to intersect with Clements Bridge Road at Locust Grove

Boulevard, taking over the right-of-way of Green Briar Ct. A new segment is proposed that would connect these two roads to create a road parallel to Clements Bridge. A four way intersection would be created where the off-ramp southbound from Rt. 55 now curves over the highway to Deptford Center Road. A new on-ramp to southbound Route 55, which currently does not exist, allows those traveling from the north from the Locust Grove development, from the west along Clements Bridge Road and from the south via Cooper Street to access Route 55 without having to go through the intersection of Clements Bridge Road and Almonesson Road and the severely congested Almonesson/Deptford Center Road intersection.

#### CROSS TOWN CONNECTOR AND FASOLA PARK DRIVE

This proposed roadway would function as a minor collector and provide an important east-west link in the central part of the Township. It is envisioned that the roadway would begin at Tanyard Road, opposite Mail Avenue, curves to form a right angle with Cattell Road, and then paralleling Herman Avenue intersects with Sycamore Avenue at Delsea Drive. Following Sycamore, it skirts the south side of Fasola Park and the Deptford Township high school football stadium and ends at Fox Run Road. This road would greatly facilitate travel within the municipality, particularly for transporting students to the high school and to the many events held there as well as Fasola Park. It would provide an alternative to Cooper Street and Good Intent Road as east west travel links in the north central part of the Township. The expansion of Fasola Park southward, as indicated in the Open Space and Recreation Element, will need to be designed with the connector in mind when property is acquired to implement the plan. The right-of-way would need to be acquired separately through subdivision to avoid conflicts with state green acres regulations. Due to the park's proximity, it is envisioned that this roadway would be designed at the beginning with "traffic calming" to keep speeds low. One means of achieving this would be to create a roundabout where entrances to the north and south side of the park would be placed.

#### BANKBRIDGE BOULEVARD CONNECTOR

Bankbridge Road serves as an east west connection between Delsea Drive/Route 55 and Glassboro Road. Motorists who desire to continue further west to Wenonah and Route 45 (Mantua Pike), must currently make two turns on Glassboro Road in order to access Mantua Avenue as Bankbridge Road currently intersects Glassboro Road approximately 500 feet south of Mantua Avenue. The construction of Bankbridge Boulevard as part of the Lakes of Bankbridge planned unit development (PUD) has created an opportunity to directly connect Bankbridge Road with Mantua Avenue. Accordingly, a short connector road is envisioned that would spilt off from the current roadway approximately one-half mile west of Tanyard Road and join up with

the existing end of Bankbridge Boulevard, thus providing a seamless connection from Delsea Drive all the way to Mantua Pike. This road segment should be constructed with whatever development occurs on the parcel, which was the last phase of the PUD. Should the Township acquire this parcel for open space as indicated in the Open Space and Recreation Element, the right-of-way would need to be acquired separately through subdivision to avoid conflicts with state green acres regulations.

#### **FIVE POINTS BYPASS**

The Five Points intersection, formed by the junction of Route 41, Route 47, Blackwood-Barnsboro Road, and Egg Harbor Road is one of the more congested and complicated intersections in the Township. The redevelopment of the Kinsley Landfill property provides an opportunity to construct a new roadway that would bypass the intersection completely and provide improved connectivity between the major roadways in this portion of the Township. It is envisioned that the roadway would begin at Route 41 and then proceed in a southwesterly direction and intersect Route 47 (Delsea Drive) before ending at Blackwood-Barnsboro Road approximately ¼ mile west of the existing Five Points intersection. As part of this new roadway it is also envisioned that International Avenue, which currently ends in a cul-de-sac, would be extended to meet Delsea Drive and the proposed Five Points by-pass.

#### **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. Traffic calming has become more common in New Jersey as concerns with speeding traffic in neighborhoods and a rise in pedestrian fatalities state-wide has made traffic calming measures more attractive to municipal officials. By reducing vehicle speeds, traffic calming methods can help decrease the number and the 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.<sup>4</sup> 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 and include 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,

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<sup>4</sup> - *Traffic Calming*, Cynthia L. Hoyle, American Planning Association, PAS Report No. 456, 1995.

traffic signals, and pavement markings that are intended to regulate traffic without direct physical intervention. However, studies that have been done in the United States - particularly in the Pacific Northwest states - and Western Europe find that the active controls are substantially more effective than passive controls. 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. This occurs on many roads in Deptford. Roadway design is evolving towards “self-reinforcing” speed limits through traffic calming methods that alert motorists to the proper speed for their vehicles.

A glossary of terms and illustrations describing various active traffic calming measures follows.

**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 sit 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*, the Dutch term for the concept where it originated. 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.



ROUNDABOUTS. A 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. Roundabouts differ from the sometimes notorious New Jersey “traffic circles” that became a byword for accidents and congestion. 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. Roundabout design has advanced since the time when the New Jersey’s traffic circles were first created in the 1930’s. Roundabouts handle one lane of traffic at each intersection into the circle; state highways often had multiple lanes entering in the same direction. Roundabouts have been successfully implemented in Massachusetts, Washington and Oregon and are encouraged by the Federal Highway Administration. The FHWA has issued a design manual for roundabouts as well as the influential American Association of State Highway and Transportation Officials (AASHTO) organizations. Consequently, roundabouts are becoming more accepted

in New Jersey for several reasons. One, study has shown that roundabouts greatly reduce side impact accidents that are often the most dangerous to occupants. Two, traffic keeps moving, even if slowly, thereby reducing fuel consumption. Three, roundabouts eliminate the cost and expense of installing and maintaining traffic signals (though this is offset to a degree by plant maintenance, if they are landscaped).



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. Since the Township does not have jurisdiction over the arterial road system, that being under the jurisdictions of the state and county, it can most easily institute some of these techniques on its own streets. The best candidates for introducing traffic calming are residential collector streets, such as Locust Grove Boulevard.

**SUMMARY AND RECOMMENDATIONS**

Improving the ability of people and goods to be moved in and through the Township is an important goal of the Master Plan, it is also tempered by the desire to preserve and enhance the scenic beauty of the street. It is clear that government cannot build enough road capacity to satisfy the demand that exists. Congestion will remain but through incremental physical improvements, adverse effects on the fabric of the community can be minimized. Pedestrian and bicycle networks provide an important alternative to motorized transportation, are areas where Deptford can make substantial progress. The following recommendations are made in the Circulation Element and are depicted on the Circulation Plan as appropriate:

- 1) Roadway Classifications. As depicted on the Circulation Plan.
- 2) Sidewalk Policy. The Township should create a formalized sidewalk priority list and a policy for evaluating the need for sidewalks throughout the Township and consider the establishment of a modest, but multi-year construction plan for missing links.
- 3) Stream Corridor Trail System. The Township should undertake a study of the feasibility of establishing a trail network along stream and tributary corridors with pedestrian connections between separated neighborhoods.
- 4) PATCO Extension. The Township should formally endorse Alternative 2 of the Southern Jersey to Philadelphia Transit Study as it would provide the greatest benefit to the residents of the Township.
- 5) New Road Segments. As depicted on the Circulation Plan.
- 6) Traffic Calming. To be instituted as a revision to the Unified Development Ordinance and the Capital Improvement Program.



# Circulation Plan

Deptford Township, Gloucester County, NJ November 20, 2007

# Land Use Plan Element

## INTRODUCTION

The Land Use Plan Element seeks to promote the goals and objectives of the Master Plan for the conservation, development and redevelopment of Deptford. The Land Use Plan Element synthesizes the policies and recommendations found in the other elements and statements in this document. The element is designed to encourage compatible land uses, the reuse of existing buildings for new purposes, the restriction of development on environmentally sensitive lands and the careful management of growth and preservation on the remaining land. This Master Plan is a continuation of earlier efforts to control the direction of growth, preservation and development.

The Master Plan and specifically the Land Use Plan Element provide the policies for the regulation of land use through the zoning ordinance and other land development ordinances. Land use classifications, found in this element, supply the rationale for various zoning regulations. The Land Use Plan, found at the end of this document, supports the zoning map by designating the use of land in specific areas of the municipality.

The document continues with an analysis of land as it is used today, major issues in land use and the establishment of land use categories as a means of addressing these issues. The Land Use Plan Element is expected to be implemented mainly through the instruments of private capital and land ownership, guided by the policies and recommendations in this document.

## Existing Land Use

### LAND USE CATEGORIES

This section of the element describes how land is currently being used in the Township in contrast to how it is regulated. Analyzing existing patterns of land use is a necessary first step in determining how well current zoning is implementing the goals and objectives of the Master Plan and where changes might be required to improve this implementation. Accordingly, a map of existing land use within the Township has been created utilizing property tax records, aerial photography and data from the NJ Department of Environmental Protection (DEP) with selective field investigation.<sup>1</sup> The existing land use plan geographically divides Deptford into nine different land use categories. The existing land use categories are described below:

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<sup>1</sup> - Land Use/Land Cover from the NJDEP's I-Map data.

**SINGLE FAMILY DETACHED RESIDENTIAL** – This category consists of detached housing occupied by a single household. This category constitutes about 93 percent of the housing units in Deptford, based on land area. The highest concentrations of single family residential areas are in the northern and eastern areas of the Township, as well as in Oak Valley.

**OTHER RESIDENTIAL** – This category comprises all other residential units in the Township including semi-detached (houses that are attached, having one party wall common to another house), townhouses (single family attached residences), and apartments (multi-family housing developments such as garden apartments). This category comprises the remaining seven percent of housing units. Neighborhoods of this type are primarily clustered in the Locust Grove and Narraticon planned unit developments.

**INSTITUTIONAL** – The Institutional classification refers to social institutions and governmental uses. Accordingly, it includes municipal offices and facilities, religious uses, and schools. It also includes nonprofit community facilities, and recreational facilities that have a widespread local membership but are not public facilities. This category may be contrasted with Township-owned land used or intended for recreational or conservation purposes. In that circumstance it has been placed in the Open Space/Recreation category rather than in the Institutional class. Further, land owned by the municipality, but used for water supply, sewage treatment or storm water management has been placed in the Transportation/Utility classes.

**COMMERCIAL/OFFICE** – This category includes retail sales and services such as stores, restaurants and entertainment. It comprises services provided to households and businesses. Automotive services, including repair, fueling and items for use in automobiles are also part of this land use classification. The Commercial/Office category contains professional, business, and general administrative offices. However, where offices are operated as part of a distribution or manufacturing concern, they have been placed in the Industrial category. Deptford's significant amount of retail and commercial land uses are centered on the Deptford Mall area in the northeast section of the Township and run along the major corridors of Hurffville Road, Cooper Street, and Delsea Drive.

**MANUFACTURING/LIGHT INDUSTRIAL** – This category encompasses manufacturing, assembly, distribution, warehousing, research and development, and office uses. If the office use is the predominant use, it has been placed in the Office class, instead. The largest concentration of industrial uses is on the southerly end of Hurffville Road and along Barnsboro-Blackwood Road.

**AGRICULTURAL** – Areas that are tilled and growing field crops have been included in this category. The agricultural category also includes areas utilized for raising

livestock, mainly swine, and horse breeding and stabling. The largest concentrations of remaining agricultural land are found on Delsea Drive and in the southernmost sections of the Township in the general vicinity of Gloucester County College.

**OPEN SPACE/RECREATION** – Open space designates land held by the government or a non-profit land trust for active and passive recreation or conservation purposes. Recreation is meant as active recreation within an open space parcel. In Deptford, aside from the municipal government, the DEP and the Old Pine Farm Land Trust have significant open space land holdings. Large municipal open space areas include Fasola Park, the Montague Lane sports complex and the Deptford Soccer Complex.

**TRANSPORTATION/UTILITY** – This category identifies land used for streets and highways, railroads, public water and sewerage facilities, and similar functions.

**VACANT/WOODED** – Vacant land is open or wooded land with no discernible use and assessed for tax purposes as vacant land. This contrasts with land used for agriculture that may on inspection seem vacant, but are farmland assessed. Large areas of vacant land and land that is primarily wooded, but may have scattered buildings in them are found generally in the southern half of Deptford.

The Township contains approximately 11,224 acres, or 17.54 square miles.<sup>2</sup> The acreage of the existing land use categories is depicted in the following table.

**Table VII-1. Existing Land Use.**

<b>Existing Land Use</b>	<b>Acreage</b>	<b>% of Total Acreage</b>
Single Family Detached Residential	3,547.9	31.6%
Multi-Family Residential	274.8	2.4%
Institutional/Community Service	230.7	2.1%
Commercial/Office	1,026.0	9.1%
Manufacturing/Light Industrial	48.6	0.4%
Agricultural	879.5	7.8%
Open Space/Recreation	473.0	4.2%
Transportation/Utility	622.3	5.5%
Vacant/Wooded	3,963.2	35.3%
Water	157.9	1.4%
<b>Total</b>	<b>11,224.0</b>	<b>100.0%</b>

*Sources:* NJDEP 1997 Land Use/Land Cover, Deptford Tax Assessment Records, DVRPC 2005 aerial photography and field investigation.

<sup>2</sup> - This number differs slightly from the Housing Element and Fair Share Plan and reflects the greater precision from geodetic data now available.

As the table indicates, vacant/wooded land is the largest land use in the Township. Single family detached residential uses, however, is a close second; indicating that, given the current pace of development, it may soon overtake vacant land for the top position. Commercial/office uses represent the third largest land use, followed by agriculture, roads, and open space/recreation. This is a fairly typical land use pattern in a suburban area like Deptford, that has a high concentration of retail establishments. The most notable aspect of the existing land use is the large amount of land that is vacant and or devoted to agricultural uses. Fully 43% of the land in the township falls into these categories. Despite the common perception of Deptford as a “built-out” municipality, this statistic shows that much land remains. This presents the Township with an important opportunity to decide how it desires to see this remaining land utilized and what balance to strike between additional development and preservation. The existing land use categories are depicted on the Existing Land Use map on the following page.

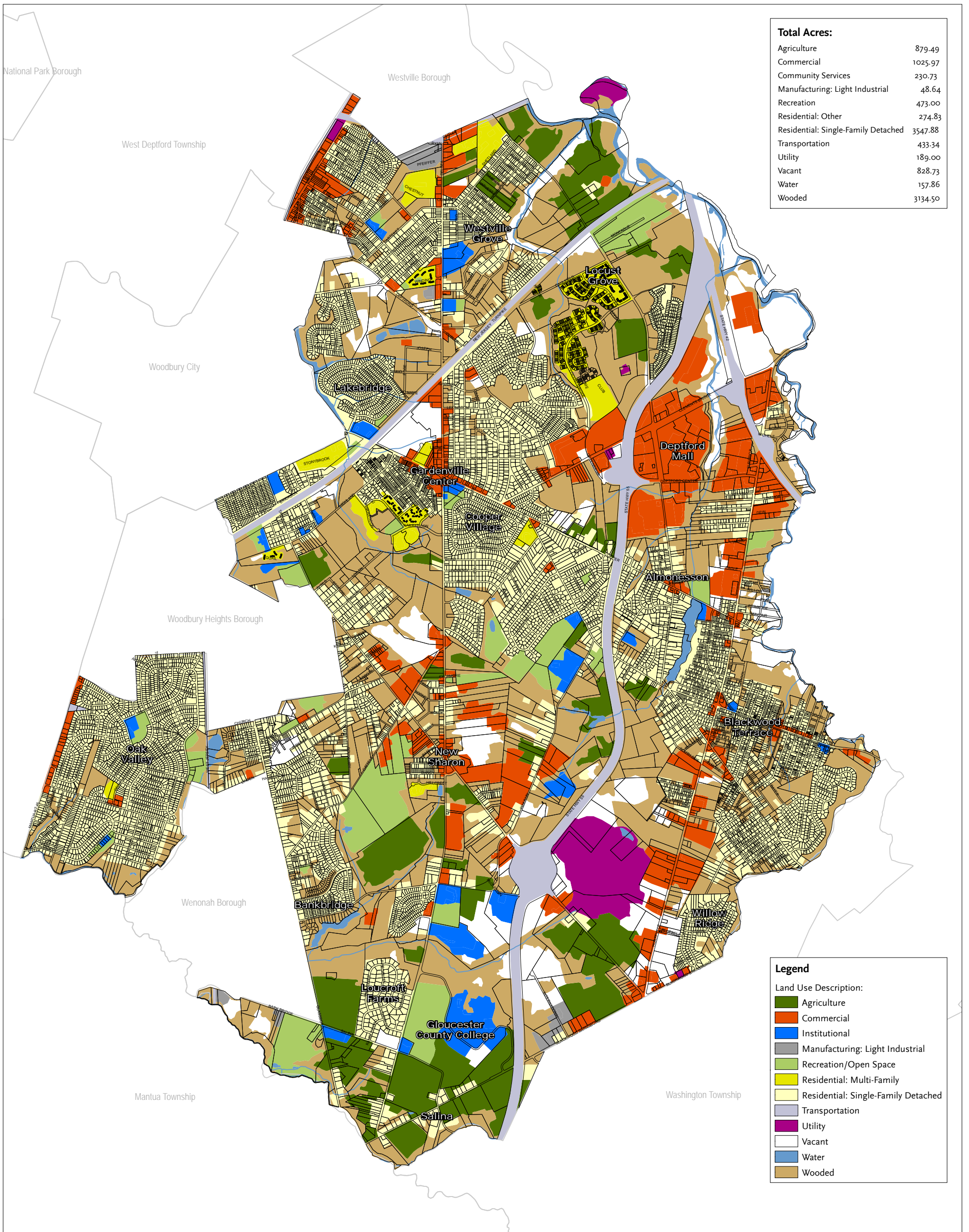
The existing land use categories may be aggregated into the broader categories of residential, commercial (office and retail), industrial, institutional (institutional, open space, semi-public) and undeveloped (agriculture and vacant). In this analysis, the transportation and utility category has been removed since it is a function of the development of the other land uses. These broader categories are indicated in the table below.

**Table VII-2. Aggregated Existing Land Use, Excepting Transportation and Utility.**

Existing Land Use	Acreage	% of Total Acreage
Residential	3,822.71	36.6%
Commercial	1025.97	9.8%
Industrial	48.64	0.5%
Institutional and Open Space	703.73	6.7%
Undeveloped	4,842.72	46.4%
Total	10,443.77	100.0%

*Sources:* NJDEP 1997 Land Use/Land Cover, Deptford Tax Assessment Records, DVRPC 2005 aerial photography and field investigation.

By this analysis, the Township is just over one-half developed, with 53.6% of its land area used. This figure, however, should be viewed with several caveats. Land that is already developed may also have further development potential. Some land that is in the undeveloped category may have deed restrictions or easements that prevent development. Similarly, environmental regulations will render some lots unbuildable, regardless of the allowed development in Deptford’s zoning ordinance.



# GENERALIZED Existing Land Use

Deptford Township, Gloucester County, NJ November 20, 2007



Clarke Caton Hintz  
Architecture  
Planning  
Landscape Architecture

**POPULATION TRENDS**

Deptford Township has followed a similar growth pattern to other suburban towns in southern New Jersey. The Township remained as a largely rural, agricultural area with a small, stable population for the first 250 years of its history. After World War I, streets in Westville Grove, North Woodbury and Blackwood Terrace were created (at least on paper) and suburbanization started that was an outgrowth of more urban areas. It was after World War II, however, that suburbanization swept over Deptford, resulting in the addition of more than 19,000 residents between 1950 and 1970 (a large increase of 267%). It was fueled by Deptford's proximity to Philadelphia and to industrial jobs along the south Jersey waterfront that were within reasonable commuting distance as the highway system developed and expanded.<sup>3</sup>

As the local and national economy worsened in the 1970's, however, Deptford entered a period of slight population decline. The combination of a rapid loss of industry in New Jersey and Philadelphia, the two Arab oil embargoes, and stagflation (a combination of low economic growth and high inflation) resulted in a depressed employment and housing market. These conditions yielded a net decrease of 95 residents between 1970 and 1990, a striking contrast to the previous 20 years. It would not be until after the housing market recovered from the real estate crash of the late 1980s and early 1990s that significant growth in the Township would resume. The real estate boom of the last decade (only recently cooled) can be viewed as a function of steady employment growth and new attention to land previously overlooked in earlier expansions.

**Table VII-3. Population Change, 1930 to 2000.**

Year	Population	Population Change	% Population Change
1930	4,507	-	-
1940	4,738	231	5.13%
1950	7,304	2,566	54.16%
1960	17,878	10,574	144.77%
1970	24,232	6,354	35.54%
1980	23,473	-759	-3.13%
1990	24,137	664	2.83%
2000	26,763	2,626	10.88%
1930-2000		22,256	493.81%

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

<sup>3</sup> - The Walt Whitman Bridge linking southern Philadelphia to Gloucester City opened in May 1957 and was only the second bridge across the Delaware River in the metropolitan area.

The era of most rapid growth occurred in the 1950 to 1960 time period when not only was the rate of growth the highest, but also the absolute number of people added to the Township. The 1960 to 1970 decade also saw significant growth. The development that occurred in the 1990s occurred mostly in the latter half of the decade when the 1989 to 1993 recession in New Jersey gave way to economic growth in the mid-1990s. The increase in the population in the 1990's also represents unsatisfied demand for housing from the 1980's.

Growth in population is dependent on several factors. It is a function of the birth rate plus immigration minus deaths. At the local level, migration is the most significant factor and is directly influenced by the amount of developable land for housing, the economic climate for housing, the number of persons per household, the strength of the school system (for families) and intangible factors that make up household decisions about the location and type of housing to occupy. These affect the rate of growth or decline and the eventual population of the Township.

The Township is within the 9 county region of the Philadelphia metropolitan area that is analyzed by the Delaware Valley Regional Planning Commission. The Commission is the official Metropolitan Planning Organization that sets transportation planning policy in this area for the federal government. The Commission, as part of their responsibility, forecasts population and employment at the municipal level. Their forecast is shown in Table VII-4.

**Table VII-4. Estimated and Forecast Population Change, 2000 to 2025.**

	2000 Census	Estimated and Forecast Population					2000- 2025 Change
		2005	2010	2015	2020	2025	
Deptford	26,763	27,120	27,630	28,170	28,790	29,190	9.1%
Gloucester County	254,673	265,500	278,960	292,940	308,330	322,520	26.6%
New Jersey	8,414,350	8,745,279	9,018,231	9,255,769	9,461,635	9,636,644	10.2%

*Sources: Regional Data Bulletin No. 73, Delaware Valley Regional Planning Commission, March 2005 (Deptford and Gloucester County); U.S. Bureau of the Census, April 2005 (New Jersey)*

These forecasts were reviewed as part of the Housing Element in November 2006 and contrasted with projections of the population based on constructed, approved and anticipated development. The municipal projections forecast higher population of 29,840 people in 2005 (2,720 higher); 33,678 people in 2010 (6,048 higher) and 37,375 people in 2015 (9,205 higher). The DVRPC forecasts are definitely too low since they do not account for the nearly 1,000 dwellings that have been occupied since 2004 in Deptford. The projections from the Housing Element should be considered the highest projection of future population.

Deptford is in the two growth areas of the State Development and Redevelopment Plan, the Metropolitan and Suburban Planning Areas (Planning Areas 1 and 2). Recent and pending rules emanating from the NJ Department of Environmental Protection are strongly steering future growth in the state away from the other planning areas through their sanitary sewer service regulations. More than 1.2 million additional people are expected in the state by the year 2025. State policy is directing this population growth to Planning Areas 1 and 2, which includes Deptford. Existing zoning is expected to handle the majority of Deptford's population growth, but as the focus of land development policies shifts from purely commercial districts to more mixed use districts, these areas can provide additional capacity should it become necessary.

### **Land Use Issues**

Since the last master plan update, new problems and opportunities have arisen in Deptford. Major land use issues meriting detailed attention are discussed below.

#### **NEIGHBORHOOD PRESERVATION**

Nearly all of Deptford's residential development has occurred over a 90 year period that started when agricultural land was subdivided into narrow lots, sometimes called "strip lots". Strip lots were sold in bunches depending on the size of the parcel the buyer wanted. The other characteristic of this early period of land development is the "gridiron" street pattern that creates rectangular blocks. In the Township, this started the neighborhoods of Westville Grove and Blackwood Terrace.

As noted in the existing land use section, the next big wave of suburban development occurred after World War II with the development of curvilinear streets and more irregular block patterns. This time period ushered in a different means of development, where the infrastructure of streets, sidewalks, public water and public sewer was installed by the developer. Oak Valley and Cooper Village are perhaps the two prime examples of this era in the Township. In the previous time, these public facilities were installed by the municipality, sometimes billed to the land owner through special "benefit assessment" tax levies.

By the late 1960's and early 1970's, planned unit developments had come to Deptford, with comprehensively designed developments encompassing large acreage and many more amenities – typically open space and recreational facilities – than either of the two earlier development eras. Narraticon and Locust Grove are examples of this time period. Since this time, development has reverted to the pattern more typical of the 1960's as the costs of assembling and holding land have risen and large land parcels are no longer available.

The focus of this section is on housing from the first two eras. The newest housing in these groups is now 40 years old and many developments are considerably older. Social perceptions have changed about the size, internal arrangement, and functions of housing. One change is the rise of outdoor living space with decks, patios, swimming pools becoming increasingly common. Consumer demand has also led to an increase in the number of bathrooms and family living spaces adjacent to the kitchen. Another is the now common practice of having a home office. Many houses in Deptford do not have the space for these amenities and are now functionally obsolete for the tastes of new homebuyers.

If prices decline relative to other housing, the housing will become more affordable to buyers and landlords, but it raises a concern about the level of investment in the upkeep of the housing stock. There are many instances in nearby towns where a pattern of disinvestment occurs as housing ages and the physical neighborhood as a whole declines. Disinvestment can also occur as a problem of an aging population that has fewer resources to devote to home maintenance and improvement than members of the working population.

From a land use perspective, one of the problems is a lack of land to expand and improve houses within the building envelope permitted by the zoning district. Impervious coverage may also be a strong limiting factor. A means of addressing the problem is by relaxing some of the yard and coverage requirements in districts with smaller lot sizes. This could be accomplished through narrower side yards, for example, or even reduced front yard setbacks, since the front yard is typically the largest yard space. Unbridled construction, however, can result in big differences in the size of houses in a neighborhood. In planning terms, this is called a problem of scale. This occurs where the newer house is larger both in its building footprint and in its height compared to the original houses. There are zoning means to address the scale issue, such as building volume ratios and infill housing regulations based on a survey of existing houses within a defined radius.

In addition to tweaking zoning regulations, continued investment by the municipality is important in maintaining a neighborhood's streets, sidewalks, street trees and parks. For example, a program of urban forestry to encourage the planting of street and shade trees aids in the perception of neighborhood attractiveness.<sup>4</sup> For blocks or sections of the Township that need a comprehensive approach, the Neighborhood Preservation Program in the NJ Department of Community Affairs provides assistance to municipalities in code enforcement, community planning and other organizing efforts.

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<sup>4</sup> - See Conservation Element for additional discussion on urban forestry.

**AGE-RESTRICTED HOUSING**

Deptford's zoning regulations encourage the development of its R-40 zoning districts for age-restricted development. In the R-40, an optional set of regulations allow the development of senior independent living, congregate care and assisted living facilities. The main allowed use is single family detached housing on 40,000 sf. lots, which translates into a density of approximately 0.9 units per acre when roads and storm water management are included. Under the senior housing option, the allowed density increases to 1.5 units per acre. The regulatory structure of the zoning code creates a "floating" zone that could be located in any R-40 district without regard for connection to transportation routes, shopping and services of interest to an aging population. These factors suggest that the land use policies for age-restricted housing in the Township should be changed.

Federal law contains two exemptions from anti-discriminatory legislation pertaining to housing for older persons. The more common is housing for persons aged 55 or older; however, the other exemption is for persons 62 years old and older. Deptford has examples of both types of exemptions, but the "55 and older" segment is the one with the most housing units in town.

Age-restricted housing types range from homes that are indistinguishable from housing that is not age-restricted to residential uses that are quasi-institutional, such as assisted living facilities or nursing homes. In Deptford, most age-restricted housing has been in the form of single family detached housing on small lots, such as Lakebridge. However, age-restricted uses are much broader than these well known types. A description of the different types of age-restricted housing is presented below:

*Adult Retirement Communities* – An adult retirement community is a type of planned residential development (PRD) specifically designed for active, independent older people. Like other PRD's, there is a wide variety of different housing types. A manager is usually responsible for the general maintenance and upkeep of the community for which a monthly fee is charged. Heritage Village which is part of the Locust Grove planned unit development, is a form of an adult retirement community.

*Assisted Living Residence or Facility* – An Assisted Living Residence or Facility which is licensed by the NJ Department of Health and Senior Services to provide apartment-style housing and congregate dining. The "assisted" part of the title refers to help from staff with one or more of seven life skills – such as dressing. Assisted living residences may incorporate some skilled nursing services, such as an Alzheimer's wing, particularly in newer developments. This type of facility replaced residential health care facilities in state licensing. Alterra Sterling House on Delsea Drive is an example of an assisted living facility.

*Comprehensive Personal Care Home* – 4 comprehensive personal care home is licensed by the NJ Department of Health and Senior Services to provide room and board and to assure that assisted living services are available when needed, to four or more adults unrelated to the proprietor. Some were formerly Class C boarding homes that have been upgraded and some are virtually indistinguishable from assisted living facilities. Comprehensive personal care homes are licensed by the NJ Department of Health and Senior Services, Office of Licensing Certification. Twin Cedars and Sunrise at Woodbury Lake are examples of comprehensive personal care homes in Deptford.

*Congregate Apartment Housing* - Congregate apartment housing is a specially designed apartment building for independent to semi-independent people that includes community social and dining facilities. Individual living units include, at minimum, a living room/bedroom, bathroom, and kitchenette. Almost always rental, the state does not directly license the development. Operators tend to be governments, non-profits and religious organizations. The two mid-rise senior buildings operated by the Gloucester County Housing Authority on Pop Moylan Boulevard would fit into this classification.

*Continuing Care Retirement Communities (CCRC)* - A continuing care retirement community, also known as life care community, provides housing, services, and health care, including nursing home care, to people of retirement age. Typically, the age-restricted dwellings are detached or semi-detached and are combined on the same site with congregate care, assisted living facility and/or skilled nursing care. CCRC's are regulated by the New Jersey Department of Community Affairs, Division of Codes and Standards, Bureau of Home Owner Protection. Any nursing facility is licensed by the NJ Department of Health and Senior Services, Office of Licensing Certification. Though no CCRC's are located in Deptford, examples in South Jersey include Cadbury in Cherry Hill, Medford Leas (Medford), and The Evergreens in Moorestown.

*ECHO Housing (Elder Cottage Housing Opportunities)* - An ECHO housing unit is a small, removable modular cottage put on a concrete foundation/slab or treated wood foundation in a back or side yard of a single family home. This type of arrangement permits an older person to live independently next door to the main house. ECHO units are connected to the utilities of the primary dwelling and can be fashioned to match or complement the main dwelling. The unit is removed from the property when it is no longer necessary. ECHO units work best on larger lots, those in excess of half an acre.

*Long Term Care Facility* - The long term care facility is a medical/residential facility that provides 24-hour supervision by trained personnel. These are nursing facilities and sub-acute care, such as a rehabilitation hospital. All nursing homes are licensed by the NJ Department of Health and Senior Services, Office of Licensing Certification. Long term care facilities in Deptford are Innova Health (which also operates a sub-acute rehabilitation facility there) and the more traditional Gloucester Manor Nursing Home.

While age is not the sole determiner of an individual's fitness, some generalities may be made. The 55 and older developments in the Township are more attractive to those that are still in the working population but are no longer raising children – “empty nesters”. The term “active adult” is often used to describe the marketing of the initial developments. Their traffic effects are similar to other developments that are not age-restricted. This usually changes within ten years of the opening of the new neighborhood as residents' age and retire from the work force. Demographers consider the target group to be those in late middle age and the young elderly, from 55 to 75± years of age. After age 75, persons might enter one of the combined residential/medical uses as a result of a change in life circumstances, such as the loss of a spouse or advancing infirmity. The average age of new residents to a CCRC is in their late 70's and in an assisted living or comprehensive personal care home, the early 80's.

Gerontological experts predict that the general age brackets noted here will rise as medicine and preventative care become more effective in slowing the aging process. In general, age-restricted housing is constructed at higher densities than non – age-restricted housing even for similar types of housing. For example, single family detached houses are more likely to be sited on lots of 10,000 square feet or larger. This same housing type in an age-restricted development is found on a lot of perhaps 6-7,000 square feet (and not long ago lots under 5,000 square feet were common). The higher densities are due to a number of reasons, including: the smaller unit found in senior citizen developments; the need for shorter internal distances to common facilities in multi-family uses; the lesser overall impact on governmental services and particularly roads; and lastly, older residents desire for smaller dwellings. A 6-7,000 square feet minimum lot size translates in a density of about 5-6 units per acre on a site that does not have environmental constraints.

Densities for the multi-family uses such as congregate apartments or assisted living are typically from 10 to 20 units per acre. With assisted living and long term care, densities are sometimes expressed as the number of beds per acre. A typical formulation would make two beds the equivalent of one unit. Thus a density of 14 units to the acre would equal 28 beds to the acre, for example. As the level of services available rises, so do the staff needs. Adequate parking and loading facilities need to

be factored into the siting requirements and density limits. The range in bed density in Deptford's existing assisted living, nursing home and comprehensive personal care homes ranges from 8 to 53 beds per acre, averaging about 23 beds per acre, or 12.5 units per acre. These facilities typically have a mixture of one and two-bedroom units. The congregate senior apartments at the Gloucester County Housing Authority buildings have densities in excess of 36 units per acre (these are one-bedroom units).

These higher densities suggest that many of the age-restricted types of housing do not require very large lots. Nursing homes, assisted living facilities and comprehensive personal care homes can be placed on lots of less than 5 acres. It is the more conventional types of age-restricted housing, such as the small lot single family houses, that need larger land areas, especially if they are designed with recreational and social programs.

A change is proposed in Deptford's land use policy for age-restricted development. Instead of allowing senior independent units in otherwise low density residential districts, land would be specifically identified, based on the following criteria:

- Locating the uses in a spot where civic uses, services and shopping are available or are expected to be in the future.
- Allow for a variety of lot sizes to coincide with the different development needs of the various housing types.
- Earmark land in areas also slated for mixed use redevelopment.

Further differentiation is also sought to distinguish between sites suitable for housing types with and without staff. Staffed sites would have higher densities than the more conventional age-restricted development and consequently would be on smaller sites. Proposed age-restricted sites are depicted on the Land Use Plan. In the zoning code, consideration should be given to establishing maximum lot sizes for the denser types of age-restricted housing with staff.

### **LOCUST GROVE**

Locust Grove has its beginning in the early 1970s but its development really began after 1987 when the broad outlines of the project were approved by the Planning Board. As a planned unit development, Locust Grove was designed to allow flexibility in its area and yard standards to respond to changing market conditions. In this, the development has been successful and was able to meet a higher level of demand for single family detached and age-restricted housing than was contemplated in the original 1987 approval.

Locust Grove was split into 12 sections that have been developed at different times by different developers. Aside from one site on Almonesson Road, these sections have been built out or have fully approved development plans. Since the early 1990's, Locust Grove has been zoned R-40 and Bc-2 with a PUD (Planned Unit Development) overlay. As each section went through the site plan approval process, individual developers often requested and received deviations from the established bulk standards. Now that Locust Grove is nearly complete, the flexibility allowed by its existing PUD overlay district creates confusion when applications for additions and expansions are submitted, since the bulk standards under which many sections were built are only contained within the resolutions of approval, rather than in the Township's zoning regulations. New zoning districts that codify the standards under which the individual developments were approved are recommended as part of the implementation process.

### **OTHER HOUSING MATTERS**

Deptford Township's largest land use category is single family detached housing which occupies in excess of 3,500 acres, or 31.3% of its total land area. By and large, single family detached houses have been built on lots ranging in size from 4,000 to 20,000 square feet in area. Little to no modern housing is found on larger lots suitable for the construction of executive housing. Further, land with attractive physical characteristics or environmentally sensitive features also should be zoned for lower density residential uses that allow for successful integration of the land and development. For example, smaller parcels require grading the entire lot to create positive drainage away from the foundation and towards the street. This grading destroys the natural features of a site. This is most obvious in the loss of woodland in the Township. With more than a quarter of the Township in woodland, lower density in appropriate locations would allow the retention of groves and copses in housing development. This analysis suggests that the area around Bankbridge Lake south to the Maple Ridge Golf Course and east to Tanyard Road remain or become a low density residential land use.

### **RETAIL AND OFFICE USES**

Deptford's land use policy has had a strong emphasis on retail development. The Deptford Mall has been the main catalyst for Deptford becoming a regional shopping destination. This strategy has been successful in creating employment and providing most of the non-residential tax base to balance with the residential districts in the municipality. Deptford, however, has been less successful in diversifying its non-residential uses. For example, even though most of the commercial and industrial districts permit office uses, little office development has occurred. The lack of office development has less to do with any land use policy that Deptford may employ, than

the Township's place in the regional economy. In comparison to Camden and Burlington Counties, Gloucester County has lagged in population growth and transportation access to the core metropolitan area of Philadelphia. Gloucester County is now adding more houses and population than the other counties. As business grows there will be more opportunity for Deptford to diversify its non-residential tax base. Further, as health care provides one of the economic engines for the County, the limited land area in Woodbury near Underwood Memorial Hospital for expansion provides opportunities for Deptford to zone land for medical services.

The prominence of retail uses also has a major negative impact on traffic levels and circulation. Retail trips occur most heavily on weekends, with the early hours of the afternoon the peak travel time. Congestion is a serious problem not only on weekends, but seasonally, during the end of the year holidays. Deptford has numerous areas zoned for commercial development that have not been developed. These are located on Delsea Drive near the Turnpike, at the crossing of Delsea Drive and Tanyard Road, on Hurffville Road at Good Intent Road and on both sides of the Rt. 55 and Delsea Drive interchange. Development of these areas for retail purposes, which is the most likely scenario, would aggravate traffic congestion in new areas of the municipality. Further, in some areas it would introduce commercial uses into predominantly residential areas such as Bankbridge Road and Tanyard Road. With the potential exception of the east side of the Rt. 55 interchange, these commercial areas are being scaled back through reinstatement of the residential uses before the 2002 master plan amendments or through the creation of office and mixed use districts.

The regional commercial category in the land use plan encompasses the Deptford Mall and surrounding retail development. Competition among shopping centers is intensifying and some of the older centers are losing tenants to the newer ones. The mall itself is an important economic contributor to the municipality and is in competition regionally with other similar centers. Other mall shopping centers are investing significant money in upgrading their appearance and in creating more freestanding buildings on their periphery. The large surface parking lots are giving way to multi-story parking garages. At the same time, the municipality is looking for improved access for vehicles and pedestrians, as well as aesthetic improvements to the streetscape and internal parking lots. The types of aesthetic improvements sought are discussed in the Community Design Sub-Element.

Flexible land development regulations are needed in order to encourage reinvestment in the regional commercial area. An example of the need for flexibility is in the development of Deptford as a center for hotels. At the present time, hotels are limited in height to three stories or 40 feet. By comparison, in the South Jersey region, Mt. Laurel has the highest concentration of hotels and permits buildings up

to 110 feet tall, or eight or nine stories. The industry standard is for hotels to be at least four stories in height and many are taller. This suggests the need to reexamine the development regulations for uses in the regional commercial land use classification when revisions to the Unified Development Ordinance are undertaken to implement recommendations from this study.

### **MIXED USE**

Small scale mixed use districts were created with the Transitional Commercial 1 and 2 districts after the adoption of the 1989 Master Plan. In these districts, which are found along certain segments of state highways, both residential and non-residential uses are permitted. They are identified as Mixed Use 1 (MX-1) and Mixed Use 2 (MX-2) on the land use plan. These areas are intended to remain largely the same except those along Rt. 45. On Rt. 45, the present land use policy is for non-residential uses only. Residential uses would be added to make this area consistent with the other mixed use districts.

Two new district classifications are proposed, MX-3 and MX-4. The first of these has been applied to the Deptford portion of the Bellmawr redevelopment area and continues the residential part of the land use classification first established as part of the Housing Element.<sup>5</sup> In that revision to the land use plan, it was labeled Residential Multi-family 3 (RM-3). Further discussion is found under the section on Redevelopment Areas.

Deptford has developed as a suburban community with an emphasis on automobile-based travel. This pattern will remain the dominant one for the foreseeable future. Even while acknowledging that fact, certain areas of the municipality would benefit from a more integrated development approach where residential and non-residential development are accommodated on the same site and potentially in the same building. One of these areas is the former Deptwood shopping center. Though the site has two approved big box retail uses, the second phase of that project is more speculative. A project with a design that creates a more substantial streetwall on Rt. 47, where the second phase is proposed, can establish a hybrid suburban form where buildings and not parking is the dominant view from the street.

The other area designated on the land use plan is in transition from lower value and vacant land uses to higher value ones (excepting the personal storage use) on Clements Bridge Road. As depicted, this is the land on the south side of Clements Bridge across from Deptford Honda, the Plaza at Deptford and the Lowe's Plaza. Allowing a more concentrated development form will create higher values for any

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<sup>5</sup> - The Land Use Plan was amended at the same time as the Housing Element was adopted, November 9, 2006.

project that will allow for the construction of much needed roads through this tract. Mixed use development would best be achieved through regulations that address the form, design, scale and location of buildings, rather than precisely determining the uses within each building. The intent is to create an alternative to the strip shopping centers presently slated for the MX-4 area and create a different nucleus of housing and non-residential development not currently present in Deptford. By altering the land use policy in the two areas, more housing choice will become available. This is an area that could be developed with mixed use buildings with retail or office uses on the ground floor and residential uses above. Three and four story versions of this type of building are depicted in the Community Design Sub-Element.

### REDEVELOPMENT PLANS

Two locations in Deptford are identified as future redevelopment areas in parts of the municipality that were used for municipal landfills. These are discussed below:

#### BELLMAWR REDEVELOPMENT

The first of these is commonly named the Bellmawr Redevelopment area, as it involves a parcel of land surrounded on three sides by the Borough of Bellmawr. It is a section of Deptford that is physically separated from the rest of the municipality by Big Timber Creek and consists of about 26 acres. In total, the redevelopment area in both municipalities is about 61 acres. The redevelopment area is bounded by Creek Road, Rt. 42 (North-South Freeway) and the Big Timber Creek. A portion of the landholdings are also in the Borough of Runnemede but no development is anticipated on this parcel. In Bellmawr, the Bellmawr Waterfront Development, LLC, has been named the redeveloper of the surrounding area and is currently preparing the site for redevelopment. This involves improving drainage and capping the landfill. The redevelopment area in Bellmawr is being planned with two transportation improvements in mind. One is a highway ramp connecting northbound I-295 with southbound Rt. 42. The second is to accommodate a commuter rail line alongside Rt. 42, the Gloucester County PATCO High Speed Line system (see Circulation Element).<sup>6</sup>

Recent events dictate that the capping of the landfill, which currently occupies the site will make it suitable for non-residential uses only within the corporate boundaries of the Township. This is at variance with the Township's adopted Housing Element and Fair Share Plan that earmarks the site for multi-family residential uses to partially address the third round of housing obligation.

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<sup>6</sup> - Port Authority Transit Corporation, a subsidiary of the Delaware River Port Authority.

A comprehensive plan for the redevelopment that apportions the 80 affordable housing units in Deptford's plan without a precise delineation of the municipal boundary is necessary to ensure that they are credited to the municipality. In addition, any growth share obligation generated by the employment in the non-residential portion of the redevelopment that is allocated to Deptford would also be addressed by the redevelopment entity. The precise mechanism for this objective would be addressed in any future redevelopment agreement between the redeveloper and the municipality.

In order for the benefits of landfill capping and returning the land to productive use to occur, the parcel needs to be analyzed to determine if it is an area in need of redevelopment based on statutory criteria. If the area is found to meet the criteria by the Planning Board after public hearing, the Township Council's next action would be to adopt a resolution declaring it an Area in Need of Redevelopment and directing the preparation of a Redevelopment Plan. Once drafted, the Redevelopment Plan would be adopted as an ordinance by the governing body, a redeveloper selected and a redevelopment agreement executed.

#### FIVE POINTS REDEVELOPMENT

The second redevelopment area identified is in the Five Points area where the land use plan indicates the Resource Recovery, Open Space and Research, Office and Manufacturing land use categories. The first two of these are described in the Land Use Categories portion of this document. The ROM district and its rationale are also described in the Land Use Categories section and a fuller explanation is offered below.

The interchange area represents the last major opportunity for Deptford to take advantage of the state's investment in highway infrastructure. There is also the future possibility that the highway interchange will also be the location of a heavy rail station that would offer intermodal transportation opportunities for Deptford. Ever since the first State Development and Redevelopment Plan was adopted in 1992, the state machinery of government has been gradually moving away from supporting automobile centered land development to mixed use development in "centers". Centers are concentrations of population, employment and economic activity. Center development is intended to save taxpayers a significant amount of money, preserve ecological habitats that would be compromised through greenfield development, and more efficiently use existing infrastructure. These policies have worked their way through other levels of New Jersey government and non-governmental organizations, albeit unevenly, and now have exerted a real effect on land development in the State, particularly for brownfields site like the Kinsley Landfill. This is the one location in Deptford where a mixed use development could be started from scratch to combine

retail, office, residential and civic uses in a comprehensively designed and integrated center. An integrated mixed use development would also provide an example for the retrofitting of older retail development to stay competitive in the marketplace where providing a wide variety of shopping is no longer enough for the consumer. Such redevelopment would create a critical nucleus of redevelopment that would change the land use balance at the southern end of the municipality in a positive direction and possibly be more important for Deptford's future than its use as a technology center.

### **Land Use Categories**

The land use categories represent a set of recommendations for the use and development of property in Deptford and should be viewed as providing the planning basis underpinning the municipality's various zoning districts. The land use categories are broadly drawn and are intended to set overall land use policy for the Township. The land use categories set ranges for residential development and consequently may support more than one zoning district.

In order to meet the new goals and objectives of this Master Plan and to address the major land use issues identified in the beginning of the element, the Land Use Plan distinguishes land uses differently than the 1989 Plan (the last major master plan study). There is greater emphasis on mixed use development that combines various forms of non-residential and residential land uses in one area. This may be considered an evolution of the planned unit development concept by allowing mixed use buildings.

The land use categories for Deptford are described below and are graphically depicted on the Land Use Plan found at the end of this document.

#### **RESIDENTIAL CLASSIFICATIONS**

The residential districts in the Township consist mostly of single family detached houses at varying densities. In all but the multi-family districts, small scale open space and religious uses are common, typically on lots of less than one acre. These uses are appropriate in the context of residential neighborhoods. In order to implement the Township's plan for affordable housing, each district is also intended for two family homes at roughly twice the density of the overall district so that each two-family house occupies the land area of a single family dwelling. Also commonly found are uses for utility purposes, such as pumping stations, substations, and storm water management facilities. These uses are necessary complements to all residential districts. Specific residential land use categories include:

**R-1, RESIDENTIAL SFD, < ONE UNIT PER ACRE**

The R-1 is primarily for single family detached residences at a density of less than one unit per acre. Intended for areas suitable for executive housing or areas where the road or utility infrastructure is lacking, it is also the location of most of the remaining agricultural uses in the municipality. In certain areas, there are inclusions of streets and blocks from older subdivisions with higher densities, however, the general character of the land is larger lots with scattered agricultural uses.

**R-2, RESIDENTIAL SFD, 1-2 UNITS PER ACRE**

An intermediate density residential district for single family detached houses at densities ranging from one to two units per acre. The districts are characterized by existing neighborhoods with relatively large lots and gradual infill development, or in locations where there is a logical transition between the R-1 and R-3 districts.

**R-3, RESIDENTIAL SFD, 2-4 UNITS PER ACRE**

This land use category constitutes the majority of Deptford's post-war single family detached residential development – commonly built on quarter acre lots. It has also been applied to former planned unit development districts with similar densities. The land use category is also suitable for neighborhoods that include land available for infill residential development and the existing pattern of house construction averages in the density range established in this paragraph.

**R-4, RESIDENTIAL SFD, 4-7 UNITS PER ACRE**

The highest density of the single family detached districts, this category is intended for the oldest neighborhoods in the municipality where there is a substantial variation in lot size. Many areas include vacant lots that could be developed singly or through the minor subdivision process. This category is intended to control such development to avoid overcrowding of existing neighborhoods, especially since most of the rights-of-way serving them are substandard in width.

**MF, MULTIFAMILY**

The multifamily category includes the unrestricted (by age) apartments and townhouses in the municipality. The intended density is to remain at 6 to 10 units per acre, depending on the neighborhood context of the individual parcels. Existing apartment complexes may exceed this density, but have been included in this category based on their use characteristics. In redevelopment areas, however, the density of multifamily uses may be higher, based on the need to implement the redevelopment plan goals established by the governing body.

**AR-1, AGE-RESTRICTED I**

One of the main land use and housing objectives of the master plan is the identification of appropriate locations for age-restricted housing. Most of the housing intended for age-restricted development is for small lot single family detached residences, where the house design is single story or story-and-a-half in height. In certain locations, townhouse or apartment use would be appropriate where it is logically related to transportation and services. Densities of up to six units per acre are contemplated; however, single family detached developments are anticipated to be clustered, with small lots and an overall density of up to two units per acre.

**AR-2, RESIDENTIAL MEDICAL**

AR-2 is distinguished from AR-1 by the combination of uses allowed and the more intense use of the land found in residential/medical facilities. Since the last major overhaul of the Township's land use policies, a number of new uses have arisen that combine housing with personal and medical services. This combination ranges from handyman and maintenance services, to assistance with the daily tasks of life to fully staffed 24-hour nursing care. This classification is intended to allow comprehensive personal care and assisted living facilities, nursing care and skilled nursing care, rehabilitation centers and similar combination of uses. Also included in this category are the two mid-rise residential buildings operated by the Gloucester County Housing Authority on Pop Moylan Boulevard, even though the level of assistance is more akin to regular apartment buildings, due to their size and higher density. On larger sites, the uses could constitute a small version of a continuing care retirement center (*see* discussion under Land Use Issues) with AR-1 uses. In addition, medical office uses would be permitted as part of a comprehensively designed project to provide a continuum of services to residents within the larger tracts, those in excess of ten acres. This designation has been extended to similar existing uses, as well as wholly new sites.

**MIXED USE CLASSIFICATIONS****PUD, PLANNED UNIT DEVELOPMENT**

The planned unit development designation has been retained for the Narraticon community. A mixture of residential uses are permitted ranging from single family detached and attached dwellings to garden apartments up to a net density of 5 units per acre. In addition, personal sales and services, low intensity retail uses and institutional uses would continue to be permitted.

**MX-1, MIXED USE 1**

The MX-1 districts are linear and front on either Rt. 41 or Rt. 47 in the areas of the Township that have been primarily developed as residential neighborhoods. The MX-1 district thus functions as an intermediate land use category between the highway and residential neighborhoods that begin one lot off of the highway. The lack of depth to the lots limits the intensity of uses that can be accommodated on the land. The districts have been developed with a combination of residential and non-residential uses – conversion of residential buildings to non-residential uses has been common. Previously, residential uses were limited to single family detached uses. It is proposed that residential units above first floor commercial uses would be added to the allowed mix of residential uses. Further, the introduction of floor area ratio limits is proposed to control the intensity of the use of lots. A floor area ratio of .15 to .20 is proposed. Commercial uses are intended to be oriented towards retail and business services and personal sales, as opposed to highway-oriented uses. Due to a need for fueling stations and their historic location on the state highway system, these are intended to be allowed as conditional uses that restrict their intensity and size.

**MX-2, MIXED USE 2**

The MX-2 area is characterized by larger lots with considerably more depth from the highway than found in the MX-1 category and is located on the southerly end of Rt. 41. Consequently, a higher floor area ratio would be permitted, ranging from .20 to .25. In addition to the uses contemplated for the MX-1 land use category noted above, the higher intensity residential/medical uses such as those indicated in the AR-2 district are an anticipated use.

**MX-3, MIXED USE 3**

The MX-3 mixed use district would replace the RM-3 district established as part of the land use plan amendments adopted at the same time as the latest housing plan. The MX-3 district is intended to operate in conjunction with a redevelopment plan for the area that also includes land in Bellmawr. The MX-3 district would permit mid-rise office buildings and regional shopping centers. Additionally, mid-rise apartment building, partially age-restricted would be permitted when part of the municipality's affordable housing plan. This would require a mixture of affordable and market rate units. A floor area ratio range for the broad land use categories of retail (.30 to .50), office (1.0 to 3.0) and residential (1.0 to 2.0) may be applied to the redevelopment plan. In the absence of a redevelopment plan, the existing land use designation of Institutional would remain.

**MX-4, MIXED USE 4**

This land use category marks a shift in emphasis from wholly commercial designations to one where a combination of residential and commercial uses is

developed, including combined buildings. This designation would replace most of the BC-4 zoning district on Clements Bridge Road. This district is the location of significant planned road improvements (see the Circulation Element) that create both an internal road system and improve the minor arterial system of the Township. This area needs to be developed with sensitivity to the small residential neighborhood just to the west of the district, but at the same time permits the creation of a street “wall” on Clements Bridge Road. The “wall” in this instance is the effect created with buildings closer to the street coupled with an improved streetscape of trees, pedestrian paths and small plazas. Higher heights would be allowed from the Caulfield Avenue intersection eastward, with lower heights adjacent to the neighborhood. The second location is applied to a portion of Rt. 47 adjacent to the Brunswick Lanes bowling alley that is a second phase of the redevelopment of the former Deptwood Center site. A floor area ratio of between .25 and 0.80 is proposed for a mixed use site and in mixed use buildings. Incentives should be created in the zoning regulations to encourage mixed use buildings with good civic form.

#### COMMERCIAL CLASSIFICATIONS

##### NC, NEIGHBORHOOD COMMERCIAL

The NC district is similar to the MX-1 and MX-2 districts in being intended for personal sales and services, convenience retail, and small professional offices, but differs from the mixed use districts by not permitting residential uses. As non-conforming uses, automobile services uses also tend to be found in the NC areas, but these are intended to remain non-conforming. A floor area ratio of .15 to .20 is proposed, consistent with the one-story and small scale two-story development

##### HC, HIGHWAY COMMERCIAL

In contrast to the Neighborhood Commercial land use category, the Highway Commercial classification provides for shopping centers and freestanding retail development on larger lots. Additionally, the HC classification is more oriented towards automobile uses. The allowed development would be intermediate between the Neighborhood Commercial and Regional Commercial intensities, with a floor area ratio between .20 and .30.

##### RC, REGIONAL COMMERCIAL

The Regional Commercial designation is centered on the Deptford Mall and includes the related secondary development constructed around it. The large majority of the development is in shopping centers, as opposed to freestanding stores. The RC is also the focus of Deptford’s hotel industry and national chain entertainment and restaurant uses. The next evolution of the Deptford Mall would likely require the construction of parking decks or garages, which would permit a higher floor area

ratio of .40 to .60 at the Mall. Other development in the surrounding area would have a floor area ratio of up to .30, similar to the upper end of the HC district.

#### O, OFFICE

The Office classification replaces a more retail oriented zoning district on Delsea Drive. The Township has many locations for general commercial uses – meaning office, services and sales, but no specific location intended solely for office uses. The location of the use is within a few miles of Underwood Memorial Hospital in Woodbury, where land for medical offices or outpatient services is limited. This would provide a location for the development of professional offices that would provide a transition between the open space use to the south, and the residential and mixed use districts to the north. A floor area ratio of up to .25 is proposed.

### **INDUSTRIAL CLASSIFICATIONS**

#### O-I, OFFICE-INDUSTRIAL

This land use classification is intended for small business uses in multi-tenanted buildings that typically have a front office and a back distribution center. This category would also include locations for contractor offices and storage and personal or household storage. Minor assembly of components manufactured elsewhere would be allowed, but more intensive manufacturing is intended for the other industrial districts. A floor area ratio of up to .25, due to the one story nature of the building housing these uses and the higher office component of such development, is anticipated.

#### ROM, RESEARCH, OFFICE & MANUFACTURING

This district is proposed for large scale planned industrial development at the last largely undeveloped interchange in the Township, at the intersection of Rt. 55 and Rt. 47. The area is proximate to the Gloucester County College and two interchanges from the new South Jersey Technology Park being developed by Rowan University in Harrison and Mantua Townships. This district is intended to allow more intensive development within an overall general development plan approval process to encourage the comprehensive planning for the area. Higher floor area ratios would be permitted when developed comprehensively. Designation of this land area for research, office and manufacturing is supported by the economic development goals of the county, as noted below.

The Gloucester County Freeholders have adopted a Comprehensive Economic Development Strategy (CEDS). First adopted in 2003, the County through its Economic Development Board is in the process of updating the document. The CEDS identifies the nascent technology clusters at Rowan University that include the

School of Engineering and more recently the Technology Park, where the first building has been designed. The CEDS recommends creating additional clusters of related technology industries and suggests that the existing Sony and KTron plants in Pitman (the interchange between Deptford's interchange and Rowan University's) could be a source of new spin-off businesses. Further, the CEDS recommends making more of the existing institutional framework in the County that could include Gloucester County College. The CEDS has identified a need for land for incubator space for new businesses. This is the approach taken successfully at Burlington County's community college in Mt. Laurel.

The ROM land area is also suited for a different development scenario that dovetails with the municipality's identification of the Five Points region for redevelopment. The Planning Board found at its June 2007 hearing that the region qualified as an area in need of redevelopment. It has recommended that the region be officially designated by the governing body. Significant public benefits and land use flexibility can occur through the redevelopment process (*see Redevelopment Plans: Five Points Redevelopment, above*).

Even in the absence of the creation of a redevelopment area, a comprehensively planned mixed use development is a suitable land use for the ROM district, provided that it can meet certain threshold criteria. Appropriate criteria would be a minimum of 150 acres owned or controlled by a single entity, a range or ratio of different uses, the use of the general development plan process to ensure the timely construction of municipal and other public improvements, and other conditions.

#### LI-1, LIGHT INDUSTRIAL 1

This designation has been applied to only limited areas in the municipality where there are existing scattered site manufacturing uses with the main land use designation in the Broadway corridor leading to Interstate 295. In addition to manufacturing uses and the uses allowed in the O-I district, automobile service uses would be permitted subject to conditions.

#### LI-2, LIGHT INDUSTRIAL 2

The Light Industrial 2 designation allows the type of uses also in the LI-2, but also borrows the technique of permitting a higher level of development utilized in the ROM district. This district may be considered intermediate in intensity between the ROM and the LI-1.

#### LI-3, GENERAL INDUSTRIAL

This land use classification represents a reassessment of the usefulness of the Flex zoning district in the southerly end of Rt. 41 for encouraging a different type of development than the truck services, automobile wrecking yards, and scrap metal

dealers found in this stretch of the highway. The standards applied to the existing uses do not address the real impacts created by these non-conforming uses, which are primarily visual and circulatory. This district would generally permit the existing uses but would apply a comprehensive set of performance standards to the properties. Taking this approach should provide an incentive for property owners to invest in improving the look of their business and properly channelizing truck traffic.

#### RR, RESOURCE RECOVERY

This land use designation applies only to the Kinsley landfill and is intended to allow the use of collected methane for power generation and other clean technologies, such as solar collector arrays.

#### INS, INSTITUTIONAL

Deptford has a wide variety of governmental, public and quasi-public, educational, and religious institutions within its boundaries. This land use category has been applied to such uses. Some religious institutions are on very small lots and have been included within the surrounding residential district for clarity of the Land Use Plan.

#### OS, OPEN SPACE

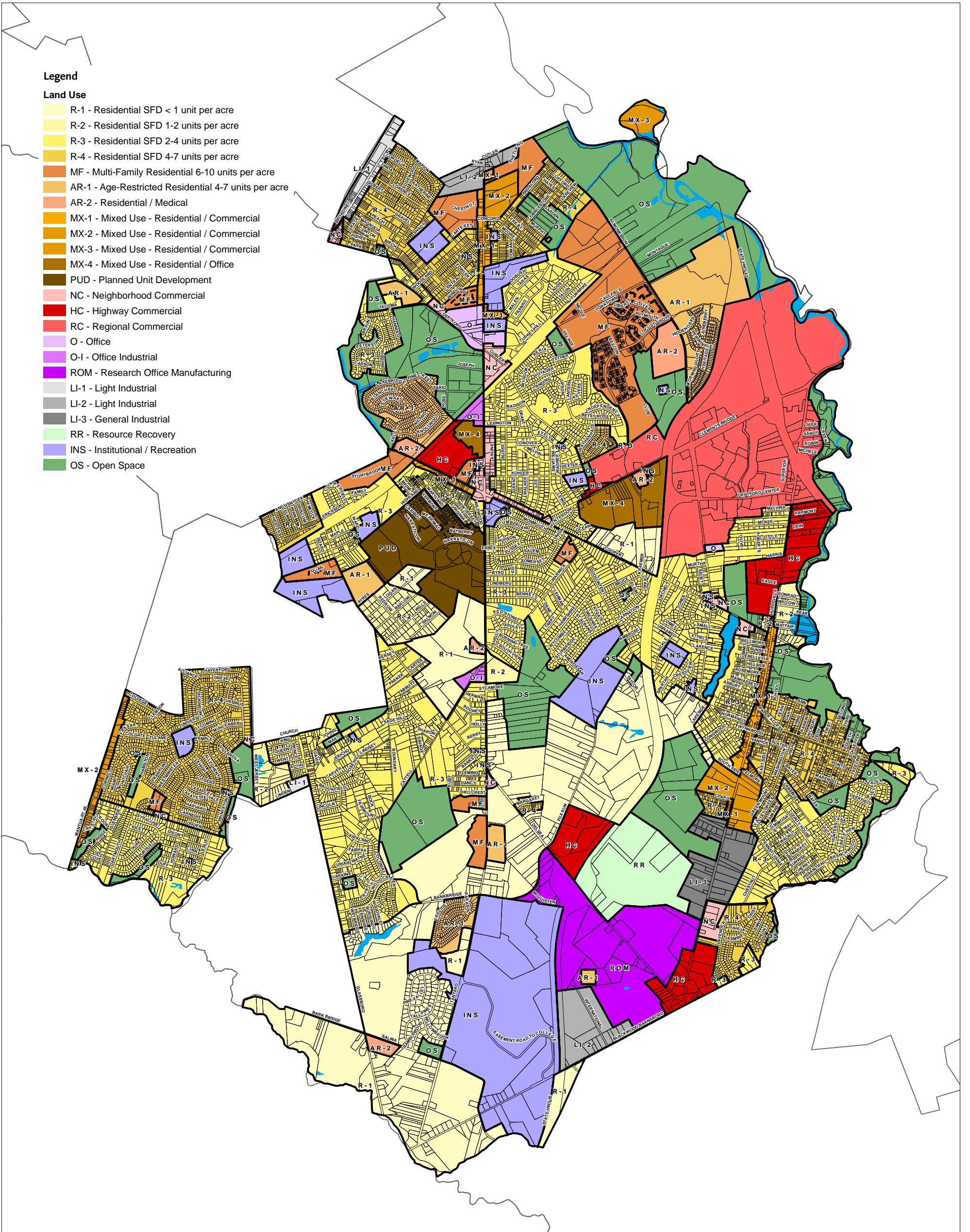
The Open Space land use category identifies land to be acquired or restricted for conservation, active and passive recreation. Land owned by Deptford Township for recreation or conservation purposes has been labeled as Open Space. Other lands held by the municipality are in the Institutional classification. If owned by a public entity, conservation trust, or other organization for open space, the areas are proposed to be protected from uses that would damage or degrade the ecological capabilities of the land, and to remain essentially undeveloped except for structures ancillary to recreation and leisure activities, such as food stands, restrooms, equipment houses, or outdoor performance space. On private land, the zoning applied would need to differ whether it was publicly or privately owned since reasonable economic use of private land must be maintained. In those instances, the land would be either intuitively or low density residential zoned.

### **SUMMARY AND RECOMMENDATIONS**

The Land Use Plan Element synthesizes the main themes of this Master Plan by signaling a shift from purely residential or commercial development to more mixed use. It points to the future where the available land resources will be scarce and earmarks certain parcels for potential open space acquisition or development rights purchase. This will allow the municipality to meet the future recreational needs of its population. The plan includes several new policies on housing and zoning districts

related to housing. It identifies two areas for potential redevelopment and recommends land use policies for them. Specific recommendations include the following:

- 1) As neighborhoods age, targeted efforts in preservation need to be made to ensure their continuation as viable communities. The effort includes code enforcement, capital improvement budgeting, state assistance if needed, and ensuring that the municipality's land development code allows home improvement to meet current expectations of buyers.
- 2) The land use plan depicts proposed areas for age-restricted housing in two related categories, those with significant medical uses combined with housing and those without. The zoning map and districts will need to be modified to implement these recommendations.
- 3) Create new zoning districts for the Locust Grove community to reflect approved standards.
- 4) Maintain the integrity of larger residential lots in the central and southern portions of Deptford for environmental protection purposes and to provide areas for executive housing to balance residential land uses in the municipality.
- 5) Create design standards for commercial development.
- 6) Reexamine the height limitations for hotels.
- 7) Create mixed use zoning districts as outlined for the MX-3 and MX-4 land use classifications.
- 8) Develop redevelopment plans for the Bellmawr and Five Points Redevelopment Areas as needed.
- 9) Implement the land use categories through the Township's Unified Development Ordinance as appropriate.



**Legend**

**Land Use**

- R-1 - Residential SFD < 1 unit per acre
- R-2 - Residential SFD 1-2 units per acre
- R-3 - Residential SFD 2-4 units per acre
- R-4 - Residential SFD 4-7 units per acre
- MF - Multi-Family Residential 6-10 units per acre
- AR-1 - Age-Restricted Residential 4-7 units per acre
- AR-2 - Residential / Medical
- MX-1 - Mixed Use - Residential / Commercial
- MX-2 - Mixed Use - Residential / Commercial
- MX-3 - Mixed Use - Residential / Commercial
- MX-4 - Mixed Use - Residential / Office
- PUD - Planned Unit Development
- NC - Neighborhood Commercial
- HC - Highway Commercial
- RC - Regional Commercial
- O - Office
- O-I - Office Industrial
- ROM - Research Office Manufacturing
- LI-1 - Light Industrial
- LI-2 - Light Industrial
- LI-3 - General Industrial
- RR - Resource Recovery
- INS - Institutional / Recreation
- OS - Open Space

# Land Use Plan

Deptford Township, Gloucester County, NJ November 20, 2007

0 550 1,100 2,200 3,300 Feet  
 Source: Civil Solutions GIS Geodatabase  
 Based on tax assessment MOD IV data



Clarke Caton Hintz ●●●  
 Architecture  
 Planning  
 Landscape Architecture

## Community Design Sub-Element

### INTRODUCTION

The Community Design Sub-Element is part of the Land Use Plan Element but has been separated to give it a special emphasis in this Master Plan. The Community Design Sub-element also functions as a technical appendix to the Master Plan as it discusses the form of buildings and their relationship to other buildings and streets.

Community planning, prodded by the emergence of the new urbanism movement beginning in the mid-1980's, has rediscovered its roots in the physical layout and design of towns, suburbs and cities. New Jersey faces the prospect of being the first "built-out" state in the country in the next 30 years. Built-out means that all of the land available for housing, shops, factories and institutions will be used and new development will require the redevelopment of existing buildings or obsolete sites. When redevelopment is the primary means of creating new buildings, design becomes more important. This occurs because each new building will be built in an existing context of other, older, buildings. It contrasts with the emergence of suburbs when land converted from farmland or woodland and few surrounding buildings existed – the neighborhood created its own context. Today, in order for new buildings in redevelopment to be compatible with the development that already exists next door and down the block, their design must integrate the new with the old. Without good design, the character of the community can become lost.

Deptford has not yet experienced any significant "tear down" activity where larger houses replace existing smaller ones. At this point in its development, the Township has sufficient vacant land resources that locations for new housing are still available without resort to tear downs. Where Deptford has experienced a wave of redevelopment of various sites, it has been in its commercial sector. Examples include the demolition of the Deptwood Center on Cooper Street and Almonesson Road and the former RCA/Thompson plant on Clements Bridge Road. Both of these projects have approval for new retail development; several stores have opened at the latter location.

Of the different types of non-residential development, retail centers have the fastest obsolescence. While new forms of retail development do not completely eliminate earlier types, new centers are often favored by the public and have higher sales per square foot than older centers. Retail development has undergone an evolution from the traditional downtown (Woodbury), to suburban strip centers (the original Deptwood Center), the creation of the enclosed shopping mall (Deptford Mall), the

reinvention of the suburban strip center as a power center of big box merchants (Deptford Landing) and the creation of life style or entertainment retail centers (no examples yet in Deptford). Each new form seeks to capture consumer dollars by differentiating itself from other retail centers. This sub-element seeks to guide the design of new forms of retail development that are anticipated in Deptford through illustrations.

The Master Plan seeks to move away from new purely retail developments to more mixed use that incorporates retail, office and residential uses, some in the same buildings, with pedestrian connections and integrated amenities, such as plazas and seating. It also seeks to improve solely retail sites through the use of landscape architectural elements that enhance the appearance of centers.

In the region, some mixed-use development has occurred where transportation systems have interconnected, for example a major or a highway with a train stop. Comprehensively planned districts surrounding a train stop are often called “transit-oriented development” or TOD. NJ Transit and the Delaware Valley Regional Planning Commission, for instance, have undertaken a number of planning studies that look at the feasibility of developing the land surrounding a train stop for TOD in north and central New Jersey, on the PATCO High Speed Line and around SEPTA stations in the Philadelphia suburbs. While Deptford does not have any trains stops, should the extension of the PATCO High Speed Line into Gloucester County occur (*see* Circulation Element), the conditions would be ripe for fully investigating the feasibility of TOD in Deptford. These concepts are illustrated below with images taken from other locations outside of New Jersey where they have been more fully developed.

### Mixed-Use Forms



A minimum two-story appearance is important in creating an appropriate scale where buildings are close to the street. One-story buildings have less mass and do not create the “street wall” effect desired.



This project incorporates ground level retail uses with second story offices. It also illustrates the use of a speed table for the extra wide crosswalk in the foreground as discussed in the Circulation Element. The project also includes a six-story hotel in the background that functions to terminate the view down the street and create a sense of place.



This illustration and the following picture demonstrate one of the fundamentals of the form-based concept of land use regulation – setting standards for the shape and scale of building while paying less attention to uses. In these illustrations, the ground floor could be used for either retail or residential use. The ground floor is used for retail purposes in the top illustration and housing in the bottom one.



Multi-Family Forms



New forms of multi-family housing are emerging that combine aspects of townhouses and flats, or apartments. The three-story parts of this project could either be designed as a townhouse or what is called a “stacked” townhouse - a flat with a townhouse above it.



The next three illustrations (one on the following page) depict how the same basic form of a structure can be designed to enhance or deemphasize the type of dwellings that are located in the building. In the top illustration, the distinctly different floors, balcony treatments and door locations identify this building as containing only flats.



The middle illustration to the left has elements that suggest that it could be either all flats or a series of stacked townhouses, particularly in places where multi-story porches are common on townhouses.



The final illustration has a design that emulates a large townhouse through vertical differences in the façade and the prominence of a third story bay window and centered dormer. All three of the illustrations depict buildings that are all flats.

**Retail Improvement**



Entrance signage and landscaping create the first impression of a site. In this shopping center, the use of contrasting color from different plants enhances the appeal of the sign.



Focal points are created through the use of varied paving materials and the fountain. Plants add to the sense of enclosure created by the brick pavers.



Raised planters function to define the plaza area and to separate shoppers from parked vehicles. This design can be used to address grade changes with steps (see following illustration) by utilizing the brick portion for handicapped access.



Addressing the change in the grade of the site adds interest to the project and provides an opportunity to create an additional display window and seating area.



Sculpture or other public art adds to the site amenities.



Outdoor cafes can enliven an area. A fence demarcates the café from the pedestrian portion of the sidewalk, defining the public from the quasi-public space.



All too often, building lighting is not coordinated with site lighting. In this illustration, the building lights functions as pedestrian illumination and complements the site lighting. The site lighting is low and at a human scale.



The contrast in paving materials defines the pedestrian walkway that leads from one section of the shopping center to another. This illustration also depicts the concept of the pedestrian street; motorists drive with extra caution due to the changes in curb height and use of lighted bollards in the center of the photograph.



Hedging of parking areas blocks the view of significant stretches of asphalt, yet is low enough to allow security personnel to see into the parking lot.



Pedestrian walkways run through the parking lot to the buildings but are separated from parked vehicles. Illumination is provided at each conflict point between pedestrians and vehicles.

These illustrations are to be used in the site development process to guide the design of architectural and landscape architectural elements for mixed use, multi-family and retail development. They are also intended to underpin the establishment of design guidelines either as a separate brochure for developers or to be incorporated into the Uniform Development Ordinance of the Township.

## Statement of Planning Consistency

### INTRODUCTION

This section addresses the relationship of the land uses proposed under Deptford's Master Plan to the land use designations and related Master Plan policies of contiguous municipalities, Gloucester County, and the State of New Jersey.

### LAND USE POLICIES IN SURROUNDING MUNICIPALITIES

Serving as a central hub of southern New Jersey, Deptford Township plays a critical role in shaping the regional landscape. Deptford Township is bordered by ten municipalities that range in character from the dense City of Woodbury to rural Washington Township. Through assessing neighboring land uses, Deptford will ensure that it is promoting land uses that are compatible with its adjacent municipalities and will foster regional planning within the south New Jersey region.

#### West Deptford Township

One of the five municipalities located along Deptford's western boundary, West Deptford Township implemented zoning along its eastern border that complements Deptford's land use regulations. For example, West Deptford's R-2 Suburban Residence and SC Shopping Center districts, which are located along the southern boundary, facilitate the transition between the two townships. The R-2 district limits lot sizes to minimums of 20,000 square feet if there is no water or sewer infrastructure available, 15,000 square feet if there is either water or sewer, and 10,000 square feet if both water and sewer infrastructure are available. The West Deptford R-2 Suburban Residence and the SC Shopping Center district border the Deptford R-10 and the R-6 Residential districts, which restrict the minimum lot size to 10,000 square feet and 6,000 square feet respectively. These densities are relatively comparable.

In addition, West Deptford zoned the land along the northern shared border with Deptford as C Commercial, which allows general commercial activities that are not limited to neighborhood services. Examples of permissible uses include hotels, retail, office, studio space, banks, restaurants, and gas stations. The C Commercial zone complements the adjoining LI-1 Light Industrial district in Deptford Township, which permits non-polluting industrial and related uses.

### **City of Woodbury**

Located to the northwest of Deptford Township, Woodbury City serves as the county seat for Gloucester County. The municipalities' respective zoning are compatible and serve to reinforce the shared character of the area. Within the City of Woodbury, the R-90 Residence is the prominent zoning district along the border and is located along the center of the boundary. The R-90 zone permits single family residences and establishes the minimum lot size at 18,000 square feet. Correspondingly, this zone abuts the R-10 Medium Density Residential, R-10A Medium and Low Density Residential, RM-2 Multi Family Residential and INS Institutional districts in Deptford Township, all of which are compatible uses.

Woodbury's R-60 Residence District is located directly to the North of the R-90 zone. The R-60 district defines the minimum lot size as 6,000 square feet. The R-40 Low Density Residential district in Deptford Township abuts the R-60 district in Woodbury City. While the R-40 district permits less intense development, the two zones are compatible. Similarly, Woodbury designated the area to the South of the R-90 as PA Planned Apartments, which is denser than the adjacent R-6 zone in Deptford Township.

While the residential districts in Woodbury City complement Deptford Township's existing land use regulations, the City's zoning along the northern most shared border does not reflect the character of the adjacent zones in Deptford Township. Woodbury designated the area along the northern portion of border as C-3 Commercial, R-35 Residence, and I Industrial districts. The C-3 zone permitted uses include, but are not limited to, laboratories for scientific or industrial research, bulk laundries, food processing, and general contracting. The R-35 Residence establishes the minimum lot size as 3,500 square feet. In contrast, the neighboring zones in Deptford are R-6 and R-10. While the municipalities' residential zones are comparable, the intense uses in the City's Industrial district are not the ideal fit for the R-6 and R-10 zones in Deptford.

### **Westville Borough**

Spanning 1.4 square miles, Westville Borough is located to the North of Deptford Township. The southeastern border of the Borough, which is adjacent to Deptford Township, is zoned R-1 Residential District. Westville's R-1 zone sets the minimum lot size at 6,000 square feet. Correspondingly, in Deptford Township the adjacent zones are R-6 High Density Residential, RM-2 Residential Multi Family, INS Institutional, and LI-2 Light Industrial. The R-6, RM-2 and the INS districts facilitate a natural transition between the two municipalities. While the LI-2 zone is inconsistent with the character of a residential area, does not present an incompatible use. The LI-2 Light Industrial district features less intense uses than traditional industrial uses and also provides

nearby residents with access to employment opportunities. Similarly, the south central portion of Westville Borough is zoned I-4 Light Industrial and directly abuts Deptford's northern LI-2 Light Industrial district and its R-6 High Density Residential zone. Additionally, the Borough's southern C-3 Commercial district is adjacent to Deptford's northern LI-1 Light Industrial zone.

### **Woodbury Heights Borough**

Located to West of Deptford, Woodbury Heights Borough is comprised of four zoning districts: CC Community Commercial, HC Highway Commercial, LI Limited Industrial and R Residential. The majority of the area in Woodbury that abuts Deptford Township is zoned R Residential, which limits lot size to a minimum of 9,000 square feet for detached units and 15,000 square feet for churches. The R Residential zone is adjacent to the R-6 High Density Residential, INS Institution, R-10 Medium Density Residential, R-40 Low Density Residential and the RM-1 Residential Multi Family.

Moreover, the eastern commercial district in Woodbury Heights is directly adjacent to Deptford Township, with the HC Highway Commercial to the north of the Community Commercial zone. The HC Highway Commercial district flanks the R-6 High Density Residential zone in Deptford, and provides the area with access to needed goods and services. The CC Community Commercial zone, which adjoins the INS Institutional and RM-1 Multi Family Residential zones in Deptford, permits uses including public purpose uses, retail, office, banks, and restaurants. Additionally, the LI Limited Industrial zone in the South of Woodbury Heights is adjacent to R-6 High Density Residential and R-10 Medium Density Residential. The LI Limited Industrial zone provides for public purpose use, office uses, wholesale distribution centers and warehouses, and manufacturing plants with processes that are completed on the enclosed buildings. While the LI Limited Industrial zone is not necessarily incompatible with residential uses, the traffic associated with the permissible uses may affect the character of the residential areas in Deptford.

### **Wenonah Borough**

The Borough of Wenonah is located to the southwest of Deptford Township. The Borough's R-1 Residential zone is the dominate zoning district in Wenonah and requires lot size minimums that range from 11,250 square feet for existing single lots to 22,500 square feet for proposed units. The R-1 Residential zone adjoins the R-6 High Density Residential, R-10 Medium Density Residential, and the INS Institutional districts, all of which are compatible uses. Wenonah has an additional residential district located to the south of the Borough. The LR Low Density zone, which requires a minimum of one acre per unit, borders Deptford's R-40 Low Residential district. The neighboring zoning

district promotes a natural transition between the two municipalities, as the density and permitted uses are quite comparable.

In addition, the Borough has designated land for conservation and recreation through its P&C Parks and Conservation District, which loops around the south, east, and north of the R-1 Residential zone. This zone is designed to preserve open space in perpetuity for present and future residents of Wenonah. The northwestern most conserved land in the Borough is adjacent to both the R-6 High Density Residential and the INS Institutional district, whereas the land to the northeast of the border neighbors the LI-1 Light Industrial in Deptford. The southeastern most portion of the P&C Parks and Conservation district abuts a little league field in Deptford, which is in the Township's INS Institutional zone. It also flanks the R-40 Low Density Residential district.

While the majority of Wenonah Borough is zoned for Residential uses, a small portion of land that is located on the eastern border of the Borough is designated C Commercial and I Institutional. The C Commercial zone permits such uses as retail, personal service shops, business offices, restaurants and public garages. Both the Borough's C Commercial and I INS districts neighbor Deptford's R-10 and R-20 Residential zones.

### **Mantua Township**

Mantua is located to the southwest of Deptford Township and shares a border with Deptford Township's southernmost R-40 Low Density Residential zone. Mantua Township provides for a multitude of uses along its border with Deptford. Mantua's LI Light Industrial zone flanks the northern portion of the shared border. The Township's LI Light Industrial district permits the following uses: general business, professional and government offices, data processing, research and engineering activities, assembly and light manufacturing, wholesale distribution centers and warehouses, and commercial greenhouses, nurseries, and florists, and nursing homes. While the traffic associated with the wholesale distribution centers and the warehouses may affect the character of Deptford's R-40 Residential district, the uses are compatible and provide residents of Deptford with convenient access to employment centers.

Mantua's R-40 Low Density Residential district is located to the south of the LI Light Industrial zone. Mantua's R-40 Low Density Residential district sets the minimum lot size at one acre, which reflects the density defined in Deptford's R-40 zone. Additionally, Mantua's R-22 Medium Density Residential zone, which establishes the minimum lot size at a half acre, neighbors Deptford's R-40 zone and presents a complementary use. Mantua's AT Apartment/Townhouse district is located along the southernmost portion of the shared border with Deptford, and has a maximum density at 6 units per acre. While this is denser than the R-40 district in Deptford, it is still a compatible use. The

aforementioned residential districts in Mantua and Deptford are serviced by Mantua's CC Community Commercial district, which is located to the south of the R-22 zone. Permissible uses in the CC Community Commercial zone include retail trade, restaurants, banks, general and professional offices, personal and professional offices, and garden centers.

### **Washington Township**

Washington Township is situated to the East of Mantua and to the southwest of Deptford Township. While Washington Township is defined by its rural character, it does accommodate intense uses along its shared border with Deptford Township. The northern tip of Washington is zoned HC Highway Commercial, which allows for uses, including but not limited to, retail stores, eating establishments, office space, personal services, and government buildings. This zone neighbors the R-10 A Medium & Low Density Residential in Deptford Township, which is a compatible use.

The Highway Commercial zone is also along the central portion of the municipal border, and flanks Deptford's BC-1 Business Center One zone, which allows for intense development along highway interchanges. Additionally, Washington Township located its PI Planned Industrial zone along its border with Deptford in two distinct locations. The southern PI Planned Industrial is adjacent to Deptford's LI2 Light Industrial and its R-40 Low Density Residential zones. The northern PI Planned Industrial neighbors Deptford's C-2 Neighborhood Commercial District, the R-6 A, Affordable High Density Residential, R-10 Medium Density Residential and R-10 A, Low to Medium Density Residential. Uses permitted in Washington Township's Planned Industrial zone include scientific or industrial research engineering laboratories, warehouse facilities, light manufacturing, municipal and government buildings, and wholesale business establishment, and public utility service yards. The CI Commercial Industrial district, which permits all uses in the HC Highway Commercial District and additional commercial and industrial uses, is located between the Planned Industrial districts in Washington Township and adjacent to the BC-1 Business Center One and the LI2 Light Industrial districts in Deptford Township.

Washington Township juxtaposes zones that promote a rural character to the PI Planned Industrial districts. In particular, the R Rural Residential zone is located to the North and to the South of the PI Planned Industrial zones. The R Rural Residential district permits detached single family dwellings, farm buildings and agricultural uses. The established minimum lot size is five acres. The southern R Rural Residential zone neighbors Deptford's INS Institutional zone and R-40 Low Residential zone, while the northern R Rural Residential district is adjacent to Deptford's R-6 Affordable High Density Residential, R-10 Medium Density Residential, R-10A Medium & Low Density

Residential, and C-2 Commercial districts. Additionally, Washington's PR-1 Planned Residential One zone is located to the east of the R Rural Residential District. The PR-1 Planned Residential One district, permits single-family developments to be built on lands formerly zoned rural and designated in the Master Plan as R/LI. The zone allows applicants to reduce the size of lots; however, the maximum density is set at 1.6 units per acre. This zone is adjacent to the R-10 A zone in Deptford, which allows denser development. While the intensity of the use is greater, the respective zones are compatible.

### **Gloucester Township**

Bordering Deptford Township to the East, Gloucester Township, Camden County is bisected by NJ State Highway 42. The R-3 Residential district, which defines the minimum lot size for a single family dwelling as 9,375 square feet, is the predominate use located along the Township's border with Deptford. The R-3 Residential zone is compatible with surrounding land uses, as it is adjacent to R-10A Low to Medium Density Residential, R-6 High Density Residential, R-40 Low Density Residential, INS Institutional, R-20 Residential, and BC-4 Business Center Four districts. Additionally, Gloucester's R-4 Residential district is located to the North of its R-3 Residential zone and enjoins Deptford's BC-2 district. The R-4 district allows single family dwellings on a minimum lot size of 6,250 square feet, churches, municipal uses, parks, and conserved lands. The Deptford BC-2 Business Center Two zone is a compatible use, as it provides the residents of Gloucester Township with access to goods and services, as well as employment opportunities.

Gloucester Township has designated two areas on the Deptford border as the BP Business Park zone. The BP Business Park zone provides for comprehensively planned office, as well as combined office and manufacturing or warehouse uses in single or multi-tenant buildings. The northern BP Business Park zone neighbors the BC-2 Business Center Two zone in Deptford while the southern BP Business Park district is adjacent to the BC-4 Business Center Four zone. The similarity in permissible uses provides for a natural transition between municipalities. Comparably, Gloucester Township's NC Neighborhood Commercial and GI General Industrial zones, both of which are located next to the BP Business Park district and both of which are commercially oriented, border Deptford's BC-4 Business Center Four zone. Gloucester Township also designated an IN Institutional zone along the northern portion of the municipal border. The IN Institutional zone permits governmental, educational, charitable, health care and religious uses. The IN Institutional district neighbors the BC-2 Business Center Two district, which compliments the IN zone, as it provides access to goods and services.

### **Runnemede Borough**

Located in Camden County, Runnemede is situated to the northeast of Deptford Township. The Borough is comprised primarily of residential uses, with two residential zones located along the Deptford Border. The Residence R-2 zone is the least dense residential zone, establishing a minimum lot size of 20,000 square feet. Its neighboring Residence R-3 district is substantially more dense, setting a minimum lot size of 8,000 square feet. Runnemede's R-2 and R-3 districts are adjacent to Deptford's BC-2 Business Center Two district, which provides the Borough's residents with access to goods and services. Additionally, the Borough's P Public zone is situated adjacent to the Deptford border, and enjoins Deptford's INS Institutional zone. Deptford's Institutional zone also neighbors Runnemede's park land.

### **Bellmawr Borough**

The Borough of Bellmawr, Camden County, borders Deptford Township to the North. The Light Industrial district in Bellmawr is located on the western portion of the shared municipal boundary. The Light Industrial zone permits commercial and industrial development of a mechanical nature as well as specified residential uses. The Light Industrial district is directly adjacent to the INS Institutional zone in Deptford Township. Bellmawr's P Recreation and Open Space district, which limits uses to public parks, outdoor and indoor recreational uses, passive or active open space, and community centers, is located to the West of the Light Industrial district in the Borough and adjacent to the INS Institutional zone in Deptford, which also allows for parks.

### **COMPATIBILITY WITH REGIONAL AND STATE PLANNING DOCUMENTS**

The consistency of the Master Plan with regional and state plans is examined in this section. The documents compared include Gloucester County's Cross Acceptance Report, the 2001 State Development and Redevelopment Plan, and the Draft 2004 State Development and Redevelopment Plan.

#### **County of Gloucester, Cross Acceptance Report**

Gloucester County details its key planning initiatives and strategic hurdles in its Cross Acceptance Report, dated February 2005. The report highlights the County's completed Northeast Region Strategic Plan, which recommends the use of smart growth principles in developing a uniform growth strategy for the fourteen municipalities in the northeastern portion of Gloucester. This plan reaffirms Deptford Township's Master Plan, which fosters development in locations that build on existing density and on sites that promote smart linkages.

Furthermore, the County's Cross Acceptance Report detailed its concerns related to the increased demands on the sewer and water infrastructure in Gloucester. In particular, the County emphasized its struggle to meet the new demand related to its rapid growth while not overburdening the Potomac-Raritan-Magothy Aquifer or the existing sewer lines. Deptford Township addresses this concern via its Conservation Element, which stresses the need for sustainable development practices, and its Land Use Element which advocates the development of areas adjacent to existing development.

### State Development and Redevelopment Plan

The New Jersey State Plan, which was adopted in 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 include:

- 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.<sup>1</sup>

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

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<sup>1</sup> - New Jersey State Planning Commission, March 2001, *The New Jersey State Development and Redevelopment Plan*, p.7.

- PA2 Suburban Planning Area
- PA3 Fringe Planning Area
- PA4 Rural Planning Area
- PA5 Environmentally Sensitive Planning Area

The 2001 plan is the document in current use; however, the State Planning Commission with their staff, the Office of Smart Growth, is working with counties and municipalities to update the existing plan. The Office of Smart Growth has developed a draft of the proposed State Plan Policy Map at the direction of the Commission and is in the process of holding public meetings regarding its recommendations.

Under the adopted 2001 New Jersey State Development and Redevelopment plan, Deptford Township is designated primarily as Planning Areas 1 and 2, with a small swatch of land to the North defined as Parks and Natural Areas. The boundary of the area within Metropolitan Planning Area 1 is closely aligned with the border of Deptford's designated center. Planning Area 1 extends slightly to the southwest, with the southern most portion of PA 1 located just South of Wenonah Borough and East of Mantua Township. The southern portion of Deptford Township, which borders Washington Township, is located within Suburban Planning Area 2.

The Preliminary New Jersey State Development and Redevelopment plan proposes changes to the planning area designations. While the preliminary plan does not advocate drastic shifts in the planning area classifications in Deptford Township, it does expand the portion of the Township that is classified as Parks and Natural Areas. Specifically, two areas to the West of Gloucester Township and to the South of Route 44 have been proposed as Parks and Natural Areas instead of Planning Area 1. The preliminary plan also recommended the change of a small area West of Route 55 from PA 1 to Parks and Natural Areas. Additionally, the other substantive change to the existing classification affects the area to the North of the Township along the Township Border with Bellmawr Borough and Runnemede Borough that is adjacent to Big Timber Creek. The preliminary plan advocates that the area, which was formerly designated as Metropolitan Planning Area 1, be classified as Environmentally Sensitive Planning Area 5 with sewers.

While Deptford Township is not currently engaged in the cross acceptance process, the Township does find the majority of the Preliminary New Jersey State Development and Redevelopment plan to be consistent with the Township's Master Plan. The Township, however, does have concerns related to the location of one of the sites deemed environmentally critical. The preliminary plan identifies the area located near the Locust Grove PUD in Deptford as an environmentally critical area. This is contradictory, as the Locust Grove PUD is slated to include over 1,700 residential units. Furthermore, the Township is also concerned about the preliminary plan's removal of Deptford's

designation as a Proposed Regional Center. The Township maintains that the character and its corresponding land use support Deptford's categorization as a Regional Center.

**SUMMARY**

As demonstrated in this section, the policy goals and objectives for the Deptford Master Plan are substantially consistent with local plans and ordinances, County strategic planning documents and the State Development and Redevelopment Plan. While certain minor inconsistencies exist with regard to land use policies in adjacent municipalities, these do not alter the substantial compatibility of this document with other relevant planning documents.