

TOWN OF OXFORD

2010

COMPREHENSIVE PLAN



Adopted 10.12.10

Cover photograph by Jane McCarthy, Oxford ferry boat race, © 2007, used with the gracious permission of the photographer.

RESOLUTION NO. 1008

A RESOLUTION OF THE COMMISSIONERS OF OXFORD ADOPTING THE
TOWN OF OXFORD 2010 COMPREHENSIVE PLAN

WHEREAS, pursuant to Article 66B § 3.05(b) of the Annotated Code of Maryland, the Oxford Planning Commission determined that the Comprehensive Plan for the Town of Oxford should be updated and amended in accordance with applicable provisions of Maryland Law; and

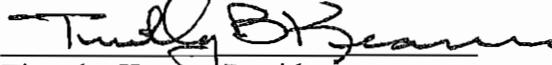
WHEREAS, in accordance with Md. Code Ann. Article 66B, § 3.07(b), after notices to all state and local agencies with planning jurisdiction, and after a duly advertised public hearing on September 7, 2010, an updated Comprehensive Plan for the Town of Oxford has been unanimously approved by the Planning Commission, and duly certified and recommended to the Commissioners of Oxford for adoption;

NOW, THEREFORE, BE IT RESOLVED by the Commissioners of Oxford, that the Town of Oxford 2010 Oxford Comprehensive Plan, dated October 1, 2010, a copy of which is attached hereto and incorporated by reference herein, be and is hereby adopted as the Comprehensive Plan for the Town of Oxford, Maryland.

AND BE IT FURTHER RESOLVED that this Resolution be affixed to and be made a part of the Town of Oxford 2010 Comprehensive Plan.

RESOLVED this 12th day of October, 2010.

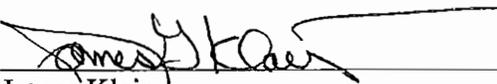
COMMISSIONERS OF OXFORD:



Timothy Kearns, President



Peter Dunbar



James Klair

I hereby certify that the above Resolution was passed by a unanimous vote of the Commissioners of Oxford on the 12th day of October, 2010.

Attest: 
Lillian Lord, Clerk/Treasurer
Town of Oxford

RESOLUTION NO. PC 1000

A RESOLUTION OF THE OXFORD PLANNING COMMISSION
APPROVING THE 2010 COMPREHENSIVE PLAN FOR OXFORD,
MARYLAND

WHEREAS, in August, 1996, the Town of Oxford adopted an updated Comprehensive Plan; and

WHEREAS, in accordance with its duties and obligations under Maryland law, the Oxford Planning Commission has undertaken revisions, amendments and updates to the comprehensive plan, which are compiled in the 2010 Comprehensive Plan for Oxford, Maryland, which is attached hereto; and

WHEREAS, in accordance with Maryland law, in May, 2009, the draft Oxford Comprehensive Plan was submitted to all adjoining planning jurisdictions, and all state and local jurisdictions, in accordance with Md. Code Ann. Article 66B, § 3.07(c); and

WHEREAS, the Oxford Planning Commission had a duly advertised public hearing on the draft Comprehensive Plan on September 7, 2010; and

WHEREAS, the Oxford Planning Commission has considered the public comments as well as written comments from the Maryland Department of Planning, and Talbot County; and

WHEREAS, the Oxford Planning Commission believes that it is desirable and in the public interest that the Oxford Comprehensive Plan, dated October 1, 2010 be adopted.

NOW, THEREFORE, BE IT RESOLVED by the Oxford Planning Commission that the attached 2010 Comprehensive Plan for Oxford, Maryland, dated October 1, 2010, which is attached hereto and incorporated herein, be and is hereby approved;

AND BE IT FURTHER RESOLVED that an attested copy of the 2010 Comprehensive Plan shall be certified to the Commissioners of Oxford for consideration of adoption.

RESOLVED, this 5TH day of OCT., 2010.

THE OXFORD PLANNING COMMISSION



Donald Silliman

**THE TOWN OF OXFORD
2010 COMPREHENSIVE PLAN**

TABLE OF CONTENTS

CHAPTER 1 – Introduction and Background.....	1
1.1 Orientation	3
1.2 History	4
1.3 Regional Setting	6
1.4 Physical Setting	7
1.5 Mineral Deposits	8
1.6 Drainage.....	8
1.7 Drinking Water/Groundwater Resources	9
1.8 Surface Water Quality	9
1.9 Sensitive Areas	10
1.10 Wildlife Habitat	11
CHAPTER 2 – Goals and Objectives	13
2.1 Guiding Principal	13
2.2 Goals	13
2.3 Objectives.....	14
2.3.1. Population.....	14
2.3.2. Natural Resources	15
2.3.3. Economic Development	15
2.3.4. Public Services.....	16
2.3.5. Housing	16
2.3.6. Transportation	17
2.3.7. Land Use	17
2.3.8. Cultural	18
2.3.9. Intergovernmental Cooperation	19
2.3.10. Fiscal	19
CHAPTER 3 – Land Use	21
3.1 Existing Land Use Characteristics.....	21
3.2 Land Use Map	23
3.2.1. Maritime	24
3.2.2. Commercial	24

3.2.3. Institutional	24
3.2.4. Residential	25
3.2.5 Parks and Open Space.	25
3.2.6. Industrial Park	25
3.2.7 Wildlife/Wetland.....	25
3.2.8 Annexation and Growth Area.....	25
CHAPTER 4 – Municipal Growth Element	26
4.1 Introduction.....	26
4.2 Character of the Population.....	26
4.2.1. Housing	26
4.2.2. Employment	27
4.3 Past Growth Patterns of Town of Oxford	28
4.4 Future Growth Patterns and Build-Out Analysis	31
4.4.1 Infill Areas – Build Out Analysis	31
4.4.2 Future Growth Needs – Growth Area	31
4.4.3 Population Projections	32
4.5 Public Services and Infrastructure Needed to Accommodate Growth Within the Town and the Growth Area.....	33
CHAPTER 5 – Community Facilities.....	35
5.1 Overall Objectives	35
5.2 Education	35
5.3 Health Care Facilities	37
5.4 Fire Protection.....	37
5.5 Police Protection	38
5.6 Public Water System	38
5.7 Public Sewerage System.....	38
5.8 Refuse Disposal.....	39
5.9 Oxford Community Services Building	40
5.10 Oxford Library	40
5.11 Oxford Museum	40
5.12 Oxford Community Center	40
5.13 Recreation	41
CHAPTER 6 – Transportation	43
6.1 Existing Roads and Streets.....	43
6.2 Street Ends, Pedestrian and Bicycle Access	43
6.3 Oxford-Bellevue Ferry and Boating Transportation	44

6.4 Other Local Transportation Opportunities.....	44
6.5 Future Transportation Planning.....	44
CHAPTER 7 – Sensitive Areas	46
7.1 Overall Objectives	46
7.2 100-Year Flood Zone.....	46
7.3 Streams and Stream Buffers.....	46
7.4 Tidal and Nontidal Wetlands	47
7.5 Critical Areas.....	47
7.6 Agricultural Land	47
7.7 Waterways.....	47
CHAPTER 8 – Water Resources Element	49
8.1 Introduction.....	49
8.2. Goals and Objectives	49
8.3 General Background	50
8.3.1 Topography and Geology.....	50
8.3.2 Soil Types	51
8.3.3 Drainage	51
8.4 Water Sources for the Town of Oxford	52
8.4.1 Oxford’s Existing Water System and Users.....	53
8.4.2. Future Planning for Water Services	55
8.5 Town of Oxford Existing Sewerage System.....	56
8.6 Future Planning for Sewer Services	59
8.7 Non-point Sources	64
CHAPTER 9 – Implementation.....	66

TABLES, FIGURES AND MAPS

Tables

Table 4(A)	Oxford's Population (1970-2000) in Relation to Talbot County	28
Table 4(B)	Comparison of Oxford, Talbot County and State of Maryland in Selected Demographic Characteristics from the 2000 Census.....	28
Table 4(C)	Annexation History of Oxford.....	29
Table 4(D)	New Homes Built In Oxford (2000-2009).....	30
Table 4(E)	Population Projections – Town of Oxford	33
Table 5(A)	Talbot County Public School Enrollment and Capacity	36
Table 8(A)	Oxford Inventory of Public Wells	53
Table 8(B)	Oxford Average Daily Well Pumpage (gpd).....	54
Table 8(C)	Oxford Existing Wastewater Treatment Plant Design Criteria	56
Table 8(D)	Town of Oxford Wastewater Treatment Plant Effluent Flows (MGD) (2007-2009).....	57
Table 8(E)	Oxford Current NPDES Permit Requirements (Q less than 104,000 gpd)	58
Table 8(F)	Oxford NPDES Permit Requirements (104,000 gpd <Q< 150,000 gpd)	59
Table 8(G)	Table of Wastewater Treatment Acronyms	59
Table 8(H)	Oxford Future Average Design Influent Concentrations and Loads	60
Table 8(I)	Oxford's Permit and TMDL Status (2008)	60

Figures

Figure 1
Agustine Herrman Map of Maryland, 1670 4

Figure 2
Town Creek..... 48

Figure 3
Town Creek and Boone Creek Drainage Basin 52

Maps

Map 1
Town of Oxford Future Land Use Planning Areas..... End of Chapter 3

Map 2
Oxford Growth Area Plan, reprinted from Talbot County
Comprehensive Plan, Map 3-4, adopted February, 2005..... End of Chapter 3

Map 3
Critical Area Land Use Classification Map
Showing Sensitive Areas (RCA) End of Chapter 7

CHAPTER 1

Introduction and Background

This Comprehensive Plan is an update and revision of the previous Oxford Comprehensive Plan, which was adopted in 1997. It is intended to guide the future growth and development of the Town of Oxford, Maryland. The Plan establishes a framework for managing the future use of land within the Town and surrounding areas, and represents the basic policy framework for town use of resources. It has been prepared with recognition that decisions made to address various individual and town needs will ultimately influence Oxford's physical form and function.

Our Comprehensive Plan forms the policy framework for the Town's zoning and subdivision ordinances and development regulations. Moreover, it serves as a guide for the Town Planning Commission and Board of Zoning Appeals as they make decisions concerning the administration of these implementing ordinances. When developing and implementing the Plan, Oxford coordinates with Talbot County concerning issues of mutual interest, including connecting roadways, sewer planning and critical area planning issues.

The Oxford Comprehensive Plan is not intended to be a rigid set of specifications, forcing specific development. It is intended, rather, to be a practical guide to assist development decisions and provide continuity of visions about the character, location, and types of future land uses. It also illustrates the "big picture" of community needs. The Plan provides the basis for additional housing decisions, economic development and the preservation of the existing residential character, commercial base and historical fabric of the Town (including in particular, the maritime interests) and other public policy objectives that may be developed in further detail by the Town leaders.

Article 66B of the Maryland Annotated Code, Zoning and Planning, delegates basic planning and land use regulatory powers to the Town of Oxford. When these powers are exercised, they must be exercised in accordance with the applicable provisions of state law. Accordingly, this Comprehensive Plan for Oxford is prepared in compliance with Sections 1.01, 3.05, 3.06, 3.07 and 3.08 of the statute. Section 1.01 mandates certain subjects (referred to as "Visions"), which must be dealt with in the Plan, Sections 3.05 and 3.06 address the Plan's content and organization, and Sections 3.07 and 3.08 address procedures for the Plan's review and adoption.

In accordance with Section 1.01, the following twelve visions are implemented through the Plan:

- (1) Quality of life and sustainability; a high quality of life is achieved through universal stewardship of the land, water and air resulting in sustainable communities and protection of the environment;

- (2) Public participation: citizens are active partners in the planning and implementation of community initiatives and are sensitive to their responsibilities in achieving community goals;
- (3) Growth areas: growth is concentrated in existing population and business centers, growth areas adjacent to these centers, or strategically selected new centers;
- (4) Community design: compact, mixed use, walkable design consistent with existing community character and located near available or planned transit options is encouraged to ensure efficient use of land and transportation resources and preservation and enhancement of natural systems, open spaces, recreational areas, and historical, cultural, and archaeological resources;
- (5) Infrastructure: growth areas have the water resources and infrastructure to accommodate population and business expansion in an orderly, efficient, and environmentally sustainable manner;
- (6) Transportation: a well-maintained, multi-modal transportation system facilitates the safe, convenient, affordable, and efficient movement of people, goods, and services within and between population and business centers;
- (7) Housing: a range of housing densities, types, and sizes provides residential options for citizens, of all ages and incomes;
- (8) Economic development: economic development and natural resource-based businesses that promote employment opportunities for all income levels within the capacity of the State's natural resources, public services, and public facilities are encouraged;
- (9) Environmental protection: land and water resources, including the Chesapeake and coastal bays, are carefully managed to restore and maintain healthy air, and water, natural systems, and living resources;
- (10) Resource conservation: waterways, forests, agricultural areas, open space, natural systems, and scenic areas are conserved;
- (11) Stewardship: government, business entities, and residents are responsible for the creation of sustainable communities by collaborating to balance efficient growth with resource protection;
- (12) Implementation: strategies, policies, programs, and funding for growth and development, resource conservation, infrastructure, and transportation are integrated across the local, regional, state, and interstate levels to achieve these visions.

1.1 Orientation

Oxford, Maryland is a small town located in the south-central part of Talbot County, on the west-central edge of Maryland's Eastern Shore. Oxford is located on the south bank of the Tred Avon River, near its mouth, where it empties into the Choptank River. It is one of the oldest towns on the Eastern Shore, and retains a number of historically significant structures, and is the only Eastern Shore town shown on the Augustine Herrman map of Maryland, published in 1670. Heavily water-oriented from its beginning, it served an important port function in its early years and today retains its essential character as a center for water-oriented recreation and other maritime activity.



Figure 1 -- Augustine Herrman Map of Maryland, 1670

1.2 History

Oxford is the oldest town in Talbot County, and is one of the oldest towns in Maryland. Although already in existence for many years, Oxford marks the year 1683 as its official founding, for in that year Oxford was first named by the Maryland General Assembly as a seaport and was formally laid out as a town. In 1694, Oxford and a new town called Anne Arundel (now Annapolis) were selected the only ports of entry for the entire Maryland province. By 1664, Oxford had 100 lots platted, and the first Commissioners were selected.

Early citizens included Robert Morris, Sr., agent for a Liverpool shipping firm who greatly influenced the Town's growth; his son Robert Morris, Jr., known as "the financier of the Revolution;" Jeremiah Banning, sea captain, war hero, and statesman; The Reverend Thomas Bacon, Anglican clergyman who wrote the first compilation of the laws of Maryland; Matthew Tilghman, known as the "patriarch of Maryland" and "father of statehood" and Colonel Tench Tilghman, aide-de-camp to George Washington and the man who carried the message of Cornwallis' surrender to the Continental Congress in Philadelphia.

Until the American Revolution, Oxford enjoyed prominence as an international shipping center surrounded by wealthy tobacco plantations. Oxford grew steadily until 1750 as a major port for the export of tobacco, wheat, and timber products and the import of slaves and English goods. The importance of the tobacco industry declined for the remainder of the 18th century, and by the time of the Revolution, Oxford's commerce had declined greatly, dependent as it had been on trade with England. As Oxford's port activity declined, Baltimore rose as the principal seaport of the State.

Oxford's economy maintained itself until the Civil War primarily through its basic seafood industry and activity in its ship building yards. With the arrival of the railroad in 1871, the Pier Street docks developed into a major commercial area, beginning more than a half-century of prosperity for the Town. In the late nineteenth century, two passenger trains and two freights daily used the Oxford terminal, which served as an overnight stop for the railroad crew. Many of the boatyards existing today were established during this period. By this time, Oxford was a town of about 1,100 people (according to The Maryland Atlas of 1895).

The Kuhner Engine Company was located on the southwest corner of Pier Street and Morris Street and manufactured small diesel engines during World War I. The years between the First World War and the Depression were good to the seafood industry in Oxford. Pound-net fishing supported many families. Canning houses and packing houses for oysters and crabs crowded Pier Street. Estimates of the wintertime peak population range from 1,000 to over 1,600 for periods during the early twentieth century.

The Great Depression of the 1930's signaled the end of an era for Oxford. The highway and automobile shifted the population center of the county eastward, and many watermen left the oyster and crab industry when the market declined for these luxury foods. The Oxford High School closed its doors in 1938.

Always a popular retirement community with its river front orientation and comfortable historic houses, Oxford became more accessible to recreation-minded western shore residents with the opening of the first Chesapeake Bay Bridge in 1952. The railroad line was abandoned in the late fifties. First a seaport, later a seafood and agricultural center, Oxford's vitality now relies upon its popularity as a sailing and boating center, and a residential community with a significant retired population. The same boatyards that built the sturdy skipjacks and bugeyes of the early 1900's now build and maintain high quality yachts for recreational use.

The period of the 1980's was a period of modest residential expansion for the Town of Oxford. One new subdivision was created and annexed (Bachelor Point), and an undeveloped

but previously platted area of Jack's Point was redeveloped with larger lots (5,000 square foot lots combined to create 10,000 square foot lots). A developed area (set forth on a 1912 subdivision plat titled "Tred Avon Addition"), known as "the Park", which runs south of Pier Street to the NOAA Lab, was annexed into the Town. Even with these additional residential properties added to the Town's tax rolls, the population of Oxford continued to decline.

In 1986, the Town of Oxford, recognizing that its unique heritage of more than three hundred years should be protected, established a historic district and the Historic District Commission (HDC). The architectural style of Oxford's buildings is not unique to any one period. The buildings in the Historic District of Oxford were built in the eighteenth, nineteenth, and twentieth centuries. The HDC is charged with the responsibility of encouraging property owners to retain the original character of their buildings when making changes, additions, or building new structures in keeping with the ambiance of the Town of Oxford.

The Historic District guidelines, which were adopted in 1999, and revised in 2006, provide current and future property owners with guidance in planning new structures, alterations or additions to existing structures and to provide the HDC with criteria to assess building permit applications. In 2004, the HDC worked with the Maryland Historic Trust, resulting in the Historic District being listed on the National Register of Historic Places.

1.3 Regional Setting

When planning for Oxford's future, the location of the Town and the interdependence of the Town with other geographic and economic regions are of prime importance. The future population and economic vitality of Oxford is determined not only by local activities, but also by activities in the larger region of which Oxford is a part. To this extent, it is essential to relate the Town of Oxford to Talbot County, the Eastern Shore, the Delmarva Peninsula and larger metropolitan areas within close proximity.

Oxford is situated in the south-central portion of Talbot County. The Town is located near the mouth of the Tred Avon River as it merges with the Choptank River, which provides access to the Chesapeake Bay. In 2000, the Town ranked near the middle of the pack in terms of the size of Eastern Shore municipalities on the Eastern Shore with a population of 771 inhabitants. The next smallest town is Port Deposit and the next largest is Chesapeake City, both located in Cecil County. Oxford is the smallest of Talbot County's four municipalities.

Talbot County, in the central or Midshore area of the Eastern Shore, is characterized by land areas virtually surrounded by the Chesapeake Bay and four of its major tributaries. Talbot County contains over 600 miles of waterfront. Its land and adjacent waters support agriculture and seafood processing activities, which have historically formed a substantial portion of the County's economic base. Development in recent years reflects a diversification of this base economy to include broader manufacturing, service, and tourism economy. Over 75% of the 279 square miles of County land is arable. In 2000, there were 33,812 people living in the County, an increase of 11% over 1990. This was a substantial decrease in the rate of growth of the 80's when the population expanded by 19%.

The Eastern Shore of Maryland is comprised of nine counties with a 2000 population of 395,903. This represents an increase of 15% over the 1990 population. An abundance of fresh water and favorable soil characteristics enhance the Eastern Shore's value for agricultural purposes. Industrial activity in the region has historically been related primarily to agricultural activities and processing of seafood from the numerous waterways. However, since 1970, several industries which are not reliant upon food products have located on the Shore. These include manufacturing, electronics assembly and commercial services, resulting in some industrial diversification. The Talbot County Economic Development Commission recently developed a strategy of concentrating upon attracting environmental research and technology businesses to the County with the ultimate goal of becoming the "Silicon Valley" or "Research Triangle" for this particular segment of the national economy.

"Delmarva" is a term which describes the 6,057 square mile peninsula encompassing the nine Eastern Shore of Maryland counties (although some do not include Cecil County as part of the Delmarva, for the purposes of this Plan it is included), all of the State of Delaware and the two counties on Virginia's Eastern Shore. In 2000 the population of Delmarva was 1,230,901. Fifty-five percent of the land area and roughly 1/3 of the population of the Delmarva Peninsula is in Maryland. The peninsula is bounded by the Chesapeake Bay on the west and south, and the Delaware Bay and the Atlantic Ocean on the east. The peninsula lies almost entirely within the Atlantic coastal plain region.

Enjoying relative proximity to surrounding states, Oxford is located approximately 30 miles from Delaware, 90 miles from Pennsylvania and 95 miles from Virginia, by automobile. The Town enjoys excellent access to major metropolitan areas. From Oxford, it is 69 miles to Baltimore, 72 miles to Washington, 95 miles to Wilmington and 124 miles to Philadelphia. The capitals of five states are also located nearby. Oxford lies only 47 miles (via highway) from Annapolis, 56 miles from Dover, Delaware, 184 miles from Richmond, Virginia, 137 miles from Trenton, New Jersey, and 143 miles from Harrisburg, Pennsylvania. Washington, D.C. and five state capitals are located within approximately three hours driving time of Oxford.

With today's modern highway facilities, distance ceases to be as important a consideration as travel time. Oxford is 60 – 90 minutes from the fourth largest consumer market in the United States, the Baltimore-Washington metropolitan area. Philadelphia and New York, two other large consumer markets, are 2 – 4 hours travel time from Oxford. Within 350 miles of Oxford live approximately 34% of the U.S. population and 40% of the U.S. industrial market.

1.4. Physical Setting

The most notable physical feature of Oxford, and indeed Talbot County, is the close proximity of the Chesapeake Bay and the extensive and irregular shoreline formed by numerous rivers, creeks and coves. Of the County's 608 mile perimeter, over 600 miles is waterfront. The Town of Oxford is a strongly water-oriented town and derives much of its character from the influence of the Chesapeake Bay and its tributaries. Although the land area of Oxford includes only 366 acres, it has 6.4 miles of shoreline along the Tred Avon and Choptank Rivers and Town Creek, together with associated wetlands and coves.

Oxford is located in the south-central part of Talbot County on the western end of Oxford Neck. The Tred Avon River bounds Oxford Neck to the north and west and Boone Creek lies to the south. Oxford itself is partially divided by Town Creek, giving the Town a good harbor within its corporate limits.

Oxford and Talbot County have a temperate climate with warm summers and moderate winters. The average annual temperature is 51 degrees, the highest temperatures occurring in July. The months of January and February have the coldest temperatures, about 37 degrees. Normally, there are 80 days of the year with a low temperature below 32 degrees. There is considerable warm weather during the summer, and several periods of hot, humid weather can be expected. Temperatures of 90 degrees or higher occur 15 to 20 days per year, although Bay breezes tend to moderate the heat, particularly at night. Summer temperatures average 75 degrees.

The average length of the growing season in Talbot County is 196 days. The average date of the first killing frost in the fall is October 28 and the last average killing frost of the spring occurs on April 15.

Precipitation averages 43.2 inches annually. Generally the months of July and August have the most rain (about 4 ½ inches), but precipitation is spread well over all months of the year. Average annual snowfall is about 15 inches. Thunderstorms accompanied by lightning, hail and winds occur during the summer, but cause little damage. Generally the rainfall and the moisture stored in the soil are adequate for the favorable growth of crops.

Prevailing breezes are from the south in the summer and during the winter months the prevailing winds come from the west and northwest. The average wind velocity is eight to ten miles per hour. Tornadoes and hurricanes are relatively rare. However, the past history and future probability of hurricanes coming up the Chesapeake Bay accompanied by a tidal surge is cause for great concern for potential loss of property and/or life. Much of Oxford is within the 100-year floodplain.

The topography of Talbot County is generally flat. This is true of Oxford and the areas surrounding the Town. The maximum elevation within Oxford is 11 feet above sea level.

1.5 Mineral Deposits

The most important minerals in Talbot County are sand, gravel, clay, peat and greensand. Borrow pits, excavations from the upper layers of the soil to remove sand and gravel materials, are present in some parts of the Trappe Election District (of which Oxford is a part). There are no useable mineral deposits within the Town.

1.6 Drainage

Surface drainage in Talbot County varies widely from the well drained, gently sloping areas in the northeast to areas of poor drainage in the lower, flatter parts of the County. Much of the area surrounding Oxford is not well drained and surface drainage is normally slow.

There are five major drainage basins in Talbot County. These are shown in some detail in the 1992 Talbot County Comprehensive Water and Sewerage Plan. The Town of Oxford lies in the Tred Avon River Drainage Basin and the Boone Creek Drainage Basin, both of which drain into the Choptank River.

1.7 Drinking Water/Groundwater Resources

Deep-drilled wells constitute the major source of fresh water in Talbot County and are the only source of water within the Town of Oxford. There is practically no use of surface water within the County generally because the rivers are tidal, and brackish marshes are prevalent in the lowland areas.

The sedimentary geologic deposits underlying the Atlantic Coastal Plain provide ten aquifers varying in depth from 50 to 1,140 feet. Except for a number of private shallow wells serving residents and a few farm ponds for irrigation, the County's water supply comes from these aquifers. This water is naturally soft. Talbot County residents draw over 3,000,000 gallons of water a day.

The primary aquifer in the Oxford area is the Aquia Formation, a green glauconitic quartz sand. This aquifer also contains a few clay layers, shell fragments, Foraminifera and hard crusty (cemented) beds. Fossils in the formation attest to its marine origin. The water-bearing sand area is about 40-175 feet thick. At Easton, the Aquia formation lies 550 to 620 feet below sea level. Oxford's water supply is drawn from this aquifer via two active municipal wells.

In general, the groundwater resources in and around Talbot County are good in quality and abundant in quantity. Adequate fresh water surface supplies are generally not available, and deep-drilled wells are required for municipal and industrial use.

1.8 Surface Water Quality

For many years, the waters in Town Creek and along Oxford's beaches have been plagued by periodic water quality degradation. Studies have been carried out over the years to try to identify the source of the problem. No single source has been identified, but the diminished water quality appears to be the result of a combination of factors, including storm water runoff from surrounding agricultural fields and developed town areas. Water quality issues are exacerbated by the low flushing action in Town Creek.

In 1994, Maryland passed legislation requiring the installation of marine sewage pump outs at all marinas with 50 or more slips and all new or expanding marinas over 10 slips. Prior to that requirement, Oxford marina owners were in the forefront of voluntary pump-out facilities. State and federal laws prohibit the discharge of raw sewage into the Bay. These laws, along with recent programs to educate boaters and to share the cost of installing pump out facilities, should reduce the discharge of waste from boats into Town Creek. Regarding the State's Marine Sewage Disposal Facility (MSDF) law, there are at least six marinas in Oxford with MSDFs.

1.9 Sensitive Areas

The Town considers Town Creek a sensitive area. This creek was probably discovered by Captain John Smith, the English explorer, in 1608 and has been an important body of water since that time. It is however, not really a “creek”. Town Creek is a tidal inlet of the Tred Avon River, and receives storm water runoff from its shores which retain some wetlands, fields, and developed housing and waterfront commercial areas. The very head of Town Creek is the discharge point for Oxford’s wastewater system. In recent years, the Oxford Commissioners have investigated the possibility of moving the discharge point by sending its effluent to the Town of Easton’s more modern facility, but the investigation was suspended when the Talbot County Council declined to amend its Comprehensive Water and Sewer Plan to enable the Town to further explore this possibility.

Concerns about Town Creek include the substances and liquids released into it by the Town’s wastewater treatment facility, careless disposal by boat owners of petroleum, chipped paint, bait and other wastes from their boats, animal and waterfowl feces and agricultural pollutants (e.g. fertilizers, pesticides, etc.) which result from storm water runoff.

Construction of bulkheads, wharves and piers, installation of mooring buoys and living aboard a vessel for more than 60 days a year, are all supervised by the Oxford Board of Port Wardens. This Board was established by Town Ordinance No. 173, adopted April 27, 1982. The Board meets monthly and reviews application permits for the above creek-related activities, listens to comments by neighbors and other townspeople and approves or denies permit applications.

The Board of Port Wardens recognize the great value of Oxford’s adjacent waters, including Town Creek, to all citizens of Oxford, and to visitors, and attempts to balance the needs of users with the retention of the aesthetic values which have made the Town’s waterfront both useful and attractive.

Oxford and Talbot County have adopted a Critical Area Program as well as several other programs to protect Town Creek, Oxford’s other shorelines, their associated tidal wetlands and ultimately the Chesapeake Bay and its tributaries. The Critical Area program establishes a land use management program for a 1000-foot wide zone along all tidal shorelines. Oxford’s Critical Area Program, first developed and adopted in 1987 and revised in 1995, resulted in significant regulation for new development within the Town. As shown on Map 3, most of the Town is located within the critical area. Because the historical area of the Town was well developed over its three hundred plus year history before the critical area concept became a state mandate, there was little to inventory within the Town with respect to existing natural resources. However, in the southern edges of the Town, the only area available for town expansion, there are tidal wetlands and wildlife habitats, particularly in the Bachelor Point area, which the Town has protected as it has annexed those lands. Those protections have been set forth in annexation agreements, as covenants, and in the classification of those properties as Resource Conservation Areas under the critical area law. There are some tidal wetlands at the head of the eastern branch of Town Creek. There are some nontidal wetlands in the Boone Creek drainage area and farm fields outside of Town, and some small isolated wetlands in the Bachelor Point area.

There are no steep slopes in Oxford and no known rare, threatened, or endangered species in Oxford. The Oxford Critical Area Program establishes buffers and buffer management areas along all shorelines and adjacent to wetland areas. Other programs that Oxford has adopted to protect sensitive environmental resources are in the 1992 Flood Plain Control Ordinance and a 1993 Forest Conservation Ordinance, in addition to stormwater management ordinances which are periodically revised in coordination with the Maryland Department of the Environment.

1.10 Wildlife Habitats

The most significant wildlife habitats in Oxford and Talbot County are in the areas on and adjacent to the more than 600 miles of shoreline. The shallow areas of the rivers and bays serve as spawning grounds for many species of fish and provide nourishment for young animal forms, protecting them from predators and rough water. The marsh areas generate organic nutrients, which constitute vital links in the food chains of the Bay.

Land dwelling wildlife is abundant in the surrounding Talbot County farm lands and is of three major kinds: 1) open-land wildlife, 2) woodland wildlife, and 3) wetland wildlife. About 30% of the County's land is well suited to wetland wildlife. The migratory Canada goose is an important species locally, and provides beauty and recreation to many in the Oxford area.

Tidal wetlands provide important wildlife habitats in Oxford and the surrounding region. Tidal wetlands consist of the land that lies between normal high tide and normal low tide. When the tide is low, these areas provide feeding areas for waterfowl and shore birds as well as some land mammals, especially raccoons and muskrats. The only significant vegetated tidal wetlands in Oxford are along Bachelor Point road and Boone Creek, with limited tidal wetlands at the end of the center branch of Town Creek. Those marshlands host waterfowl, muskrats, raccoons, water birds and shore birds, and deer, foxes and others are regularly sited. The latter are visitors even to the developed areas along Town Creek, and even the residential areas of Town.

The Oxford Cooperative Laboratory, a combination federal and state research facility (NOAA and Maryland Department of Natural Resources), owns and controls one of two forest stands within the Town. That area, a relatively small area of loblolly pine trees along Bachelor Point Road, is an established Cooper's Hawk nesting area. In recent years, the Oxford Lab and its environs have hosted a wintering Snowy Owl. The Lab woods area adjoins the Resource Conservation Area that flanks Bachelors Point Road to the south of the Lab. That area includes another forested area and adjacent wetlands on the east side of Bachelor Point Road. That area, zoned Wildlife Sanctuary/Wildlife Corridor is restricted from development. This area provides a connected corridor for habitat and movement. There are also several reconstructed living shorelines in Town, including three properties along Town Creek. The Town has obtained grant funding for a living shoreline adjacent to Town Park and the shoreline adjacent to the Ferry Dock.



©*Star Democrat*, Chris Polk, 2009

The Snowy Owl surveys the world from atop his perch on the roof of the Oxford Cooperative Laboratory, on February 17, 2009. Birders, scientists and residents of the Town report that the owl first appeared during the January 27, 2009 snowfall. The bird spent more than five weeks in the Oxford area, often perched on elevated edifices in Oxford.



Cooper's Hawk in forest stand at NOAA lab, 2009

CHAPTER 2

Goals and Objectives

This section supports and addresses all Twelve Visions of the 1997 Planning Act, which provides the philosophical framework for this Comprehensive Plan.

2.1 Guiding Principal

To achieve a unity of purpose in the Goals set forth in this document, it is necessary that each of the Goals is compatible and that each is aimed at helping to achieve the same ultimate Goal for Oxford. In other words, the Goals all work together to make Oxford the type of town its citizens desire. This Guiding Principle is defined as follows:

Preserve the current unique small town character of Oxford, strictly regulating and controlling future expansion, while maintaining its historic neighborhoods, its commercial areas, its recreation facilities, its environmentally sensitive areas, its economic stability and its diversity.

The following Goals, created from the Guiding Principal and the implementation of the twelve visions, form the Comprehensive Plan.

2.2 Goals

- **POPULATION**
Preferred growth should be focused within the existing corporate boundaries of the Town so that both public facilities and approved land uses remain adequate to support a diverse population.
- **NATURAL RESOURCES**
Protect the natural resources and sensitive environmental features in and around Oxford and to encourage their proper utilization.
- **ECONOMIC DEVELOPMENT**
Encourage and preserve a sound economy, including the hospitality industry, maritime based services and boatyards, to maintain an economic base that is responsive to the needs of Oxford's population and provides a strong tax base for the Town.
- **PUBLIC SERVICES**
Provide, in an efficient and professional manner, an adequate level of those services, facilities and utilities which are normally provided by local governments of similar scale for the safety, health and well being of residents and visitors.

- **HOUSING**
Maintain Oxford’s tradition of neighborhoods containing well-maintained, single-family owner occupied residential properties and preserve the integrity of the historically significant structures. Provide the opportunity for affordable housing to support the delivery of public services.
- **TRANSPORTATION**
Endeavor to keep Oxford free of all types of vehicular congestion and to provide safe and easy pedestrian and bicycle access to all parts of the community.
- **LAND USE**
Maintain a planned pattern of development within the Town’s existing corporate boundaries and in any land that may be annexed that is compatible with both the efficient utilization of land and water and the Town’s traditional neighborhood character.
- **CULTURAL**
Support, protect and enhance Oxford’s cultural and historic heritage and maintain a balance of cultural activities and resources appropriate to residents of all ages, national origins and economic levels.
- **INTERGOVERNMENTAL COOPERATION**
Work cooperatively with Talbot County, the State of Maryland and other entities, including neighboring communities, to provide Oxford residents with cost-effective services including police and fire protection, emergency medical services and road maintenance and repair.
- **FISCAL**
Conservatively and responsibly manage the Town’s revenues and expenditures to maintain a favorable balance between those revenues and the expenditures necessary to meet the community’s needs.
- **RECREATION**
Enhance the public open space and existing parks to encourage their continued use by members of the community and visitors.

2.3 Objectives

2.3.1. Population

Oxford should retain its character as a small Eastern Shore town. Based upon past patterns of population growth, the Town does not expect to experience significant growth. The Town’s objectives with respect to population growth include the following.

- Retain and enhance Oxford’s desirability as a place for year round living.

- Encourage a mix of age groups with emphasis upon increasing the number of citizens in the 20-45 age groups.
- Encourage a diverse economic mix of the town's population.
- Encourage full-time residency in the town's population.

2.3.2 Natural Resources

Oxford's most important natural resources are its land and water. Lands within our planning area include farms, and lands within the critical area. Managing the future uses of the properties is important to the citizens of Oxford and Talbot County. To preserve and enhance these resources, the following objectives are established:

- Strive to maintain the quality of the tidal water in and around Oxford at a level suitable for human contact and shellfish production and harvesting.
- Preserve wetlands and other wildlife habitats in the Oxford area.
- Encourage preservation of traditional agricultural areas at the gateway to Oxford.
- Continue to make stormwater a primary concern and minimize adverse impacts on water quality resulting from runoff.
- Encourage protection of trees throughout Oxford.
- Encourage shoreline protection, and implement and encourage innovative approaches such as living shorelines.
- Recognize the flood prone nature of Oxford's topography and encourage appropriate design solutions for new construction that meet federal and local requirements.
- Protect and improve the water quality of runoff, ditches, streams and waterways that drain into Chesapeake Bay and its tributaries.
- Promote a universal stewardship ethic toward our land and water and other natural resources.

2.3.3 Economic Development

Oxford should strive to encourage the continued economic viability of its downtown merchants and its boating and marine uses that have been in existence since the 1600's. Oxford's maritime and water-based history should be preserved. The following objectives are important for economic development:

- Encourage and maintain a level of commercial activity primarily oriented towards meeting the needs of Oxford's population and secondarily towards serving the needs of persons from areas outside the Town's corporate boundaries. Easton and Cambridge are to be regarded as the providers of the major shopping and employment centers for Oxford's population, but Oxford employment opportunities are to be encouraged.
- Encourage the moderate expansion of the town's hospitality industry, such as restaurants and tourism related commercial uses, as well as boat building and marine maintenance and repair industries and other water oriented commercial activity.
- Encourage the flexible use of existing residential buildings and accessory structures to facilitate home occupations and home offices that are compatible with adjacent residential uses.
- Encourage high tech, computer-based businesses and related employment opportunities.
- Within the framework of this Plan, the Town should maintain a flexible attitude toward potential new businesses locating in the Town. In that regard, the Town should consider implementing flexible public parking standards, such as waivers, shared parking arrangements, etc., where appropriate.

2.3.4 Public Services

Oxford provides many public services to its citizens, including water and sewer utilities, solid waste disposal, police protection, street lighting, parks and recreation. Other organizations and governmental agencies also offer public services including fire protection, twenty-four hour paramedic services, ambulance services, and the medical facilities of the University of Maryland Shore Health System (Memorial Hospital) at Easton. Oxford's public services objectives focus on maintaining and improving the services that are currently provided, which are as follows.

- Maintain the current level of police and fire protection and ambulance services, upgrading them as appropriate in accordance with improved technology or increased demand.
- Provide water, solid waste disposal and sewage services which are in compliance with applicable regulations and recognized standards and which are adequate for needs of town residents.
- Maintain and improve the town recreational facilities, including town parks and town controlled open space.

2.3.5 Housing

In order to maintain Oxford's tradition of well-maintained, attractive homes, while also providing affordable housing opportunities for younger citizens, and families, the Town's objectives including the following.

- Consider innovative strategies, including the use of surplus town lands, to encourage the development of affordable housing in the Town, and work to create a housing stock that will remain affordable, on a long term basis, for the citizens who will be actively involved in providing local emergency services.

- Traditional neighborhood design principles and characteristics shall be applied to any residential development and redevelopment activity, and the zoning ordinance should be amended to permit the development of traditional neighborhood housing and accessory structures that create a sense of interaction and intimacy with the pedestrian-oriented streets and public ways.

- Maintain Oxford as primarily a single-family residential community.
- Encourage high quality housing in the town.
- Preserve Oxford’s historically significant structures.

2.3.6 Transportation

The Town will strive to accomplish its transportation goals through the following objectives:

- Maintain and improve the quality of the Town’s road system by keeping low traffic speeds and volume throughout its streets.
- Provide for vehicle, bicycle and pedestrian safety by upgrading and improving roadways and sidewalks, and pedestrian-only footpaths and water access areas.
- Provide adequate public off-street parking and encourage use of existing off-street parking facilities for both residential and commercial buildings.
- Control on-street parking to assure availability for all residents.
- Minimize waterway congestion, especially in Town Creek, and ensure that mooring buoys are regulated to provide safe navigable waterways.
- Work closely with the State Highway Administration to ensure that Route 333 within town limits is maintained and improved in a manner consistent with the character of Oxford.

2.3.7 Land Use

Any development or redevelopment within the Town of Oxford or its growth area should be compatible with the existing Town and with uses within the Town. Annexation should be a condition precedent to development within the Town’s growth area, it being the intention that

development in the growth should take place in the Town utilizing town services. The following objectives should yield compatible and efficient land use.

- Prohibit strip commercial development and spot zoning.
- Maintain industrially zoned land that is adequate to support the economic goals of this Plan.
- Affordable housing should be developed in a manner compatible with the Town's traditional neighborhood character.
- Promote the location of commercial and industrial activity in the industrial park area and town owned lands adjacent to the waste water treatment facility, after prioritizing additional recreational opportunities in that area.
- Encourage Talbot County to maintain low residential density in the areas located near Route 333 adjacent to the entrance to the Town and work with the County to preserve the open vistas and agricultural uses that frame the Town.
- Maintain adequate public land for recreational facilities to serve the needs of Oxford's population.
- Regulate the development of multi-family residences, including condominiums, townhouses, and apartments, to ensure that town infrastructure can support such development.
- Any residential development or redevelopment activity should be compatible with the character of the Town's traditional neighborhoods. The Oxford Historic District should be the traditional neighborhood template for development and redevelopment in Town.
- Only land located adjacent to the Town's boundaries shall be considered for annexation and no annexation shall be approved unless and until proposed use of the annexed land has been fully discussed and formalized in an annexation agreement.

2.3.8 Cultural

The following goals and objectives support the Town's goals with respect to its cultural resources.

- Support the Oxford Community Center, Oxford Museum, Oxford Library and the Oxford Custom House.
- Encourage and promote cultural and historic activities such as community outreach programs, continuing exhibits by local, regional and national artists, local theatre productions, and lecture series.

- Encourage and promote community classes and workshops to draw residents into social interaction.
- Encourage donations and bequests to assist in maintaining and enhancing the Museum's and Library's collections.
- Encourage, promote and support special events such as Oxford Day, art festivals, antique fairs, boat races, bazaars, fireworks displays and summer camps to ensure balanced recreation programs that appeal to the region's population and highlight the historic traditions of Oxford.
- Ensure the protection and preservation of historic and archaeological resources.
- Ensure that additions or modifications to historic structures preserve and maintain the integrity of the original structure.
- Support cultural activities in Talbot County generally.

2.3.9. Intergovernmental Cooperation

The following objectives support intergovernmental cooperation:

- Oxford's Comprehensive Plan and the Talbot County Comprehensive Plan should complement one another. The County Comprehensive Water and Sewer Plan should support the Town's water and sewer infrastructure planning.
- Pursue opportunities to provide coordinated, efficient services with neighboring communities, Talbot County and the State.
- Enter into agreements with other entities that provide essential services to ensure that responsibilities and commitments are clearly understood.

2.3.10 Fiscal

As for the Town's fiscal objectives, they include the following:

- Seek federal and state funding sources for identified town needs whenever available.
- Manage the financial affairs of the Town in a prudent manner to obtain a credit rating which would permit necessary borrowing at favorable rates of interest.
- While maintaining a balance between revenues and expenditures, an adequate reserve for contingencies should be maintained.

- Maintain the separation between the general revenues fund and the enterprise fund for water and sewer operations.
- Encourage a capital reserve fund and prospective capital improvement planning for ongoing capital improvements.
- Since a low tax rate is an important benefit to Oxford residents, it is important that town affairs be managed to maintain town real estate taxes at appropriate levels.

CHAPTER 3

Land Use

This Chapter supports the following visions of the Maryland Annotated Code:

- Development is concentrated in suitable areas;
- Sensitive areas are protected;
- In rural areas, growth is directed to existing population centers and resource areas are protected;
- Stewardship of the Chesapeake Bay and the land is a universal ethic;
- Adequate public facilities and infrastructure under the control of the Town are available or planned in areas where growth is to occur; and
- Conservation of resources, including, a reduction in resource consumption is practiced.

Oxford has established goals and objectives for its community, its character, and its economic vitality. Oxford wants to ensure that it will meet the needs of its residents, both present and future, in ways that allows the Town to sustain a high quality of life for all, and also ensure that our built environment does not conflict with the preservation of a healthy natural environment.

3.1 Existing Land Use Characteristics

Oxford's present land use has evolved since European settlement in the 1600's as described in Chapter 1. The Town's character has been dominated by four primary factors in the Town's history:

- Oxford has an excellent harbor and good access to deep water and water oriented transportation;
- Oxford's extensive shoreline peninsula geography creates aesthetically attractive residential settings and confines growth and new development to the south side of Town;
- Building lots were first platted in the 1600's, initiating a long town history that has been accompanied by architecture of past eras.
- Oxford has been a commercial and trade center in a rural county with an agricultural heritage which, until recently, has been somewhat isolated from urban growth centers (and development pressures) of Washington and Baltimore.

The Bay and its tributaries were the principal routes of transportation and commerce for early European settlers in the Eastern Shore and Chesapeake Bay region. Oxford developed due to its deep water access and inland road access.

Much of Oxford's shoreline has been devoted to, and remains, in marine related commercial and industrial uses. Attractive views provided by the long shorelines have resulted in extensive development of waterfront housing. Early development of the Town resulted in a traditional, pedestrian-oriented, small town grid development pattern dominated by small lots with commercial uses along Morris Street. In the center of town is a park, which provides open space as a "town green." The agricultural nature of Talbot County allowed Oxford to develop with a fairly distinctive edge, characteristic of towns in rural areas, where the town ends and adjacent farmland begins. This edge remains intact today.

Due to the shoreline and location of historic development, new development in Town has been confined to infill of vacant lots, subdivision of larger properties for infill development, and expansion to the south and east.

The tax map for Oxford reveals there are various lot sizes throughout town. Residential lots range in size from small lots of less than 4,000 square feet, and a few larger lots of approximately $\frac{3}{4}$ acre (32,000 square feet). Most parcels in the older portions of Town are less than 10,000 square feet. Newer subdivisions have larger lots as required by modern zoning ordinances and annexation agreements. For example, in Jack's Point, the minimum lot is 10,000 square feet. Lots in Bachelor's Point are unlike the rest of Oxford and are 1-2 acres in size. Commercial lots in Oxford are typically larger due to their unique history and the needs of commercial sites.

It is worth noting that only 47% of the existing residential lots meet the minimum lot area for the district in which they are located. In the Historic District, 76% of existing lots of record do not meet the current minimum requirements. Many of these smaller, non-conforming lots (those created before June 20, 1953) are grandfathered under the Town's zoning ordinance, allowing Oxford to retain its historic character in the Town's most central areas. Oxford's zoning, subdivision and land development regulations and policies should encourage and facilitate the use, restoration and development of such lots in a manner consistent with historic development patterns and, as applicable, the guidance of the Historic District Commission. For example, while the merger of historic, nonconforming lots may be appropriate in some areas of Town, within the Historic District it may lead to redevelopment that is not compatible with desired development patterns.

In recent years, there have been various figures reported as to the number of vacant properties in the Town available for dwelling construction. In April 2003, a Baltimore-based planning company completed the Town of Oxford Vacant Land Available for Construction ("infill") study. It used data made available by the Maryland Department of Assessment and Taxation noting available vacant land. Vacant lots, as well as lots large enough to allow subdivision, were counted in the study. Also counted were lots with a structure (possible teardowns) that had not been occupied for some time. Based on the number of vacant lots and allowing for subdivision of lots to a minimum of 10,000 square feet, a total of 51 currently

unoccupied properties could theoretically be subdivided or redeveloped into 79 buildable lots. 79 new residences would represent a 15% growth potential from infill. As set forth in the Municipal Growth Element, the Town has concluded that this figure is higher than practical, and believes that the number of potential buildable infill lots is less than 64, after taking into account site conditions, lot reconfiguration, and institutional knowledge.

In July 2001, an eleven lot subdivision plat for Plimhimmon Farm was formally approved by Talbot County and recorded in the land records. This 245 acre farm was formerly in Oxford's proposed growth area (1997 Oxford Comprehensive Plan). The approval of the subdivision and the removal of this large farm from Oxford's growth area was supported by the Commissioners of Oxford and the Oxford Planning Commission. It is anticipated that there will be continued pressure to develop the areas outside the Town's incorporated area.

Prior to the adoption of the 2005 Talbot County Comprehensive Plan, the Talbot County planning staff met with the Commissioners of Oxford and the Oxford Planning Commission to discuss the growth boundaries for Oxford that were being proposed for the 2005 Talbot County Comprehensive Plan. The Oxford Commissioners and Planning Commission agreed with the growth area contemplated by Talbot County, which was ultimately set forth at Map 3-4 of the Talbot County Comprehensive Plan titled "Oxford Growth Area Plan". The Town has accepted this growth area boundary, established in 2005 cooperatively with Talbot County and Oxford planners, recognizing the following principles:

- A definitive urban/rural demarcation of a "greenbelt" at the outer perimeter of the growth areas will reflect the total build-out line as well as provide a clear edge and sense of arrival into the Town.
- Rural agricultural areas immediately adjacent to the Town should be preserved, together with associated sensitive areas.
- The designated growth area, to the extent undeveloped, may not be developed for 20, 30, even 50 years.

3.2 Land Use Map

To put the land use Goal and Objectives in perspective, a future Land Use Map, has been added to this Plan. This map is consistent with Oxford's last two comprehensive plans.

The map delineates five geographic areas for Oxford and its environs.

Area A includes most of "old Oxford," the "Historic District," and includes the land west of Town Creek and north of the "Pincushion" intersection at South Morris Street and Route 333. The residential area in this part of Town has been designated as primarily single-family residential.

Area B is the eastern part of Oxford including Jack's Point and other land north of Route 333 and between Town Creek and the Oxford Cemetery. Area B has a number of vacant platted

lots and paper streets which could accommodate some future growth, and have been counted in the “infill development” analysis.

Area C is land from Route 333 south to the Cooperative Oxford Lab and east to Bonfield Manor Road. A substantial number of people now live in Area C and this is another area for future residential growth in Oxford. Land near the municipal wastewater treatment facilities has been used for a modest sized business/industrial park.

Area D consists of the area from the NOAA research lab south to Bachelors Point. A significant portion of Area D is already located within the Town. Some large tracts of undeveloped land in Area D are wetlands and are only suited for wildlife habitat. It is anticipated that little new development will occur in this area, but future annexation of existing residences could increase the Town’s population. This area includes a 12+/- acre parcel immediately south of Oxford’s wastewater treatment plant that bears a critical area classification of LDA.

Area E includes Hel’s Half Acre, the Oxford cemetery, agricultural land to the north of Route 333, and a large agricultural field to the south of Route 333. This area is part of Oxford’s growth area as defined in the Talbot County Comprehensive Plan. While this area has been identified in the past as part of Oxford’s growth area, the Town does not anticipate any significant development in this area. The Town hopes to work with the landowners to maintain the scenic agricultural and conservation-related vistas along the important entrance to the Town.

3.2.1 Maritime

The term maritime is used to indicate areas in Town which will accommodate the boat building and repair operations in Oxford.

3.2.2 Commercial

There are different types of commercial activity in Oxford. A significant activity consists of marinas, which are not unlike the boat repair and boat building businesses in character, but which also accommodate slip rentals.

Other commercial uses in Oxford are highway oriented businesses along Route 333, which consist for the most part of automobile service, restaurants, and various shops and stores in the historic district.

3.2.3 Institutional

The activities which fall under the classification of “Institutional” include such things as churches, government buildings, and community facilities of various types. The land use plan map designates all existing church sites and the present town office site for long range institutional use.

3.2.4 Residential

Town residential areas constitute a very important element of the land use plan, since residential uses affect directly the make-up of town population, the need of additional town services, and even the patterns of both pedestrian and automobile traffic. The bulk of Oxford's land will continue to be occupied by residential uses.

3.2.5 Parks and Open Space

In accordance with the public services recommendations of this Plan, the Land Use Map shows the present Town Park on Morris Street as a continued use, and also the property at the intersection of South Morris Street and Route 333 (the "Causeway Park"). In addition, the site of the Oxford Community Center, classified as "Institutional", will serve some open space functions, together with street ends, the Strand Beach, and other community areas.

3.2.6 Industrial Park

The Town has developed the land immediately north of the sewage treatment lagoons as a small "light" industrial park.

3.2.7 Wildlife/Wetland - Wildlife Sanctuary/Wildlife Corridor

Areas with this designation must be preserved as natural areas.

3.2.8 Annexation and growth area

The Town's growth area or planning area is identified on the Oxford Growth Area Map. It is consistent with the Oxford growth area identified on the land use map incorporated in the Talbot County Comprehensive Plan, effective April 16, 2005. In order for development to occur in the Town's growth area, the Town will require that any such properties be annexed, subject to appropriate agreements, and be served by Town utilities. Town policy is that our public water and sewer facilities will not be extended beyond town limits. Annexation will be a condition of extension of these services and the cost of extending water and sewer mains and force mains will be borne by developers seeking the extension. Additionally, all petitions for annexation should include an analysis of available system capacity at the time annexation is proposed to assist our town engineer, town officials, and residents to evaluate the feasibility of providing services to existing in-town properties and the new areas proposed for annexation. The Town may consider annexation, at the petitioner's expense, to address failing existing septic systems on properties contiguous to the Town, or to facilitate new development consistent with this plan.

Oxford intends to maintain its traditional identity and location with a reasonably compact development pattern which retains the village crossroads character. Portions of the Town's growth area are appropriate for future expansion and accomplishing any projected growth; other areas within the designated growth area are most appropriate as buffers and mitigation areas.

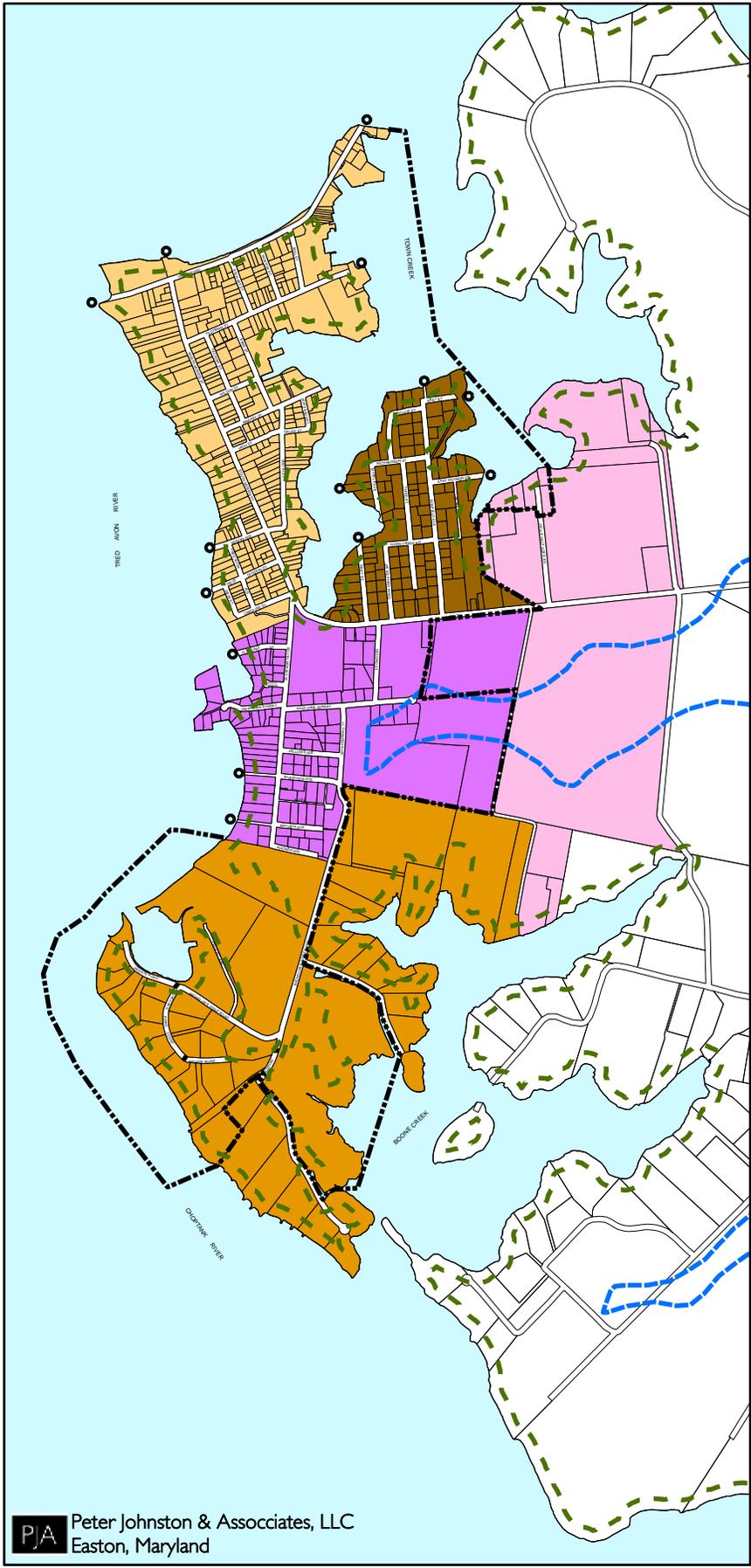
Map 1

TOWN OF OXFORD FUTURE LAND USE PLANNING AREAS

LEGEND

-  A
-  B
-  C
-  D
-  E

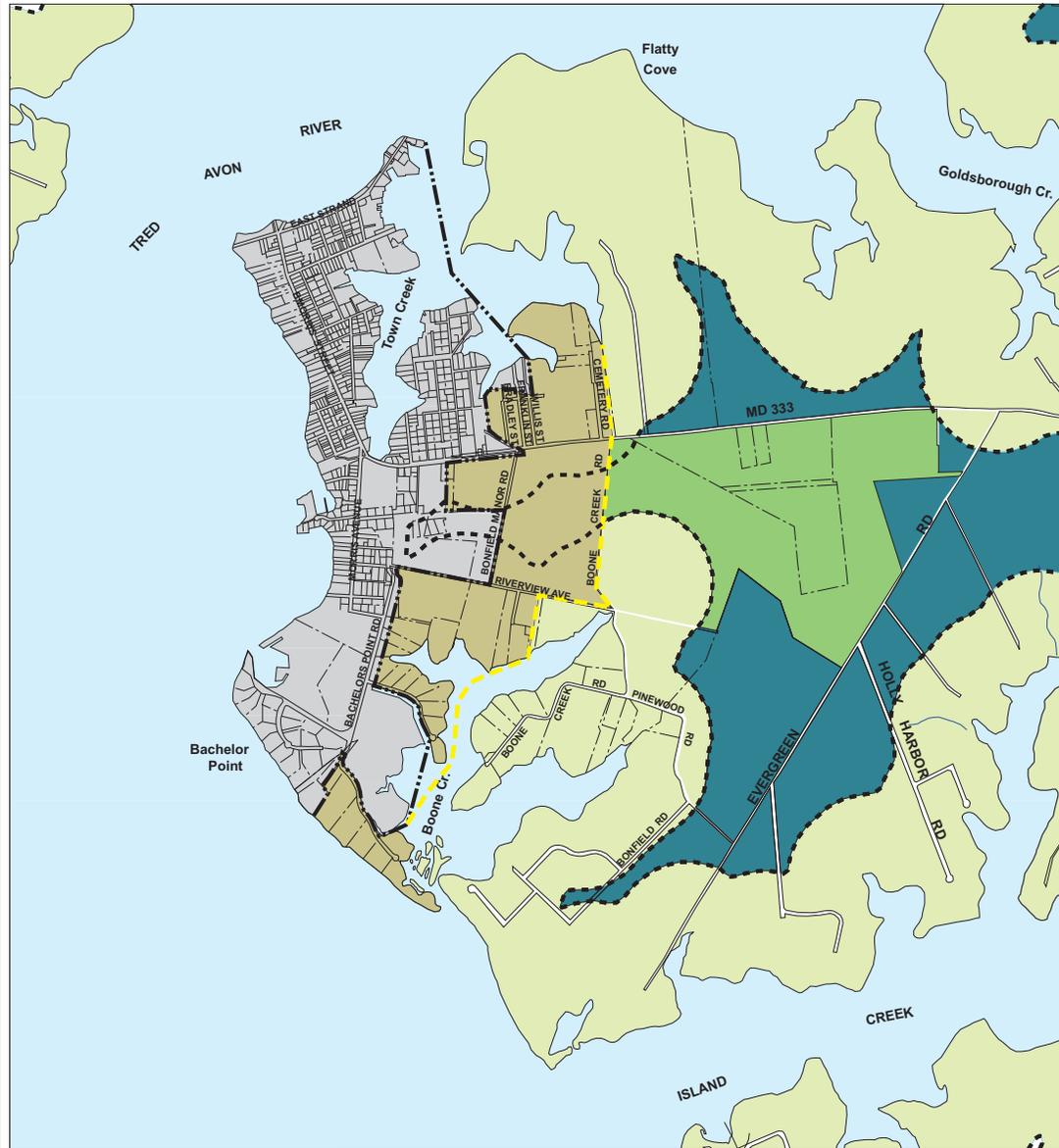
-  CORPORATE LIMITS
-  CRITICAL AREA BOUNDARY
-  CRITICAL AREA 100' BUFFER
-  PUBLIC ACCESS LOCATIONS



Town of Oxford Comprehensive Plan

Map 2

Oxford Growth Area Plan
As Shown in the Talbot County Comprehensive Plan effective April 2005



LEGEND:

TOWN OF OXFORD

DESIGNATED GROWTH AREA

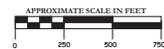
CRITICAL AREA

GREENBELT

WESTERN RURAL CONSERVATION AREA

CORPORATE BOUNDARY

PRIORITY FUNDING AREA BOUNDARY



FEBRUARY 2005

Redman/Johnston Associates, Ltd.
Easton, Maryland

CHAPTER 4

Municipal Growth Element

4.1 Introduction

In 2006, the General Assembly passed House Bill 1141, titled “Land Use-Local Government Planning”. House Bill 1141 amended Article 66B, and required that municipalities adopt additional elements in their comprehensive plans, including a municipal growth element and water resources element. As part of the municipal growth element, the Town is required to examine past growth trends and patterns, and include a projection of future growth in population and resulting land needs based on a capacity analysis of areas selected for future municipal annexation and growth. It also requires an examination of the effects of growth on infrastructure and natural features both within and adjacent to the present municipality and on future growth areas that may be annexed.

The Oxford municipal growth element will discuss and project the dynamics of the Town’s growth, including:

- Where growth has occurred and will be encouraged;
- The amount of growth involved and land to be utilized;
- The rate of growth; and
- Its past and future impacts on community facilities and natural features.

The Talbot County Comprehensive Plan states that incorporated towns are the best possible location to focus growth, whether such growth is residential, commercial or industrial. This is due to the presence of existing infrastructure for development, as well as the existing opportunities for infill and redevelopment. The Oxford Growth Area, as approved by the Talbot County Council and Talbot County Planning Commission, is shown on Map 3-4 within the Talbot County Comprehensive Plan. That map is reproduced herein, as Map 2, entitled Oxford Growth Area Map in this Comprehensive Plan.

4.2 Character of the Population

4.2.1 Housing

Oxford has a strong residential character. Commerce has become secondary in the make-up of the town character. Oxford’s businesses are mostly boatyards, marinas and restaurants, serving the Town and its visitors. Most of the residents have remained in or have come to Oxford because they believe that it is a good place to live or have a home. The quality of housing and the relatively high home prices have greatly influenced the make-up of Oxford’s population.

The 2000 Census of Population and Housing reported the following with respect to Oxford’s housing:

- Oxford contained within its corporate limits 523 dwelling units in 2000.
- Most of the Town’s housing (89.7% or 470 units), consists of single-family type units. Furthermore, most of the single-family units are detached – 450 units in comparison to only 20 “single family attached” structures. The number of multi-family housing units in Oxford remains small with only 54 multi-unit dwellings in the Town.
- Of the 523 total units, 75.7% or 396 units are occupied by year-round residents. Thus, a quarter of Oxford’s housing stock was not occupied by year-round residents.
- The majority of homes in Oxford are occupied by the owners. Of the 396 occupied units, 318 units, or 80.3% are owner occupied with the remaining 78 renter occupied.
- The average household size is 1.95 people per unit in Oxford, which is slightly less than the 2.05 person per unit recorded in 1990. The County wide average household is currently 2.32 people per unit and the State wide average size of 2.61 people per unit. The trend over the last decade is toward smaller households.

4.2.2 Employment

Oxford’s location at the end of Route 333 is not well suited for central regional employment and commercial services. However, today there are approximately 47 businesses in the Town. In addition, the Cooperative Oxford Laboratory employs about 50 people. The “Lab” is managed by both the Maryland Department of Natural Resources and the National Oceanic and Atmospheric Administration. In 2002, Oxford became the home of the United States Coast Guard station, employing 13 people. The Coast Guard is involved with law enforcement, search and rescue and environmental protection.

In 1993, the Oxford Business Association was formed. The Oxford Business Association functions as a liaison between the business establishments and the Town and has worked to promote legislation to better integrate businesses into the community, as well as Talbot County. The Oxford Business Association meets regularly with the Talbot County Chamber of Commerce and the Bureau of Tourism.

In the 1980’s, the Town established a four lot Commercial Industrial Park District. The intent of this zone was to “provide a controlled and planned area for certain commercial-industrial businesses which have limited effect upon the surrounding land.” The Industrial Park is fully built-out and occupied.

The boating industry continues to be the Town’s largest industry. The Town supports businesses that provide services to the resident population, as well as those that cater to the broader region. Some of the businesses are proprietorships that do not have employees. Oxford’s small town character and aesthetic features are attractive to people who are self-employed and to entrepreneurs whose businesses are not location sensitive and do not necessarily depend on local traffic. High speed internet access has been established in Oxford to the benefit of Oxford businesses. Oxford’s location provides a convenient commute to Easton and Cambridge regional

employment centers. There are a number of residents who commute to Annapolis, Washington, D.C. and Baltimore, some on a daily basis, others a few times a week.

Oxford’s historic character and access to the Chesapeake are attractive to residents and tourists. The proximity to Easton with its well established commercial and recreational facilities and the proximity to Baltimore and Washington, D.C. with their cultural amenities supports the continued growth in these segments of the economy.

4.3 Past Growth Patterns of Town of Oxford

Table 4(A) outlines the population of Oxford and Talbot County since 1970. This table indicates that Oxford’s small town nature represents a very small proportion of the population of Talbot County.

Table 4(A)

Oxford’s Population (1970-2000) in Relation to Talbot County				
Year:	1970	1980	1990	2000
Oxford	750	754	699	771
Talbot County	23,682	25,604	30,549	33,812
Oxford as a percentage of Talbot County	3.2%	2.9%	2.3%	2.3%

This population table includes only the permanent, year-round population of Oxford and does not take into account the effects of seasonal fluctuation. As of 2000, Oxford’s seasonal and second home population was 350 people. Oxford’s population has historically been subject to significant seasonal variations. Today, the summer continues to bring the largest population due to the presence of visiting yachtsmen and second home owners.

In terms of demographics, the information on the table on the following page, Table 4(B) has been taken from the 2000 census:

Table 4(B)

Comparison of Oxford, Talbot County and State of Maryland in Selected Demographic Characteristics from the 2000 Census			
Subject	Oxford	Talbot County	Maryland
Total Population	771	33,812	5,296,486
Median Age	55.3	43.3	36.0
% under 18	13.2	21.7	25.6
% over 65+	30.6	20.4	11.3
Total Households	396	14,307	1,980,859
Average Household Size	1.95	2.32	2.61
Total Housing Units	523	16,500	2,145,283

% Owner-occupied	80.3	71.6	67.7
% High School Graduate or higher	94.3	84.4	83.8
% Bachelor's Degree or higher	51.1	27.8	31.4
Median Household Income	\$52,054	\$43,532	\$52,868
Median value of owner-occupied homes	\$287,000	\$149,200	\$146,000

Two issues stand out in this comparison. One is the value of homes, which is nearly double that of both the County and the State. The second is the age of the Oxford community. The median age of Oxford's population is substantially older than that of Talbot County and the rest of the State. Another noteworthy item is the level of advanced education of Oxford's population. Over half of the population has at least a college bachelor's degree.

In the 1980's, one new subdivision was annexed, and an older, undeveloped subdivision was reconfigured and developed. In the 1990's, one area of adjacent land with existing homes was annexed. In 2002, additional land adjacent to the town was annexed, with one new home developed. In 2005, one existing home with a failing septic system was annexed.

Several factors have affected the growth trends in Oxford. Among those are the continuing growth in Talbot County, the increasing size of the retirement community and Oxford's natural assets of beauty, charm and location. The growth has been moderated by the increasing cost of land and housing in Oxford, lack of employment opportunities and a strong citizens' interest in maintaining Oxford's small town character.

The Town's annexation history is set forth in Table 4(C):

Table 4(C)

Annexation History of Oxford			
Year	Acres Annexed	Name of Area	Total Acreage of Oxford
1988	12	Park Area	213.7
1993	90	Bachelor's Point and the Lab*	303.7
1999	28.8	Hels Half Acre*	332.5
2002	33.5	Johnson Property*	366.0
2005	5.35	Requardt Trust*	371.35
2009	142	Submerged lands*	513.35**

*Included submerged lands

**Includes more than 150 acres of submerged lands

Unlike many annexations on the Eastern Shore, all of these annexations involved properties that were already developed, bringing little “new” development to the community. With respect to the annexation of the area known as the “Park”, The Town annexed 21 single family residences that already had Town utilities, but had failing water lines. The properties were annexed to enable the Town to upgrade the water lines.

Hels Half Acre involved the annexation of four existing single family residences that had failing septic systems. The Town annexed these residences so that municipal water and sewer could be extended at the cost of the property owners.

The Johnson annexation included the annexation of approximately 23 acres of wetlands and forest, and one existing residence with a failing septic system. The Town annexed the property to address the failing septic (by extending municipal utilities at the expense of the property owner) and to gain zoning control over the sensitive areas. As part of that annexation, the Town negotiated a covenant and rezoned the property to prohibit additional development within the sensitive areas. As part of this annexation, the Town also annexed Bachelor Point Road and two unimproved lots within its growth area adjacent to the Bachelor Point Road in the area known as The Park. The Town negotiated and obtained two pedestrian rights of way to provide connectivity between Bachelor Point and the Town. While the Town annexed Bachelor Point Road, that road was not conveyed to the Town and continues to be owned and maintained by Talbot County.

The Bachelor Point annexation involved the addition of an already approved county subdivision to the Town. Since its annexation into the Town, 16 of the 19 original lots have been built-out.

The number of building permits for new single family residences during the last ten years is set forth at Table 4(D):

Table 4(D)

Number of New Homes Built In Oxford (2000-2009)	
Year	Number of Homes Built
2000	5
2001	5
2002	4
2003	8
2004	6
2005	7
2006	2
2007	1
2008	1
2009	None

Total single family homes:	39
Replacement homes:	20
Total new homes:	19

As set forth in Table 4(D), over the past 10 years, there were 39 building permits issued. However, that figure includes a total of 20 replacement homes (that is, where an existing home was demolished and replaced with a new structure). Only 19 new homes were built in Oxford. These figures include the development of 16 homes within the Bachelor Point subdivision. There are no significant undeveloped tracts that will allow this trend to continue at the levels of the early part of the decade.

4.4 Future Growth Patterns and Build-Out Analysis

The Town of Oxford does not expect to experience significant growth over the next 20 years, for the reasons outlined herein.

4.4.1 Infill Areas - Build Out Analysis

Build-out numbers for the existing Town were generated from an inventory of lands within the Town’s boundaries. The Town collected data on all parcels greater than 14,000 square feet in the R-3 Zoning District, and 20,000 square feet in the R-1 and R-2 Zoning Districts, assuming subdivision potential for those parcels. These estimates include vacant “double lots” which are associated with existing residences, and which are located throughout the Town, primarily within the R-1 and R-2 Zoning Districts. All vacant parcels were considered parcels with the highest potential for redevelopment. Logical assumptions were made regarding the subdivision potential of existing lots based upon lot reconfiguration, degree of existing lot improvements, and the institutional knowledge of the town staff and professionals.

The Town’s total number of potential infill lots is not more than 64 lots. This figure is very aggressive as it assumes that larger in-town lots would subdivide their waterfront back/front yards and destroy their water views from existing residences, or change the relationship between existing entrances and porches and the adjoining streets. It also assumes that owners of long-established and landscaped lots will choose to reduce their privacy, destroy mature landscaping, and add new, close neighbors, in order to subdivide in the Historic District where the minimum lot size is 10,000 square feet. Realistic calculations of infill development, when dealing with logical lot configurations, and small lot sizes under the Oxford Zoning Ordinance, are speculative at best.

4.4.2 Future Growth Needs- Growth Area

The Town’s growth area is identified on Map 3-4 of the Talbot County Comprehensive Plan, titled “Oxford Growth Area Plan”, which became effective in Talbot County in April, 2005. It is Map 2 of this Plan. The Town adopts the County’s map as its growth area map. As set forth on that map, Oxford’s growth area is relatively small. Portions of the growth area include properties that are already developed, and also land that is constrained by wetlands, and critical areas. The Town will consider annexations within its growth area depending on the

specific request and the needs of the community. Portions of the “growth area” would be subject to required mitigation or undeveloped transitional areas.

The area located to the north of Maryland Route 333 and west of Cemetery Road is platted in small, 5,000 square foot lots laid out in the Jack’s Point subdivision in 1933. In recent years, the Town has required that those small lots in common ownership be consolidated into minimum 10,000 square foot lots for new development. Some of that area is constrained by wetlands. While there is some growth potential there, it is limited.

There is one parcel within the growth area with development potential. That parcel, approximately 12 acres, is located to the south of the Oxford wastewater treatment plant. The parcel was rejected by the Commissioners of Oxford for annexation in 1990’s when the developer wanted to build 30 new residential units on the property. It is classified in Talbot County critical area as Limited Development Area (LDA). The property has recently begun the application process to develop approximately 22 lots under the County’s jurisdiction. The Town believes that any development in its growth area should be located in the Town after annexation. The Town will consider annexation within its growth area depending upon the specific request and the needs of the community.

4.4.3 Population Projections

Growth rate projections, when dealing with the small numbers which characterize Oxford, are problematic at best. Projecting population is difficult when working with such relatively small numbers. Most projection methodologies that claim statistical accuracy depend on populations of 100,000 and higher. As set forth above, Oxford does not have significant infill parcels or significant new development potential in its growth area. Much of Oxford’s geographic expansion in recent decades is attributable to its annexation of already developed properties that had failing septic systems or water lines (e.g., the Park, the Johnson annexation, Hel’s Half Acre). The Town does not have significant undeveloped land that will result in an increase in population upon development. The conversion of part time residences from second homes to primary residences may change population statistics.

The Town foresees negligible population increases within the planning period for the following reasons:

- As set forth in Table 4(A), the Town’s population only increased by 20 people in the 30 year period from 1970-2000 – a 3% total increase, or an annual increase of 0.09%.
- Over the past 10 years, only 19 new homes (as opposed to replacement homes) were built. However, that figure includes 16 new homes at Bachelor’s Point, and the Town does not have vacant un-built subdivisions. The last 4 years only produced an average of one new home per year.
- In order to realize 64 new homes on infill lots, this analysis assumed that larger in-town lots would choose to subdivide rather than retain water views and privacy.

- The Town’s growth area is relatively small, and includes agricultural lands adjacent to Route 333, which the Town wishes to preserve in agriculture and open space in order to preserve the country-side entrance into Town. The Town’s growth area is further limited by the cemetery, already developed properties, and wetlands.

- Within the last 30 years, only 6 out-of-town properties have requested annexation to address failing septic systems.

- As discussed in Section 4.4.2, a 12 acre parcel in the Town’s growth area has begun the process to develop 22 lots in the County instead of requesting annexation into the Town.

- The median age of the Town is one of the oldest in the State. The Town’s death rate exceeds its birth rate.

For all of these reasons, the Town’s realistic growth rate for this 20 year planning period is an additional 20 homes and an additional 40 persons (using the Oxford’s average household size of 1.95 persons per unit). These population forecasts are set forth in Table 4(E) below:

Table 4(E)

Population Projections – Town of Oxford							
Year	1970	1980	1990	2000	2010*	2020*	2030*
Total	750	754	699	771	800	820	840

*Indicates Projections Only

In addition to the full-time population projections set forth above, as previously noted, according to the 2000 census, the Town’s second home or seasonal population was 350 people. It is difficult to forecast figures related to the second home population. With the lack of significant infill lots, the historical trend is that existing residences occupied by full-time residents are converted into second homes. Accordingly, any increase in second home population would be off-set by a corresponding decrease in full-time population. Utilizing these figures, the total 2030 population of all residents, both full-time and part-time, is expected to be 1,190.

4.5 Public Services and Infrastructure Needed to Accommodate Growth Within the Town and the Growth Area

With respect to potential impacts of any town growth on services provided by Talbot County, Talbot County has adopted an impact fee on all new residential and commercial development within the County, including development occurring within the municipalities. In 2004, Talbot County commissioned an impact fee/excise tax study from Tischler & Associates, Inc. The Talbot County impact study assessed the impacts of new development on county facilities and services, including, but not limited to:

- Libraries

- Parks and recreation
- Schools
- General government facilities
- Transportation
- Chesapeake Community College

As a result of that study, in January, 2005, the Talbot County Council adopted Bill No. 967 titled “A BILL TO FIX, IMPOSE, AND PROVIDE FOR THE COLLECTION OF DEVELOPMENT IMPACT FEES FOR FINANCING IN WHOLE, OR IN PART, THE CAPITAL COST OF ADDITIONAL OR EXPANDED PUBLIC WORKS, IMPROVEMENTS, AND FACILITIES, INCLUDING BRIDGES, STREETS AND ROADS, PARKS AND RECREATIONAL FACILITIES, AND SCHOOLS REQUIRE TO ACCOMMODATE NEW CONSTRUCTION OR DEVELOPMENT”. Talbot County’s impact fee within a municipality currently is \$5,281.00 for a single family detached unit, and \$3,778 for other residential units. For any building permits issued within the Town of Oxford, these fees are paid to the County to address the impacts of new homes on county services.

As set forth above, the Town does not anticipate significant development in terms of either infill or its growth area within the next twenty years. The Town’s 30 year history reveals a steady population, and there are not an over-abundance of vacant, undeveloped parcels for development within the Town. As for the growth area, significant portions are either already developed within Talbot County, or are constrained by critical area density limits or sensitive areas which would prevent significant development.

In the event that there is any significant development, the Town would require that the impacts of the development be studied. The Town reserves the right to impose and collect impact fees. As part of an annexation, the Town, through annexation agreements, will require that the developer address, through either economic payments or in-kind contributions, impacts on the following:

- Oxford Police Department
- Oxford Volunteer Fire Department
- Water and sewer services (including the payment of all connections associated with the extension of such services)
- Public Works staff or infrastructure

As for impacts of growth on Town services, these impacts are discussed in the Community Facilities Element and the Water Resources Elements. To reduce redundancy, please see the Community Facilities Element for a discussion of these issues.

Oxford requires that any property owner seeking annexation agree to the terms and conditions outlined in an annexation agreement to ensure that the costs of development are addressed, and that the annexation is in the best interests of the Town.

CHAPTER 5

Community Facilities

5.1 Overall Objectives

The goal of the Community Facilities element is to maintain and enhance our level of public facilities and public services. This element supports and addresses Visions One, Three and Seven to ensure that:

- Development is concentrated in suitable areas;
- Growth is directed to existing population centers and resource areas are protected; and
- Adequate public facilities and infrastructure under the control of the Town are available or planned in areas where growth is to occur.

To ensure that the provisions of our facilities and services are consistent with the Comprehensive Plan, the Town Commissioners will remain informed regarding the long-term needs of Oxford through comprehensive and ongoing reporting and planning efforts. Our priorities are:

- Maintain an adequate level of police protection.
- Maintain an adequate level of fire protection and ambulance service.
- Provide adequate facilities for community recreation, library, the arts and meeting center functions.
- Maintain adequate stormwater management systems.
- Ensure that planning for community facilities provided by county and/or state agencies, e.g., schools, social services, etc., is coordinated with and supports the visions included in this Plan.
- Maintain and improve park facilities and amenities to promote increasing usage by all members of the community.

5.2 Education

Oxford's school age children attend White Marsh Elementary School, Easton Middle School, and Easton High School. There are also several private schools in Talbot County (including the Country School and St. Peter and Paul). There are currently 67 students who live in the Oxford zip code (which includes areas outside of the town limits) who attend the Talbot County public schools. Out of the 67 children that attend public schools within the Oxford zip code, 26 students attend the elementary school, 15 students attend the middle school, and 25 children attend the high school.

The Talbot County School System has provided the following information concerning capacity:

Table 5(A)*

Talbot County Public Schools Enrollment and Capacity		
School	Enrollment (2008)	Capacity Utilized
White Marsh Elementary	230	57%
Easton Middle School	800	89%
Easton High School	1,205	94%

*Information taken from the Talbot County Educational Facilities Master Plan (2009 update)

In terms of future capacity, according to the Educational Facilities Master Plan for the Talbot County Schools, prepared by Vitech Consulting Services, Inc. for the Talbot County Board of Education (2009 Update) (“Educational Facilities Master Plan”), the Plan states that “changing demographics in Talbot County have resulted in stable to lower public school enrollment at the same time that total population has increased significantly.” Educational Facilities Master Plan, p. 1. The Plan notes that high real estate prices in Talbot County have contributed to the development of housing that is not affordable by families with school age children.

The 2009 Educational Facilities Master Plan states that “For the next 10 years total Talbot County public school enrollment is expected to be relatively stable...”. *Id.* page 1. The Educational Facilities Master Plan notes the following:

The total County public school system was at 81 percent of capacity in 2008. Overall capacity utilization is expected to fluctuate in a narrow range of 81-84 percent for the next 10 years. Therefore, the Talbot County public school system has adequate existing capacity on a county wide basis to accommodate enrollment projected during the next 10 years.

. . . .

Based upon current enrollment projections, there is no need for capacity additions to any school within the 10 year time frame of this Educational Facilities Master Plan. However, this may change depending on the magnitude and type of development currently planned, especially in the Easton and Trappe areas and on the final impacts of the 2009 redistricting.

Id. pp. 1-2.

Children from Oxford do not, and will not, add any measurable burden to the local school system. As set forth in the Municipal Growth Element (Chapter 4), the Town’s population has fluctuated within a very narrow range within the last 40 years. The Town’s death rate exceeds the birth rate, and the Town does not anticipate any significant population growth, especially among school age children.

5.3 Health Care Facilities

Oxford has no office of a practicing physician, dentist or other medical/physical/dental support facilities and services. The paramedical and emergency ambulance services are provided by Oxford Volunteer Fire Department (OVFD) and the Talbot County Emergency Medical System. The Town falls within the service area of the Memorial Hospital at Easton, a facility with 159 licensed beds and a medical and surgical staff covering most specialties. This hospital is within fifteen minutes of Oxford by automobile. In addition, the usual public health functions are provided at the Talbot County Health Department in Easton.

5.4 Fire Protection

Oxford's fire protection is very capably provided by the Oxford Volunteer Fire Department (OVFD) that operates two conventional fire engines, one tanker, one ladder truck, one brush truck, two ambulances, one chief's unit and one rescue boat. There are approximately 30 active members, but because they are not all employed in Oxford, they are not all available for service at one time.

Grants from the Town, provision of utility services by the Town, and private contributions pay the fire company's expenses. In 1994, the County passed the Fire Tax, which provides revenue for each Fire Company. The OVFD answers approximately 120 ambulance calls and 50 fire calls per year. In 1993, the Talbot County 911 Emergency System was implemented throughout the County and including the incorporated municipalities. The 911 Emergency System provides an up-to-date communication system throughout the County. Additional personnel and equipment can be brought into Oxford from the other County volunteer fire companies if the situation demands. The success of the volunteers depends, to a large extent, on having a large enough pool of able-bodied men and women employed in close proximity to the firehouse during the day. Evening alarms when volunteers are home from work are usually not a problem to small volunteer companies.

At present, the OVFD can provide only 6 to 8 persons for daytime calls. This is below the 12 to 15 persons required to answer average calls without apparent difficulty. This is because the Town cannot provide sufficient employment opportunities for young men and women. Additionally, the high cost of housing in Oxford makes it difficult for younger families to reside in the Town. If this continues, the Town could be required to maintain a paid force at much greater expense. These trends are another reason for town leaders to continue to explore affordable opportunities to create a sustainable affordable housing or workforce housing program, with priority occupancy for the emergency service volunteers. The Town of Oxford Affordable Housing Project, which was developed to provide housing that could be purchased by young families who could be active members of the OVFD, was placed on hold for an indefinite period of time in 1995.

Within the corporate limits of Oxford, fire hydrants are well located to provide protection for the structures of the Town. They are tested for flow and pressure once per year.

5.5 Police Protection

Oxford is patrolled by three full-time policemen. A part-time policeman was added to the staff in 2000 to primarily facilitate the handling of increased summer activity. The staff size is adequate.

Additional police protection is provided by State Police, which operate out of a barrack on Route 50 south of Easton and the county sheriff's office in Easton.

5.6. Public Water System

The Oxford water system, constructed in 1929, serves all areas of the incorporated Town. The Oxford water system has been repaired and maintained as needed. The town's water rates cover the cost to supply these services. The Town has established an Enterprise Fund for its water and sewer operations to ensure that these services are funded separately from the general tax revenues.

The Town has two production wells in the Aquia Aquifer. Both wells are capable to supplying 280 gallons per minute (gpm). The Town treats its water with chlorination and is sent through an arsenic removal system to comply with the Environmental Protection Agency's reduced arsenic standards that were adopted in 2006. The treatment capacity of the arsenic removal system is the same as the well capacity (280 gpm). The treated water is stored in two 100,000 gallon elevated storage tanks, which are located at the eastern end of Tilghman Street, and adjacent to the Town public works building on J.L. Thompson Drive.

The Town prepares and distributes to the residents an annual Drinking Water Quality Report.

In December, 2009, the Town replaced all of its water meters with new Neptune water meters with radio-read capability. This will significantly reduce the time required for meter readings from several days to a couple of hours. The water meter replacement was accomplished through a stimulus grant.

5.7 Public Sewerage System

The Oxford wastewater system serves the same areas served by the water system. The wastewater system was first installed in 1963, upgraded in 1981, and recently refurbished. There are four pump stations in the collection system, each of which has two pumps and a generator backup in case of power failure. The Town's Public Works Superintendent and the staff of five maintain the water and wastewater facilities and distribution systems, as well as maintenance of all other town facilities, piers, streets and parks.

The wastewater treatment plant (WWTP) is rated for an average daily flow of 150,000 gpd and serves the entire Town. The facility consists of a three-stage waste stabilization lagoon system with diffused air to provide secondary treatment of domestic sewerage in two three-acre

lagoons. Prior to discharge into Town Creek, effluent is treated with ferric chloride to reduce phosphorus levels. It is disinfected with calcium hypochlorite and subsequently with sodium bisulfate to de-chlorinate. There is also a final aeration system to maintain higher dissolved oxygen levels.

Effluent from the facility is discharged at the head of Town Creek, which flows in to the Tred Avon and Lower Choptank River and eventually to the Chesapeake Bay. In 1996, the Lower Choptank River was listed by the Environmental Protection Agency (EPA) as an impaired waterway. In 2003, Town Creek was listed as impaired. Town Creek is subject to Total Maximum Daily Load (TMDL) requirements. The Town's current NPDES permit for the Oxford WWTP includes two-tiers of discharge limits, with the first valid for flows less than 104,000 gpd, and the second for flows between 104,000 gpd and 150,000 gpd. The permit's expiration date is June 30, 2010, but the Maryland Department of the Environment has advised that it has been automatically extended by virtue of the Town's reapplication.

As set forth more fully in the Water Resources Element, the Town has been exploring its alternatives to upgrade its wastewater treatment plant in order to ensure continued compliance with TMDL's and its permits. These upgrades are costly and all alternatives are being considered.

It is a long-standing policy of the Town of Oxford that it will not extend its water or sewer services extraterritorially absent an annexation covenant and a public health or safety concern such as a failing septic system.

5.8 Refuse Disposal

Household refuse is collected twice weekly in Oxford by a private hauler under contract to the Town. Waste collected under the Town's contract is hauled to the Tri-County Solid Waste Recycling Facility. It is projected that the local, Talbot County facility will close at the end of 2010, and a new one will open near Ridgely, in Caroline County, to serve the region. This move will potentially mean more manpower and equipment, increased cost and modifications to the current service that can be anticipated to eventually result in higher user fees.

The Town also maintains a recycling center located behind the pumping station at the Causeway Park. The collection of these items is contracted to a private company. A private recycling company will also collect certain recyclable refuse, appliances and scrap metal at curbside at the expense of the homeowner. In addition to household garbage, other forms of solid waste are collected by the Town Public Works staff on a periodic basis as follows:

- Brush and yard debris – twice monthly
- Rubble and building debris – once a month
- Bulk furniture –once a month
- Cardboard – (recycled) –twice a month

5.9 Oxford Community Services Building

In 2002, the Town completed a renovation of the town office building. The renovations were funded with a state grant and low interest loans. The renovations permitted improved services to the community, and included the following:

- A two- story elevator to accommodate the handicapped and to meet the Americans with Disabilities Act requirement of providing-easy access to the main town meeting room.
- Relocation of the Oxford Police Department into the newly renovated building, with a more central location than the previous Police Department facilities.
- Public women's and men's restrooms.
- A much improved public meeting room and staff offices.

5.10 Oxford Library

Oxford has been privileged to have a small privately owned general interest library, open to the public since 1939, staffed by about 30 volunteers and maintained by donations and biannual book sales. The library is located on Market Street behind the Community Services Building. It is open 6 days per week.

5.11 Oxford Museum

Established in 1964, the Oxford Museum was previously located in the Town Office Building. When that building was renovated in 2002, the Oxford Museum had to relocate. The Museum purchased the property directly across Market Street for its new location. It continues to enlarge its collection of "Oxfordiana" from donors and loaned memorabilia. The Museum has plans for expansion of its facilities to accommodate future needs. A volunteer staff of about 35 keeps the Museum a viable attraction to tourists and residents. It is open to the public on Friday through Sunday during April–October and on special occasions.

5.12 Oxford Community Center

The former Oxford school, at the entrance to Town, is the visible hub of Oxford's community activities. The former school was leased by the Oxford Commissioners for a 100 year term to the Oxford Community Center, Inc. Now known as the Oxford Community Center, the former school is managed by the non-profit volunteer organization. It is staffed by two part-time employees and over 200 volunteers. The former school building is used for presentations, plays (it is the home of the Tred Avon Players), a summer camp for Oxford area children, group meetings, art shows, and many other community oriented cultural and recreational activities. The Oxford Community Center, Inc., with the support of the Town Commissioners, is planning a major renovation and restoration of the building.

5.13 Recreation

While Oxford's population is less than 800 residents, the Town provides its citizens with significant recreational spaces. North of the Oxford Community Center are a soccer field, basketball courts, and tennis courts. West of the community center is the Oxford baseball field, used today primarily for little league and softball activities, but with a long history of more extensive baseball use. There is pedestrian water access at numerous street ends, the Strand beach, and at the Town Park, with a new, accessible living shoreline area. There is a public boat ramp available at the end of Tilghman Street.

In recent years, another community group, the Oxford Pool Committee, has worked to develop interest in a community swimming pool. The Talbot County YMCA, a highly organized and very successful county wide YMCA organization, has expressed interest in combining its expertise with the pool organizing committee to perhaps provide a more comprehensive community recreation facility, including a pool and small gym .

It is recommended that the Commissioners continue to examine the area surrounding the Oxford Community Center, including potentially surplus agricultural lands, as a centralized location for expanded recreation facilities, and perhaps a more efficient organization of the open space area surrounding the baseball field. Not only is the community center area a highly visible focal point, it is easily accessible to visitors, who do not have to traverse the entire Town, with more area for shared public parking than any other area of Town. Recreational uses of town owned agricultural land should be considered and weighed in the context of other town priorities, such as the potential for affordable housing.

It is further recommended that the Commissioners consider the acquisition of additional land along Second Street to secure additional parking and recreation space, and to resolve the condition of a blighted structure that has not been maintained by its owners for years. The existing recreational facilities should be preserved, maintained, and improved to support their existing functions.

In addition to the playing fields and facilities described above, Oxford is a natural center for outdoor recreation. The Town is widely known for its yachting and small boat facilities. Waterfowl hunting abounds in the marshes and fields around Oxford.

The Tred Avon Yacht Club is a recreational boating hub in the Town of Oxford. It is located upon town owned property adjacent to the ferry dock at the intersection of State Route 333 and the Tred Avon River. In the late 1920's, the Town agreed to lease the land for the creation of a local yacht club to promote the Town's longstanding maritime heritage. While the Tred Avon Yacht Club is a members-only private facility, the Town has encouraged the Yacht Club to interact with Oxford citizens generally, not just its members. The Yacht Club has provided junior sailing instruction available to all local youth, regardless of affiliation with the club. Additionally, the Yacht Club is the sponsor of the annual Fourth of July fireworks, with a modest contribution from the Town. The Yacht Club sponsors several regattas every year, bringing visitors who support local businesses. It is recommended that both town officials and

the Yacht Club management continue to share ideas about more extensive community involvement by the Yacht Club.

The Town maintains other public areas, including Town Park, across from the Town Office, and an extensive public beach (the Strand), several piers, a public wharf, and a number of boat slips, which are rented on a seasonal basis to watermen and town residents, and a public boat ramp. The public area at the intersection of Route 333 and S. Morris (Causeway Park), referred to above, includes the basketball court, tennis courts and a grass playing field for soccer and other sports and activities. The basketball court was recently resurfaced and wind-screens were installed at the tennis courts. The park in the center of Town (Town Park) is a fine picnic area and serves special events. The addition of benches enhances the park's amenities. The public property along the Strand has benches available for leisure enjoyment of the view of the Tred Avon River and watching the Oxford-Bellevue Ferry. In addition to Causeway Park, the Town Park, and the Strand, Oxford is unique in that there are designated waterfront areas for public use within the corporate limits, most of which are marked by benches.

Movie theaters, bowling alleys, and other entertainment are available in Easton, Trappe and Cambridge. The Avalon Theater, an art-deco movie theater from 1921 until 1988 when it closed for renovation, reopened in 1989 as the area's most active performing arts center. The Academy of the Arts in Easton and the Chesapeake Bay Maritime in St. Michaels are other examples of the outstanding facilities within reasonable driving distance of Oxford. An excellent YMCA facility, located in Easton and recently renovated and expanded, has tennis, weight lifting, handball and indoor swimming facilities. There are public golf courses on Route 50 and 333 in Easton.

The Oxford Bellevue Ferry is an additional attraction for tourists who, during busy weekends, have to wait in line on both sides of the Tred Avon River for their turn on the ferry. Tourists traveling on the Delmarva Peninsula stop in Oxford or find it a favorable destination for a weekend or overnight visit. Some days, large groups of bicyclists travel through town along a widely recognized scenic loop used for daylong outings. Oxford provides bicycle racks at the park in the center of town for these recreational riders. Boaters traveling on the Chesapeake Bay also find Oxford an attractive destination for a visit or overnight stay.

CHAPTER 6

Transportation

6.1 Existing Roads and Streets

The Town of Oxford is unique among Talbot County's incorporated towns in that it is located at the end point of a highway with all road access to and from the Town using one roadway, Route 333. This highway provides Oxford with access to Easton and the remainder of the county. Route 333 is constructed with wide paved shoulders that provide a travel lane for bicycles. Route 333 is a State Highway designated bike route. Generally, Route 333 (also known as Oxford Road) has one of the lowest accident rates for arterial roads in Talbot County.

Route 333 has been designated as a Scenic By-Way. The agricultural and rural landscape along Route 333 outside of Oxford provides an attractive entrance corridor and gateway to the town. Oxford has already taken steps to preserve this crisp, rural edge leading into Town by participating in gateway-enhancing and traffic studies to beautify the entrance to Town. The character of this entranceway to Oxford is valued by residents and visitors.

Route 333 becomes Morris Street at the intersection known as the "Pin Cushion," a triangle-shaped plot that is the beginning of the historic district. Morris Street serves as the main street passing through the center of town until it reaches the water at the Oxford-Bellevue Ferry. Morris Street collects traffic from all side streets in Oxford, making it the busiest street in town. Other town roads are designed for low speed and low traffic volumes. Traffic control in Oxford is accomplished with the use of signs. There are no traffic lights. Local speed limits are enforced by the Town Police.

Aside from State Route 333 and Bachelor Point Road (which is owned and maintained by Talbot County), the other streets in Town are town streets, which are maintained by the Town's Public Works Department.

6.2 Street ends, Pedestrian and Bicycle Access

In addition to the Town's streets for vehicular use, there are many unimproved "street ends" that end at the water. Most of the "street ends" were never used as "streets" per se. Rather, they were used for access by the townspeople to the waterways that provided the commercial fishing opportunities that supported so many Oxford families. The Town has been proactive in preserving these street ends to provide public access to the waterways. The Town mows and maintains these public street ends, and provides benches for the public's enjoyment of the water views. It is the Town's policy to continue to preserve these historic street ends for use and enjoyment by the public.

In addition to the public street ends at the water, the Town has also strived to maintain pedestrian connectivity throughout its small town. As part of the 2002 annexation of the Johnson Property, the Town acquired pedestrian rights of way to connect the main areas of the Town with

the Bachelor Point area. The Town will continue to look for ways to encourage pedestrian connectivity.

Oxford has a relatively high level of pedestrian travel by residents who enjoy walking, and the pedestrian scale, and the design of the Town. People who travel to Oxford by boat also contribute to the volume of pedestrian travel. Oxford's traffic speed and layout of streets make it pedestrian friendly.

Bicycle travel is popular in Oxford and the surrounding area. On some days, hundreds of bicyclists travel through Oxford, a majority of whom take the ferry across the Tred Avon River.

6.3 Oxford-Bellevue Ferry and Boating Transportation

At the end of Morris Street is the landing for the Oxford-Bellevue Ferry, one of the oldest ferries without a cable in the country in continuous operation. This is a privately owned ferry that operates seasonally crossing the Tred Avon River between Oxford and Bellevue. It leaves every twenty minutes and runs from early spring until December.

Although once an active port of entry, Oxford's port facilities are not used today for cargo. Instead, the marinas are now a safe haven for the numerous sail and powerboats that operate on the Tred Avon River and in Town Creek. A survey of marinas documents 518 commercial boat slips available in Oxford. The Town owns and leases an additional 35 slips. Oxford is a popular stop-over town or destination for Chesapeake Bay pleasure boaters. The Town recently annexed additional submerged lands adjacent to the Town in order to regulate the placement and safety of mooring buoys. Prior to the annexation, there were no regulations to address the proliferation of mooring buoys in waters adjacent to the Town other than Town Creek. With the recent annexation, the Town hopes to regulate these structures in conjunction with the Department of Natural Resources consistent with this Plan and the desires of the community.

6.4 Other local transportation opportunities

The nearest airfield is located in Easton, about 11 miles from Oxford. The Easton airport is capable of handling a wide variety of aircraft, including private jets.

Public transportation provided to Oxford is through a taxi service from Easton and on-demand transit provided by USTAR (Upper Shore Take a Ride) operated on a countywide basis by Upper Shore Aging.

6.5 Future Transportation Planning

The Town does not anticipate significant new growth or development, aside from some infill development. In the event that the Town did experience any significant development, the Town would reserve the right to require independent traffic studies and other impact studies in order to determine the impact of new development on surrounding roadways. The Town would

require that any developer pay for all impacts of its development, including any impacts on existing roadways and intersections.

The Town will also require that new development with public street frontage install sidewalks where appropriate, and encourages bicycle paths or other pedestrian paths. The Town will review plans to ensure bicycle and pedestrian connectivity with other development and neighborhoods. All roadways within any new development would be required to be constructed, and bonded for a certain period to ensure that the roadways are well-constructed in accordance with the Town's road standards and specifications. In addition, the Town would require that the developer to execute a public works agreement to ensure that any new roads or streets comply with the Town's construction standards. All road systems would need to be inspected by the Town's consulting engineers prior to the Town's acceptance of the same.

The Town should consider and explore funding alternatives to create pedestrian and/or bicycle trails, in and adjacent to the Town.

CHAPTER 7

Sensitive Areas

7.1 Overall Objectives

Protection and improvement of water quality and wildlife habitat is our overall goal for managing “sensitive areas”. This element supports and addresses Vision Two of the state law, which requires that sensitive areas be protected. The four sensitive areas mandated for management and protection include:

- Steep slopes
- 100-year floodplains
- Habitats of threatened and endangered species
- Streams and their buffers

With respect to steep slopes, there are no steep slopes equal to or greater than 15% within our planning area. There are no steep slopes in Oxford and no known rare, threatened, or endangered species reside in Oxford or within the growth area, nor are there any streams. There are tidal wetlands in the Bachelor Point area, and at the head of Town Creek.

7.2 100 Year Flood Zone

Much of the existing Town is located in the 100 year flood zone identified on the federal flood maps. Oxford is a historic waterfront town that was settled along the waterfront in the late 1600’s. It has weathered its historic location for 300+ years. Significant portions of the Town experience flooding during heavy storms characterized by unusually high tides. To ameliorate flooding of low-lying areas with the 10 to 20 year storm, the Town has installed tide gates in two locations near the entrance of Town to facilitate control of tidal flooding and dewatering of excessive rainfall. The tide gates are located at Pier Street, near the U.S. post office on Banks Street, and at the Causeway.

The areas of tidal wetlands in Town adjacent to Bachelor Point Road have been protected with covenants against future development and are classified under the most restrictive critical area classification (Resource Conservation Area or RCA) and the most restrictive Town zoning classification, which is WSWC Wildlife Sanctuary/Wildlife Conservation Zoning District.

For all new commercial or residential construction, the Town has mandated compliance with federal flood elevation requirements.

7.3 Streams and Stream Buffers

There are no streams located within the Town of Oxford. In the event that property was annexed that included a stream, the Town would require that such streams be buffered on both sides. The Town would also require utilization of best management practices to protect the stream water quality. Appropriate wildlife corridor connections that may be independent of the

state and federal stream buffering requirements may also be required. There are agricultural ditches adjacent to the Town euphemistically classified as “streams” under critical area regulations, many of which have silted in, thereby contributing stormwater from agricultural fields adjacent to the Town to Oxford’s road drainage system.

7.4 Tidal and Nontidal Wetlands

Tidal wetlands exist in the Bachelor Point area, where they are already protected or are under federal governmental ownership. There are some tidal wetlands at the head of Town Creek. There are nontidal wetland isolates in the Bachelor Point area, and within the NOAA lab property. Interestingly, the Town’s sewer lagoons, clay lined sewage treatment areas, are classified as nontidal wetlands on the national wetland inventory maps. In the event that property was annexed that included nontidal wetlands, the Town will require development to fully comply with applicable state and federal regulations concerning wetland protection.

7.5 Critical Areas

As set forth on the Town’s Critical Area map, attached to this plan, virtually the entire Town is located within the Intensely Developed Area (IDA). The Town also has significant Buffer Exempt Areas (BEA) along the existing developed shoreline.

For newly annexed property, such as the Johnson annexation and the Bachelor Point Annexation, the Town required that wetland areas and sensitive critical areas be classified in the most restrictive critical area classification, which is Resource Conservation Area (RCA) and the most restrictive zoning classification under the Oxford Zoning Ordinance, which is WS/WC Wildlife Sanctuary/Wildlife Conservation. In the event additional sensitive areas, including RCA lands are annexed, these areas should be protected through corresponding town critical area classification and zoning.

7.6 Agricultural Land

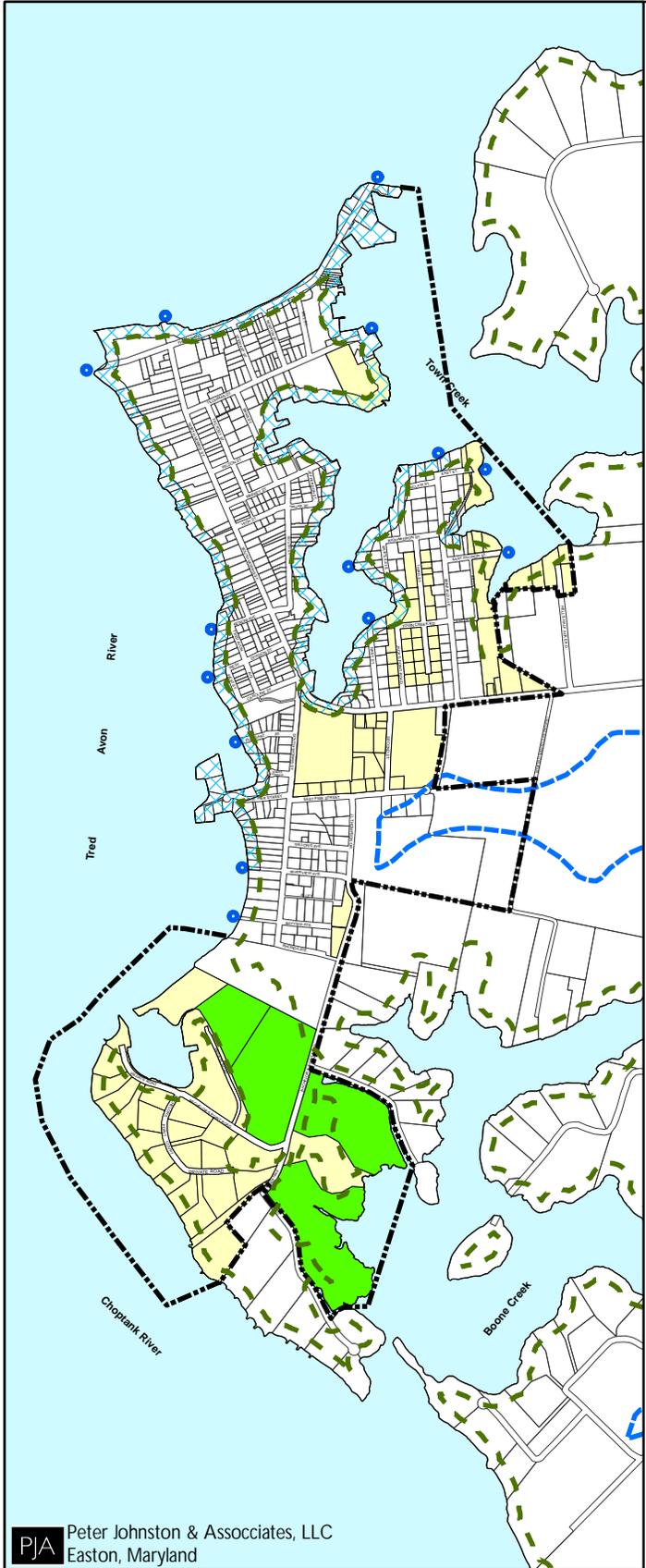
The Town will work with the County to encourage that its agricultural gateway corridor is protected. As set forth on Map 3-4 of the Talbot County Comprehensive Plan titled “Oxford Growth Area Plan”, the areas surrounding Oxford’s growth area have been identified by Talbot County as Countryside Preservation Area and Western Rural Conservation Areas.

7.7 Waterways

The Town will continue its efforts to protect its waterways, including Town Creek. As set forth more fully in the Water Resources Element, the Town will continue to explore alternatives with respect to upgrading its wastewater treatment plant. The Town also applies stormwater management regulations to new, non-exempt development activities. The Town will encourage shoreline improvements that foster and encourage wildlife, such as living shorelines.



Figure 2
Oxford Town Creek



Map 3
CRITICAL AREA LAND USE CLASSIFICATION
SHOWING SENSITIVE AREAS (RCA)

OXFORD, MARYLAND

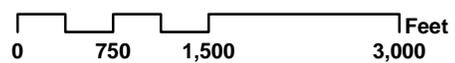
CRITICAL AREA LAND USE CLASSIFICATION

- IDA - INTENSELY DEVELOPED AREA
- LDA - LIMITED DEVELOPMENT AREA
- RCA - RESOURCE CONSERVATION AREA
- BEA- BUFFER EXEMPTION AREA

BOUNDARY LINES

- CORPORATE LIMITS
- CRITICAL AREA OVERLAY
- CRITICAL AREA BUFFER*

*Field delineation required for specified project approvals



CHAPTER 8

Water Resources Element

8.1 Introduction

As part of the 2006 legislative amendments to Article 66B, each county and municipality having planning and zoning authority is required to incorporate a water resources element into its Comprehensive Plan.

The purpose of the water resources element is to ensure that any future development plans within the Town of Oxford take into account and are sensitive to the local water resources. It is required to address the availability and adequacy of water supply sources and the capability of water bodies to assimilate wastewater and stormwater. In preparing this document, the Town has relied upon and considered the Talbot County Comprehensive Water and Sewer Plan, 2002 Report of the Review, which is the most recent comprehensive water and sewer plan undertaken by Talbot County, as well as the Talbot County Comprehensive Plan, effective April, 2005, to ensure that Oxford's planning is consistent with County planning.

8.2 Goals and Objectives

The goals and objectives of the water resources element are to:

- Protect the health, safety and welfare of the people of the Town of Oxford and Talbot County by improving and/or maintaining sanitary conditions of water resources.
- Maintain an adequate water supply for the Town of Oxford to serve not only current water demands, but future water needs resulting from population growth and development, including both residential and commercial capacity.
- Manage water resources in order to control and diminish water pollution and to preserve and maintain the necessary quality standard of streams, estuaries, wetlands, and groundwater for residential, industrial, commercial, recreational, and conservational use.
- Protect the local wellheads from contamination through regulation and development review.
- Require that any new development provide adequate water, wastewater and stormwater systems. Costs for new or expanded facilities should be borne and proportionately shared by those who will use such systems.
- Use stormwater best management practices (BMP's) to treat water flowing in the older parts of Town that were built before such practices were required. When undertaking such work, care should be taken to improve, where possible, stormwater drainage from streets and private lots.

- Work with Talbot County to ensure that the County addresses stormwater issues and drainage along County roads and on properties outside of the Town that impact the Town and its citizens.

- Administer all matters within the Town pertaining to water resources, waste disposal, stormwater management and sediment control.

- Protect the water quality of the Chesapeake Bay and its tributaries and establish objectives to assure no degradation of current water quality by upgrading existing wastewater treatment facilities with the best available biological nutrient removal technologies as the sewer service areas of these facilities are expanded.

- Continue working with Talbot County and the other municipalities within the County to encourage and direct growth in and around concentrated population centers that presently have adequate or potentially adequate water and sewer services.

8.3 General Background

8.3.1. Topography and Geology

Oxford is situated on Oxford Neck, which is located on the Tred Avon River in Talbot County. Based on the U.S. Geological Survey (USGS) 7.5-minute topographic map for Oxford, Maryland, the ground surface elevation in the Town is approximately 10+ feet above the National Geodetic Vertical Datum (NGVD) of 1929. The NGVD is approximately equal to mean sea level. The Town is located within the Atlantic Coastal Plain Physiographic Province. The Coastal Plain is underlain by a thick wedge of sedimentary deposits consisting of sands, silts, gravels and clays that dip and thicken toward the Atlantic Ocean. Based on the data from the deepest wells in the area and from surface and borehole geophysics, approximately 2,500 feet of coastal plain sediments occur above the basement bedrock complex in the vicinity. See Maryland Geological Survey Report of Investigations No. 29, Upper Cretaceous (Senonian And Paleocene Danian)) Pinchouts Of The South Flank Of The Salisbury Embayment, Maryland, And Their Relationship To Antecedent Basement Structures, by H. J. Hansen, H.J., 1978, p. 34.

Geologically, the shallowest sediments underlying the Town of Oxford are of the Kent Island formation of Pleistocene, and possibly Pliocene and Miocene age. The Kent Island formation is interpreted to be of estuarine origin and most likely an ancestral shelf area of the Chesapeake Bay. The Kent Island formation is described as interstratified silt, light-colored medium to coarse sand and dark-colored, massive silty clay. U.S. Geological Survey Professional Paper 1067-A, Upper Cenozoic Deposits of the Central Delmarva Peninsula, Maryland and Delaware, by J.P. Owens and C.S. Denny, 1979.

Locally, the superficial Kent Island formation is underlain by the Calvert formation of the Chesapeake Group. The Calvert formation is interpreted to represent a shallow marine deposit of Miocene age. The formation is characterized by blue, gray, green and brown clays, silts and variably clayey to silt sands which contain shell marl. Published driller logs indicate that the unit ranges in thickness from about 200 to 250 feet in the vicinity of Oxford. See Maryland

Geological Survey Bulletin No. 18, *The Ground-Water Resources in the Water Resources of Caroline, Dorchester and Talbot Counties*, by W.C. Rasmussen and T.H. Slaughter, 1957. Below the Calvert formation are sediments of Eocene Age. The underlying Piney Point formation is characterized by gray-to-green glauconitic sands containing shell beds and lenses of silt and clay. Rasmussen and Slaughter, 1957. The Aquia formation is considered Late Paleocene in age and is characterized by olive-gray to olive brown variably glauconitic, shelly, fine-to-course sand with some calcite-cemented layers.

8.3.2. Soil Types

The soils of Talbot County, including Oxford and its growth area, have been analyzed and described by the Soil Conservation Service (U.S. Department of Agriculture) in their Soil Survey; Talbot County, Maryland dated December 1970. Soils information is also reported in the Oxford Critical Area Program.

The Soil Survey indicates that the principal soil association found in the Oxford area is the Mattapex-Matapeake Association. These soils are developed from silty marine sediments. Although their subsoil is compact and tends to slow the movement of water, the surface soils are usually moderately well drained. The primary soil type of this association in Oxford and Talbot County is Keyport silt loam with zero to two percent slopes.

In the area just inland from Oxford, predominant soil use is the Elkton-Othello-Barclay Association. These soils are formed from marine sediments of silt and silty clay, and are deep and poorly drained. A fluctuating high water table characterizes these soils and chronic wetness is often present. Generally the soils in the areas just outside the Town's corporate limits are not well suited to septic tank sewage disposal systems.

8.3.3. Drainage

Oxford's drainage flows are divided into two drainage basins -- The Town Creek Drainage Basin to the north, and the Boone Creek Drainage Basin to the South. See Figure 1. Both of these waterways drain to the Choptank River. As noted in the 1992 Talbot County Comprehensive Water and Sewer Plan, incorporated by reference in the 2002 Talbot County Report of the Review, "drainage is comparatively simple, owing to the simple structure of the formations and the locations....The County generally has good surface drainage." 1992 Talbot County Comprehensive Water and Sewerage Plan, Chapter Two, D.

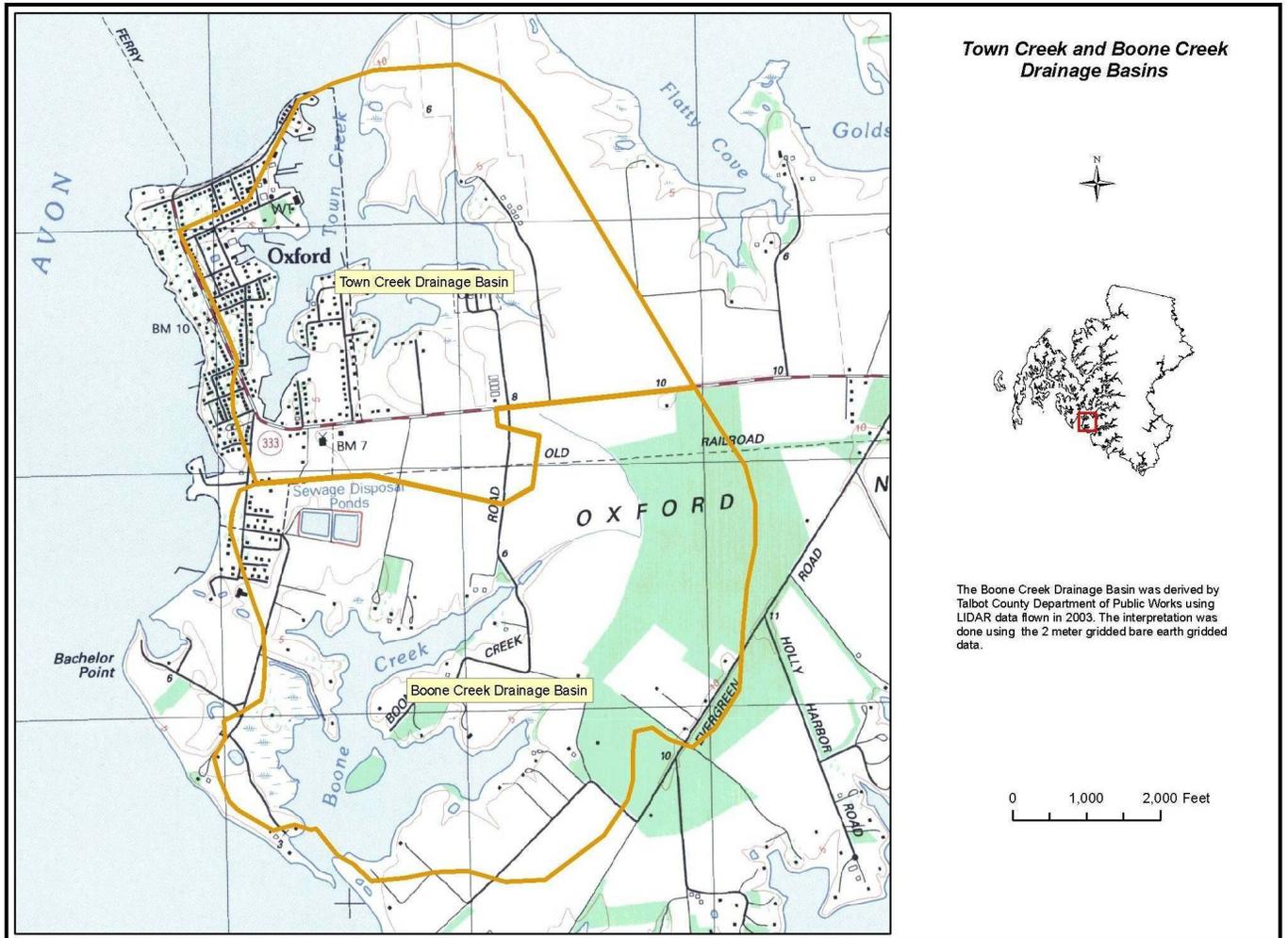


Figure 3
Town Creek and Boone Creek Drainage Basin

The Town recognizes that non-point source pollutants can transcend jurisdictional boundaries and land use impacts (whether such impacts are development related, agricultural, etc) should be addressed cooperatively and consistently in an interjurisdictional manner.

8.4 Water Sources for the Town of Oxford

The major aquifers in Talbot County are sands in the Patapsco, Raritan, Magothy, Matawan, Aquia, Piney Point, and Calvert Formations and in the deposits of the Pleistocene age. Some of the water bearing sands pinch out locally, whereas others are widely distributed and their occurrence is generally predictable. Although each of the major aquifers has its own distinctive water bearing characteristics, the sands themselves often vary considerably from one place to another in thickness, grain size, mineral content, and permeability. The aquifers that underlie the Planning Area are generally the Piney Point, Aquia, Matawan/Magothy and the Upper Patapsco aquifers.

8.4.1. Oxford's Existing Water System and Uses

The Town's water system supply consists of two deep production wells drilled in the Aquia Aquifer. The information for these wells is summarized in Table 8(A):

Table 8(A)

Oxford Inventory of Public Wells				
Well Number	Aquifer	Depth Feet	Diameter Inches	Flow Rate
Well No. 2 Permit No. TA 8102871	Aquia	578	4"	280 gpm
Well No. 3 Permit No. TA950880	Aquia	600	8"	280 gpm

The production wells are located next to the Town's Public Works Building on J.L. Thompson Drive. Water from each well is chlorinated before the water is pumped into elevated storage tanks.

Prior to 2008, the Town was obtaining its water from two wells – Well No. 2 and Well No. 1, which is located on Tilghman Street. Effective January 26, 2006, the U.S. Environmental Protection Agency (EPA) reduced the drinking water standard for arsenic from 50 parts per billion (ppb) to 10 ppb. The Town's annual average arsenic concentrations for 2003-2005 were 11.1 ppb at Well No. 1 and 11.6 ppb at Well No. 2. As a result of the new arsenic standards and the Town's arsenic levels, which exceeded the new standard, Oxford engaged the engineering firm of Stearns & Wheler Companies to study its alternatives with respect to arsenic compliance.

Stearns & Wheler evaluated alternatives for arsenic compliance, including obtaining water from the Piney Point Aquifer, the Aquia Aquifer (at another location) and the upper Patapsco Aquifer. The study concluded that arsenic levels in the Piney Point would not be low enough to provide Oxford with the new arsenic standard. The study concluded that a new well in the Aquia Aquifer would likely provide similar water quality to the existing wells. While the arsenic levels were expected to be lower in the deeper upper Patapsco Aquifer, the study concluded that treatment for iron may be required.

Ultimately, to ensure compliance with the new arsenic standard, the Town (with approval by the Maryland Department of the Environment) discontinued use of Well No. 1 as a production well, and drilled a new well – Well No. 3 in the Aquia Aquifer and installed an arsenic removal system. The arsenic removal system includes blending the water drawn from Well No. 2 and 3 and treating it for arsenic removal. The arsenic removal system has the same treatment capacity as the wells. The arsenic removal improvements were financed with a low interest loan in the principal amount of \$940,000 through The Maryland Water Quality Financing Administration.

The Town has two elevated storage tanks, each with a capacity of 100,000 gallons. One storage tank is located at the Public Works Building site, and it was constructed in 1987 and repainted in 2004. The second storage tank, which is located on Tilghman Street, was constructed in 2000, which replaced the original tank that had been constructed around 1930.

The distribution system consists mainly of 8-inch and 6 inch cast iron, ductile iron, and PVC piping. The earliest part of the distribution system was constructed in 1927. There are 586 service connections that include residential and light commercial users. All customers are metered. In December, 2009, all of the meters within the Town were replaced with Neptune meters with radio-read capability. The water meters were replaced pursuant to a \$255,000 stimulus grant.

The Town’s Water Appropriation Permit authorizes the appropriation from the Aquia Aquifer of a daily average of 140,000 gallons on a yearly basis and a daily average of 232,000 gallons for the month of maximum use.

The Town’s water use for 2008- 2009 is as follows:

Table 8(B)

Oxford Average Daily Well Pumpage (gpd)		
Month	Year	
	2008	2009
January	81,000	111,000
February	85,000	98,000
March	90,000	93,000
April	78,000	119,000
May	113,000	121,000
June	125,000	105,000
July	165,000	187,000
August	187,000	136,000
September	139,000	120,000
October	105,000	104,000
November	86,000	97,000
December	95,000	94,000
Average	112,000	115,000

The two year average for the period 2008-2009 is 114,000 gpd. There is a peaking factor of 2 between summer and winter use which relates to second home use and the increase in the hospitality industry in the summer months.

8.4.2. Future Planning for Water Services

As set forth in the Municipal Growth Element, Oxford does not anticipate significant growth over the course of the next 20 years. The Town does not extend its water or sewer services out of its corporate boundaries without an annexation covenant or to address failing services. As set forth in Section 4.4.3 of the Municipal Growth Element, the population of the Town has remained steady over the past thirty years. The Town's population of approximately 800 is based upon full-time residents. During the summer months, 350 people are added to Oxford. Predicted growth in Oxford, based on historical growth trends (and taking into account that there are no significant vacant infill parcels) is one additional dwelling unit per year. Therefore, over the course of the next 20 years, the Town will produce and additional 20 homes and an additional 40 persons (using Oxford's average household size of 1.95 persons per unit). The total population, therefore, is predicted to grow to 1,190, including second home residents. Based upon historical trends, these forecasts also assume that an additional 6 developed properties located in the county with a private well may seek annexation.

The Town computes its future water use through Year 2030 as follows:

114,000 gpd	Current water demand
5,600 gpd	Residential infill (40 persons @ 140 gallons per capita per day)
1,700 gpd	Annexation of developed properties (12 persons @ 140 gpcd)
5,600 gpd	Future commercial
<hr/>	
127,000 gpd	

Using a water usage factor of 140 gallons per capita per day (gpcd), the average daily flow in the Year 2030 is predicted to be 127,000 gpd. To account for seasonal peaking during the summer months (which includes increases associated with the hospitality industry, boating, as well as additional potential commercial uses), for future planning (in terms of design of its arsenic removal system, etc.), the Town has used design flows for sizing of 200,000 gpd average daily flow and 400,000 gpd peak daily flow.

The Town recognizes that the aquifers provide drinking water not only to the Town citizens, but to also to the county citizens and citizens beyond the county and even the State. To that end, the Town is committed to doing its part to encourage the preservation of the ground water resources to ensure a future supply of safe and healthful drinking water. The Town will consider the adoption of a wellhead protection ordinance consistent with the Maryland Model Wellhead Protection Ordinance that has been proposed by the Maryland Department of the Environment. The Town will continue to work with the state and local agencies to ensure that any development activities near its wellheads are regulated in manner to ensure the continued protection of the local and regional groundwater supply.

For all unimproved properties located in the Town or annexed into the Town, where no water extension exists, the Town's ordinances require the property owner pay for costs associated with the extension of water services, including all construction, engineering, and professional costs. All water extensions are constructed by the Town, or to the Town's

specifications. In addition to construction and engineering costs, the property owner is required to pay all capacity fees and connection charges in effect at the time of the extension.

Prior to the approval of any subdivision or site plan approval, the Planning Commission is required to review the subdivision or site plan to determine whether existing or planned public facilities are adequate to serve the needs of the subdivision. In addition to the finding of adequate public facilities, prior to the recordation of any final plat, the applicant is required to execute a public works agreement, approved by the Town Commissioners, which sets forth the necessary public improvements required, including financial guarantees (bonds, letters of credit, etc.) which are required prior to the issuance of a building permit for development.

8.5 Town of Oxford Existing Sewerage System

The Town of Oxford owns and operates the Oxford Wastewater Treatment Plant (WWTP). The WWTP is located on J.L Thompson Drive in Oxford. The facility is rated for an average daily flow of 150,000 gpd and serves the entire Town. The plant utilizes a lagoon-based water treatment plant which was originally constructed in 1963 and was upgraded in 1981 to treat the Town’s wastewater. Wastewater is pumped from the main pump station at Causeway Park to a distribution structure which splits the flows to the lagoons. Effluent from the lagoons flows to the chlorine contact tanks for disinfection. Phosphorus removal is accomplished in the chlorine contact tanks using ferric chloride. Disinfection is accomplished using calcium hypochlorite followed by liquid bisulfate addition for dechlorination. Post aeration is accomplished using diffused aeration.

The design criteria for the existing facility is presented in Table 8(C):

Table 8(C)

Oxford Existing Wastewater Treatment Plant Design Criteria		
Unit Process/Equipment	Design Criteria	Value
Influent Pumps	No. of Units Design Point	2 350 gpm@56 ft TDH
Aerated Lagoons	No. of Cells Construction Volume Surface area Depth Retention time Total Aeration Volume Aeration No. of Blowers Type	2 in Lagoon No. 1 and 1 in Lagoon No. 2 Clay-lined w/membrane baffles +/- 2,444,000 gallons each cell 6 acres total 5' – 5 ½' Cells 1&2 - 11.75 days @ 208,000 gpd 16.3 days @ 150,000 gpd 23.5 days @ 104,000 gpd Cell 3 - 23.5 days @ 208,000 gpd 3 Cells: 9,776,000 gallons 1 + 1 spare Positive Displacement
Disinfection	Chlorine Contact Tank Volume HRT at Peak Flow ⁽¹⁾	8,954 gallons 25 minutes

	Disinfection Chemicals	Calcium Hypochlorite
Post Aeration	Type	Diffused Air

⁽¹⁾ Based on a peak flow rate of 0.52 mgd

The Town's collection system is primarily gravity. There are four pumping stations, which are located at Bachelor Point, Bonfield, Banks and the Main station. With the exception of the pumping station at Bachelor Point Road, all of the pumping stations are brick structures. Each pumping station is equipped with two pumps and a backup generator. Each pumping station is fenced and locked. Flows are pumped from each of the pumping stations to the Main station, which flows to the wastewater treatment plant.

The Town has an inflow and infiltration management program, which includes annual smoke tests of all sewer lines, annual cleaning of the lines, and routine inspections.

As set forth in the Municipal Growth Element, the current full time residential population is approximately 800 while the second home, part-time population is 350. The majority of the part-time residents visit the area only during the summer months and on weekends in the spring and fall. There are more tourism visitors to the Town during the summer months and warm weather weekends. This results in a significantly larger average wastewater flows at the Oxford WWTP during the summer months and on warm-weather weekends than during the rest of the year.

The Oxford WWTP measures both influent and effluent flow. Influent flow is measured using magnetic flow meters located at the Main Pump Station while effluent flow is measured using a v-notch weir located downstream of the chlorine contact tank. As expected, effluent flows are generally higher than influent flows as a result of direct inflow from precipitation.

The monthly average daily flows for the years 2007 through 2009 are shown below:

Table 8(D)

Town of Oxford Wastewater Treatment Plant Effluent Flows (MGD) (2007-2009)			
Month	Year		
	2007	2008	2009
January	0.1393	0.1140	0.0700
February	0.1286	0.1070	0.0760
March	0.1063	0.1100	0.0570
April	0.1160	0.0930	0.1040
May	0.1060	0.1420	0.1010
June	0.1150	0.1170	0.0250
July	0.1090	0.1170	0.0980
August	0.0870	No flow*	0.0610
September	0.1080	0.1460	0.1260

October	0.1070	0.0768	0.0770
November	No flow*	0.1160	0.0770
December	0.1030	0.1100	0.1360
Average	0.1021	0.1040	0.084

* Reflects months when treatment levels were suspended due to low lagoon levels and dry conditions

3-year average: 0.0967 MGD (97,000 gpd)

Effluent from the facility is discharged to Town Creek, which flows in to the Tred Avon and Lower Choptank River and eventually to the Chesapeake Bay.

The federal Clean Water Act requires that a Total Maximum Daily Load (TMDL) be developed for those water bodies identified as suffering from impaired water quality. A TMDL is a determination of the amount of a pollutant from point, nonpoint and natural background sources, including a margin of safety that may be discharged to an impaired waterway. In 1996, the Lower Choptank River was listed by the Environmental Protection Agency (EPA) as an impaired waterway. In 2003, Town Creek was listed as impaired, and is subject to TMDL requirements. Since that time, with relatively infrequent excursions, Oxford has operated its wastewater treatment plant and managed its effluent in conformance with applicable standards. TMDLs are in the process of being promulgated for larger watersheds of which Town Creek is a part. It is anticipated that the process could result in more restrictive TMDLs for the Town's wastewater treatment system. These evolving standards underscore the need for the upgrade of Oxford's wastewater treatment plant.

The Town's current NPDES permit for the Oxford WWTP includes two-tiers of discharge limits, with the first valid for flows less than 104,000 gpd, and the second for flows between 104,000 gpd and 150,000 gpd. The permit's expiration date is June 30, 2010. The permit limits are summarized in Tables 8(E) and 8(F):

Table 8(E)

Oxford Current NPDES Permit Requirements (Q less than 104,000 gpd)		
Parameter	Monthly Average	Weekly Average
BOD ₅	30 mg/L	45 mg/L
TSS (May 1- Oct 31)	90 mg/L	n/a
TSS (Nov 1 – Apr 30)	50 mg/L	75 mg/L
TN (May 1 – Oct 31)	18 mg/L	27 mg/L
TN (Nov 1 – Apr 30)	Max Annual	Max Annual
TP (May 1 – Apr 30)	2.0 mg/L	3.0 mg/L
TP (Nov 1 - Apr 30)	Max Annual	Max Annual
NH ₃ -N (May 1 – Apr 30)	2.9 mg/L	19 mg/L Max
NH ₃ -N (Nov 1 – Apr 30)	5.9 mg/L	n/a
Fecal Coliform	14 MPN/100 mL	n/a
Total Residual Chlorine	0.012 mg/L	n/a

pH	6.5 to 8.5 range	n/a
DO	6.0 mg/L (at any time)	n/a

Table 8(F)

Oxford NPDES Permit Requirements (104,000 gpd <Q< 150,000 gpd)		
Parameter	Monthly Average	Weekly Average
BOD ₅	21 mg/L	31 mg/L
TSS (May 1- Oct 31)	90 mg/L	n/a
TSS (Nov 1 – Apr 30)	50 mg/L	75 mg/L
TN (May 1 – Oct 31)	12.5 mg/L	18.8 mg/L
TN (Nov 1 – Apr 30)	Max Annual	Max Annual
TP (May 1 – Apr 30)	1.4 mg/L	2.1 mg/L
TP (Nov 1 - Apr 30)	Max Annual	Max Annual
NH3-N (May 1 – Apr 30)	2.8 mg/L	19 mg/L Max
NH3-N (Nov 1 – Apr 30)	5.8 mg/L	n/a
Fecal Coliform	14 MPN/100 mL	n/a
Total Residual Chlorine	0.012 mg/L	n/a
pH	6.5 to 8.5 range	n/a
DO	6.0 mg/L (at any time)	n/a

Table 8(G)

Table of Wastewater Treatment Acronyms	
Acronym	Name
BOD ₅	Biochemical oxygen demand
TSS	Total suspended solids
TN	Total nitrogen
TP	Total phosphorus
NH3-N	Ammonia Nitrogen
DO	Dissolved oxygen

The existing facility is working well for a lagoon system. It is achieving relatively low ammonia and total nitrogen levels and consistently meets the new effluent permit limits during warm weather conditions.

8.6 Future Planning for Sewer Services

In 1996, the Town retained Stearns & Wheler to conduct a feasibility study to upgrade the existing facility for biological nutrient removal (BNR) while providing a process compatible with enhanced nutrient removal (ENR). The results of that study are summarized in the *Town of Oxford Wastewater Treatment Plant Upgrade Study*, submitted by Stearns & Wheler in April, 2007. As part of that study, Stearns & Wheler estimated future design loads for the Oxford WWTP, which are set forth in Table 8(H) below:

Table 8(H)

Oxford Future Average Design Influent Concentrations and Loads					
Average Month⁽¹⁾			Maximum Month		
Parameter	Concentration (mg/l)	Load (lbs/day)	Peaking factor⁽³⁾	Load (lbs/day)	Concentration (mg/l)⁽²⁾
BOD ₅	175	152	2.4	365	292
TSS	175	152	2.4	365	292
TKN	34	29	1.25	36	29
TP	4.6	4	1.25	5	4

Notes:

1. Average month data based on a flow rate of 0.104 mgd
2. Maximum month concentration is based on a flow rate of 0.150 mgd
3. Peaking factors for BOD₅ and TSS are based on current plant data (max month loads to average month loads ratio). Peaking factor for TKN and TP were estimated

Oxford's Permits and TMDLs status, as of 2008, is summarized in the following Table 8(I):

Table 8(I)

Oxford's Permit and TMDL Status (2008)				
Parameter	Current Load (lb/month)¹	Current Concentration (mg/l)	Permit Level (mg/l)	WWTP TMDL Level (lb/month)
Nitrogen	128	4.9	12.5 ²	468
Phosphorus	20	0.8	1.4 ²	52
BOD	250	21	21	780

¹Estimate based on annual average flow of 0.104 million gallons per day

²May 1st- October 31st

Although the existing facility has demonstrated the ability to meet these permit limits, it is possible that the current facility will not be able to reliably meet the ammonia-nitrogen limits included in the revised discharge permit during colder months of the year as the flows and loads increase. Moreover, if the facility is expanded or its process modified, MDE will have the opportunity to modify the NPDES discharge permit.

MDE's ENR Strategy divides wastewater treatment plants into two classifications – major facilities and minor facilities. Major wastewater treatment facilities have a current design capacity of 500,000 gpd or greater. Oxford's WWTP is considered a minor facility because its

current design is less than 500,000 gpd. MDE's ENR Strategy established a baseline nutrient contribution to the Chesapeake Bay based upon the recorded Year 2000 flows at wastewater treatment plants across the State. The ENR Strategy indicates a Year 2000 flow rate of 102,000 gpd for the Oxford WWTP. MDE used this flow rate and the historical population growth rate within each county to predict Year 2020 flow rates for each treatment plant. Based upon this approach, MDE has indicated a Year 2020 flow rate of 114,000 gpd for the Oxford WWTP. The ENR strategy allows each minor facility an effluent nutrient goal equivalent to 18.0 mg/L total nitrogen and a 3.0 mg/L total phosphorus for the projected year 2020 shown in the ENR Strategy. For the Oxford WWTP, this results in an annual average total nitrogen goal of 6,227 lbs/yr and total phosphorus goal of 1,038 lbs/yr.

The discharge requirements for a minor plant such as Oxford's are on a load basis. This allows for a sliding nutrient target concentration as the design flow rate of the WWTP changes. For example, a WWTP with a design flow rate of 275,000 gpd, the ENR Strategy nitrogen and phosphorus targets would be 7.3 mg/L and 0.54 mg/L, respectively. A WWTP with a design flow rate of 350,000 gpd, would have an ENR Strategy nitrogen and phosphorus limits of 5.7 mg/L and 0.43 mg/L, respectively.

In 2004, Maryland passed the Chesapeake Bay Watershed Restoration Fund (House Bill 555 and Senate Bill 320) providing additional state grant funding, up to 100% for planning, design and construction as available, for implementing ENR upgrades at all major wastewater treatment plants in Maryland. The fund is financed by a \$2.50 per month household surcharge on all Maryland residents and an equivalent amount on businesses based upon their water usage. Funding under this legislation is not available at this time to minor wastewater treatment plants, such as Oxford's. MDE has indicated that supplemental grant assistance, as well as low interest loans, may be available to assist the Town with the design and construction cost of a new wastewater treatment plant. In addition, grant and loan assistance may be available from other sources, such as US Department of Agriculture's Rural Development Administration.

The Town's 2007 wastewater treatment plant study included proposals for a facility that would be compatible with enhanced nutrient reduction to satisfy MDE's Enhanced Nutrient Removal (ENR) Strategy to require that the owners of sewerage treatment facilities to reduce discharges of nutrients into the Chesapeake Bay or its tributaries.

As set forth in more detail in *Town of Oxford Wastewater Treatment Plant Upgrade Study*, Stearns & Wheler analyzed the following treatment options:

- ***Phosphorus Removal Upgrade.*** Phosphorus removal is currently addressed manually, with the addition of a chemical precipitant (ferric chloride) to a contact tank in which the phosphorus is precipitated from the effluent stream and removed. The current method, while effective, is considered hazardous to employees, and is not a long term solution to compliance with Oxford's phosphorus limits. One option is an interim plant upgrade phase to reliably achieve total phosphorus permit requirements. The first phase would include new clarifiers, chemical feed systems, return sludge and flow distribution modifications. If the phosphorus removal upgrade is completed, the plant would still need to be upgraded to BNR or ENR as a later phase.

- ***BNR and ENR Upgrades.*** As part of a BNR and/or ENR upgrade, alternatives were developed to meet the following goals:

- * Ability to remove both nitrogen and phosphorus to meet current NPDES permit requirements.

- * Ability to take any single tank out-of-service for maintenance during “normal” operating conditions and still meet NPDES permit requirements.

- * Ability to operate during anticipated cold weather conditions.

- * Compatibility to be modified in the future to meet MDE’s ENR goals.

In studying BNR upgrade options, four alternatives were studied, which included Sequencing Batch Reactors (SBRs), Oxidation Ditches, Membrane Bioreactor (MBR), and Biolac Lagoon. With each alternative, the construction of a ferric chloride or alum chemical storage and feed system would be recommended for chemical precipitation of phosphorus. The metal salts would be added as required into the process just before the final clarifiers, or, in the case of SBRs, just before the settling phase. A caustic storage and feed system would also be required for influent alkalinity addition and effluent pH adjustment, if necessary.

To achieve MDE’s anticipated future ENR goals, additional tankage and equipment would be coupled with the BNR alternatives. For the SBRs, Oxidation Ditches, and Biolac alternatives, denitrification filters would be added. For the MBR alternatives, additional post-anoxic tanks would be required.

Denitrification filters provide both additional nitrate-nitrogen removal and particulate phosphorus removal. They are essentially high-rate biofilters with supplemental carbon addition that follow a nitrifying treatment process. For any system in which denitrification filters are used, it is important to consider the high headloss associated with the units. The very low elevation and mild slope of the Oxford WWTP site will necessitate the construction of a small intermediate pumping station downstream of the secondary treatment process to overcome the denitrification filter headloss.

- ***Pumping to Easton Plant.*** The Town Commissioners and its consulting engineers explored this option, which would include the potential construction of a force main and pump stations to accommodate treatment of Oxford’s wastewater treatment at the Easton wastewater treatment plant. The Town of Easton has a state-of-the-art wastewater Enhanced Nutrient Removal Technologies which allows for discharge concentrations of Total Nitrogen of 3 mg/l or less and Total Phosphorus of 0.3 mg/l or less at a design flow of 4.0 million gallons per day.

Working with the Town of Easton, Easton Utilities, and Talbot County Public Works Department, the Commissioners of Oxford and its consulting engineers studied an alternative which would allow Oxford to own and operate the pumping stations and force main (which

would be a denied access line) used to convey the wastewater to Easton. As part of this proposal, the Town agreed that the force main: (1) would be planned for limited (Town of Oxford only) access; (2) the force main would not serve any property that was not located in Oxford's sewer district; and (3) the force main agreement and any changes thereto would require the unanimous consent and approval of the Oxford Commissioners, the Easton Town Council and the Talbot County Council.

The environmental benefits of this approach are the removal of the current outfall from Town Creek, an impaired water body listed by the MDE on the 303(d) list, where there is limited tidal flushing. The improvements to the water quality of Town Creek may open opportunities for funding.

- ***Sewer System Upgrade/Replacement Alternatives***

There is no question that Oxford's dated lagoon system is nearing the end of its useful life, especially in the context of the more stringent Total Maximum Daily Load ("TMDL") analysis of the entire Chesapeake Bay. The costs of accomplishing the highest level of treatment using current technology have been estimated to run as high as \$10 million. There are advantages and disadvantages to each of the alternatives evaluated by the Town's consulting engineers. The Town should continue to analyze evolving technology in the context of the latest effluent treatment standards to come up with the best economic and environmental balance available to the town citizens.

Recognizing that financing, planning and construction take years of time, in December, 2008, the Oxford Commissioners requested that the Talbot County Council amend the County Water and Sewerage Plan to include the upgrade and treatment alternatives set forth above. Placing the alternatives in the County Water and Sewer Plan would enable the Town to continue to study these alternatives with MDE, including financing options and programs. Specifically, in order to be eligible for any grant funding, the alternatives must be included in the County Comprehensive Water and Sewer Plan. On April 14, 2009, the Talbot County Council declined to follow the favorable recommendation by the Talbot County Planning Commission and refused to amend the Comprehensive Water and Sewer Plan as requested by the Commissioners of Oxford, indicating that the requested plan amendment was premature.

With a population of approximately 800 residents, the Town will continue to explore the most cost effective approaches to upgrading its wastewater treatment plant and treating its wastewater. The Town believes that it should explore all of its alternatives and that the Talbot County elected officials should endeavor to work with the Commissioners of Oxford to explore solutions that benefit the citizens of Oxford, Talbot County, and the environment. Town officials should continue to discuss with the Talbot County Council the request that the Council support the Town and its ability to secure grant funding for wastewater treatment system analysis and upgrades.

While the Town is committed to pursuing treatment alternatives, funding must be available in order to accomplish these objectives.

- Ensure the use of best stormwater management practices to the maximum extent reasonably practical.

- Ensure that privately owned stormwater management facilities are operational and well-managed and that the expenses of such maintenance and operations are borne by the private homeowners and not the Town's taxpayers.

- Work with Talbot County to ensure that the County performs its stormwater management responsibilities along county roads, properties along the Town's borders, and other areas within the County's jurisdiction, including traditional drainage ways through land outside Oxford's corporate limits.

- Consider innovative stormwater management techniques such as constructed wetlands, reinjection and bio-retention.

As for non-point source pollutants, all development within the Town is required to comply with the stormwater management ordinance, which requires water quality measures to be implemented to treat the first inch of rain, and limits the flow of water from the site to less than pre-existing conditions. A significant source of non-point source pollutants flows from land uses and practices in other jurisdictions. The Town does not have resources or jurisdiction to identify and address non-point source pollutants outside of its boundaries, nor does the Town have sufficient information or resources to determine the suitability of receiving waters. The Town will work with Talbot County and MDE to continue to address, identify and analyze non-point source pollutants.

The Town does not have the ability to specifically forecast non-point source pollutants, but will work with Talbot County and the Maryland Department of the Environment to address and to assist with these issues. The Town will accept assistance from these agencies and jurisdictions. Talbot County has examined different land use plan scenarios in its Water Resources Element. Based upon the County's analysis, the Town believes that the Town's land use plan will have less than or similar impacts to the land use plan options that have been analyzed by Talbot County.

The Town does not have sufficient information at this time to discuss the suitability of receiving waters with regard to both point and non-point source pollution. The Town is currently working with the NOAA lab to analyze these issues. The Town will continue to work with other local and state agencies to evaluate and analyze these matters.

CHAPTER 9

Implementation

This element supports and addresses all twelve visions by setting out specific steps we have followed, and will continue to follow, to achieve them. The protection and enhancement of high quality living is an important aspect to achieving the goals of this plan and the visions of the State Planning Act. The Town's implementation plan is as follows:

POPULATION

- Encourage implementation of work force or affordable housing.
- Ensure that there are adequate public facilities to support new development.
- Land annexed into the town should be zoned in a manner compatible with the existing zoning districts of the town and should not be developed unless the developer complies with the Oxford annexation procedure.

NATURAL RESOURCES

- Continue to operate the water and wastewater systems in strict accordance with regulatory standards and permits.
- Continue to explore the Town's options with respect to upgrading its wastewater treatment plant to BNR and possibly ENR standards. To achieve this objective, the Town should continue to explore sources of funding. The Town should also continue to explore utilizing other existing facilities, such as the Town of Easton's.
- Tidal and non-tidal wetlands should be managed and preserved in accordance with buffer and mitigation requirements of applicable law.
- Work with Talbot County to ensure that areas of public open space are be preserved and roadside buffer zones are established. Outlying areas of town should be zoned within the county at low residential densities to preserve open space, farms and woodlands.
- New residential areas should preserve natural features of the site and, especially, preserve large, existing trees.
- Continue to strictly implement forest conservation, Critical Area and wetland regulations and the Stormwater Management Ordinance.
- Require environmental assessment and mitigation in connection with construction permitting for properties adjacent to wetlands.

ECONOMIC DEVELOPMENT

- Consider making surplus town owned land available for appropriate projects, if needed to support the Plan's economic development goals.
- Discourage the conversion of existing commercially zoned locations to residential land use classifications.
- Encourage commercial activity only in those areas within the existing commercial classifications, or in planned commercial or industrial park areas that might be proposed on unimproved town lands adjacent to the wastewater treatment facility.
- Continue to permit home occupations and offices that do not intrude upon the residential use of existing neighborhoods.
- Implement zoning measures ensure the preservation and continued viability of existing commercial uses, including shared-parking or parking waivers, setback relief, live/work space, and mixed commercial/residential uses (such as upstairs apartments).

PUBLIC SERVICES

- Upgrade or replace the Oxford wastewater treatment plant, and implement any new discharge permit conditions. In exploring its options, the Town should continue to explore the utilization of other existing facilities such as the modern Easton wastewater treatment facility, and emerging innovative technologies. Water and sewer services should be provided only to buildings within the town limits.
- Maintain an adequate police force, encourage police officers to live in town, and continue to offer work force housing.
- Encourage the growth of the volunteer fire department by supporting measures, such as job growth and affordable housing, which will increase the number of younger people who may be potential members of the department.
- Continue the collection of household garbage and the present schedule of collecting other forms of solid waste and yard debris.
- Continue consideration of alternatives concerning the disposal of solid waste when the current waste disposal site in Easton closes.
- Continue to monitor both wells which provide the town's water supply for salt water intrusion.
- Continue to improve and maintain all parks and other public open space areas.

- Continue the practice of according priority to licensed commercial watermen in the use of town slips.
- Repair the town boat ramp and extend its terminus to ameliorate the ledge at the ramp's end. Continue to address parking management issues in the confined spaces surrounding the ramp.
- Maintain the recycle center in a convenient location, but continue to support a county-wide curbside recycling program.

HOUSING

- Require the maintenance and repair and where appropriate the rehabilitation of substandard housing in accordance with current law.
- Discourage the conversion of property zoned for residential use to any other use.
- To meet the need for affordable housing to support the delivery of essential public services, the Town should continue to evaluate plans for development of sustainable affordable or workforce housing in appropriate locations, and should consider preserving some surplus town lands for that purpose.

TRANSPORTATION

- Continue to focus on upgrading the intersection of South Morris Street and Route 333 (the Pincushion) as outlined in the plan presented by Oxford's streetscape committee.
- Work with the state to change the look and feel of the entrance to Oxford from Latitude restaurant to the Pincushion to reflect a more "main street" than highway appearance
- Aesthetic traffic calming improvements to State Route 333 at the entrance to Town should be encouraged.
- Implement the goals and policies of maintaining a crisp, rural edge at the Town's gateway by prohibiting commercial development along Route 333 and preserving farm and open land around Oxford.
- Public works should continue to annually review the condition of streets and repave as necessary. Sidewalk safety and repair should be made a priority, and sidewalk plans developed for areas currently without them. Any new residential areas should be required to have sidewalks on at least one side of the street.
- Existing buildings that have off-street parking but do not utilize it should be encouraged to do so by the Town.

- Oxford should continue to monitor and maintain for use by the citizens, the town-owned access to the waterways, including street ends that terminate at the end of the water, and the boat ramp at the foot of Tilghman Street. Oxford should work with the Department of Natural Resources to maintain an open channel and manage boat speed in Town Creek. The Town should encourage the DNR to enforce its policy regarding personal watercraft, and encourage DNR to work with the Town to develop regulations relating to the number, density and location of private moorings in Town waters.

- Special attention should be given to the Oxford-Bellevue Ferry dock, as it is a major tourist destination and a convenient travel route to St. Michaels and surrounding areas.

- Maintain the existing traffic patterns created by one-way streets.

LAND USE

- Continue to review the zoning ordinance to determine if changes are needed to support the Land Use Goal and Objectives and enact such changes.

- Establish design standards for any commercial development activity.

- Establish innovative zoning concepts such as floating zones and traditional neighborhood concepts to ensure that new development and redevelopment is compatible with existing development in terms of design and scale, and also encourages redevelopment or continuation of existing uses (including commercial uses) through shared parking or setback relief.

- Keep all town properties in a high standard of repair, order and maintenance free of debris, with limited outdoor storage.

- Establish a system of “structural green spaces” to tie together the various parts of South Oxford and to create buffers for the lagoon area and Route 333.

- Encourage the use of landscaping in any new development, and the use of additional landscaping where needed in areas of existing development.

- Maintain strict control over the use of signs.

- Ensure open space. Encourage the preservation of old trees throughout Town.

- Maintain the Historic District.

- Maintain the rural gateway and crisp edge coming into town.

- Plan additional landscaping in Causeway park area, and the buffer areas around the lagoon, and the newer areas of town, including those areas east of Town Creek and south of Route 333.

- The Causeway Park area (not including the athletic field, which should remain open) and the buffer areas around the lagoon should receive additional plantings and bioretention areas as appropriate.
- Encourage the use of historically appropriate materials and construction when additions or repairs are made to buildings in the Historic District.
- Continue to work with the County and State regarding the preservation of the rural gateway to town by means of the Streetscape proposal and the Gateway proposal.
- Consider a tree or landscaping ordinance providing incentives for the preservation of existing trees and adding additional trees.

CULTURAL

- Support Oxford's library, museum, and community center to help maintain and enhance local cultural events and collections. Cooperate and coordinate with county and state governments to ensure that cultural opportunities are available to Oxford residents.
- Expand and strengthen organizational ties with outside agencies and the private sector to assist in the provision of increased cultural opportunities in Oxford.
- Increase the emphasis placed on financial support from the general public and the private sector to reduce participatory costs so that camps and cultural events are economically accessible to all Oxford residents.
- Consider creating an Art in Public Places program in Oxford to provide opportunities for local/regional artists to display their works in public buildings or private places of business, to generate interest in the arts and support the artists

INTERGOVERNMENTAL COOPERATION

- Pursue contact with planners in other jurisdictions to obtain the benefit of their experiences in planning and to become aware of opportunities that might benefit Oxford.
- Work with the government of Talbot County to ensure equity in the zoning of property adjacent to the Town of Oxford.
- Pursue opportunities for cooperation with all governmental and non-governmental entities whose responsibilities impact Oxford to afford Oxford community every available efficiency.
- Attempt to ensure that the appropriate Oxford officials are aware of aid (both financial and otherwise) being offered by governmental entities in regard to matters of importance to Oxford.

FISCAL

- Utilize the expertise of town residents in the development and implementation of Town projects and improvements.
- Before commencing any major project, seek professional and technical services especially from the existing state and federal programs.
- Provide for usage rates that are adequate to keep the Enterprise Fund in balance.
- Engage the services of a financial consultant as needed to provide expert advice in the technical area of government finance and reporting.
- Continue the practice of charging new users a fee for tying into an existing system.
- Because federal and state programs are frequently implemented, modified or discontinued, close cooperation and frequent communication with appropriate agencies is essential.
- A fiscal impact study weighing additional required services and facilities against expected additional Town revenues should be made before any significant annexation or major capital project is undertaken.