

A
COMPREHENSIVE
PLAN

TOWN
OF
WEST POINT
2000

Abstract

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ABSTRACT: This document is the comprehensive plan for the Town of West Point, Virginia. In addition to maps, and charts, it contains long-range use and transportation plans. Methods that are available to implement the recommendations on accordance with the Virginia state legislative provisions are included.

Acknowledgements

West Point Planning Commission

Rae Ehlen, Chairman
James E. Vadas
Webster Epps, Sr.
Mary Montague Sikes
Oliver C. Bray
Jonathan Blair Wilson
Paul Diggs

Middle Peninsula Planning District Commission

Kenneth W. Williams, Chairman
Dan Kavanagh, Executive Director

The West Point Comprehensive Plan

Was adopted by the Town Council On September 25, 2000

R. Burke Johnson, Mayor

Anthony J Romanello, Town Manager
Andrea G, Erard, Town Attorney

Table of Contents

Abstract	I
Acknowledgement	II
Table of Contents	III
Introduction	1
The Authority to Plan	2
Mission	3
Part One—Inventory and Analysis	6
History	7
Economy	8
Population	14
Natural Resources	18
Geology	18
Topography	18
Climate	18
River	18
Groundwater	18
Water Quality	18
Demand Center Analysis	19
Water Demands	20
Existing Facilities	20
Transportation	22
Highways	22
Waterways	23
Airports	23
Railroads	23
Part Two—The Comprehensive Plan	24
Goals and Objectives	25
General	26
Land Use and Natural Resources	26
Residential	27
Industrial	28
Commercial	28
Transportation	28
Recreation and Open Space	28
Public Facilities and services	29

The Plan	30
Introduction	30
Citizen Survey	30
Land Use	30
Housing	32
Commercial Activities	33
Approach	33
Graphics and Lighting	34
Planting and Parking	34
Storefronts	34
Historic District	35
Transportation	35
Public Facilities and Recreation	36
Chesapeake Bay Preservation Area Plan	37
Chesapeake Bay Preservation Act	37
Purpose of the Regulations	37
Data Collection and Analysis	38
Physical Constraints to Development	39
Environmental Policies of the Town of West Point	39
Resource Protection Areas	40
Streams and Buffers	41
Floodplains	41
Highly Permeable Soils	42
Highly Erodible Soils	42
Shoreline Erosion and Protection	43
Resource Management Areas	44
Protection of Potable Water Supply	46
Fisheries Protection	48
Water Access and Boating Facilities	50
Existing Pollution Sources	52
Redevelopment of Intensely Developed Areas	53
Summary	54
Implementation	56
Appendix A Shore Line Features	58
Appendix B Town Zoning Map	59
Appendix C Town Future Land Use Map	60

INTRODUCTION

The Comprehensive Plan for the Town of West Point, Virginia documents the positive characteristics of the Town as well as the goals and objectives designed to enhance the community's introgression into the 21st Century. The intent is to provide navigational tools so that West Point can offer optimum benefits for the entire community--its residents, businesses and industry.

West Point is an attractive small Town, located at the confluence of the Mattaponi and Pamunkey Rivers that form the historically enriched York River. Located near two major interstate highways, West Point is served by rail, water and air as well. The Town is a short drive from Colonial Williamsburg and is convenient to Richmond, Hampton/Newport News, Norfolk, and Virginia Beach, making it possible for families to live in West Point and commute to jobs in nearby cities.

This Comprehensive Plan serves three basic functions. First, the community establishes a realistic vision of where they would like to see the Town of West Point in the future. Goals and desires of the community are presented as are the implementation steps that will transform the community's vision into a reality. Secondly, the Comprehensive Plan will provide local officials, Planning Commission members, and citizens of West Point with broad guidelines and techniques to influence both public and private decisions concerning land use, location of infrastructure, and quality of life issues. Finally, the Comprehensive Plan is an essential element in bringing the Town's planning program into compliance with Title 15.1 Chapter 11, Article 4, of the Code of Virginia. This code requires the Planning Commission to prepare and recommend a Comprehensive Plan. The projections and recommendations proposed in this Plan are based on goals and should be updated, refined or changed as necessary.

While the Plan presents many goals for the Town of West Point, local officials and the public should always insure that the following important goals are achieved: 1) that the unique natural environment and historic heritage of West Point is preserved, 2) that a stable diversified economy with a viable balance between the industrial and commercial sectors is achieved, and 3) that the pattern of land uses promotes the highest degree of health, safety, efficiency and well-being for all segments of the community. The Comprehensive Plan shall serve as a guide in the attainment of these and other goals.

The Comprehensive Plan is divided into the following elements: Part One Inventory and Analysis-History, Economy, Population, Natural Resources, Transportation; Part Two The Comprehensive Plan- Goals and Objectives, The Plan, and Chesapeake Bay Preservation Plan elements. The elements include an inventory of existing conditions, needs and goals, and the strategies required to attain the community's needs and goals.

THE AUTHORITY TO PLAN

Under Title 15.1, Chapter 11, Article 4, Code of Virginia, a local planning commission is required to prepare and recommend a comprehensive plan. After data collection, analysis, and proper consideration of the Town, as described by data on the existing development and the Town's probable future development, a plan is formulated. The Code describes a comprehensive plan thusly:

“The Comprehensive Plan shall be made with the purpose of guiding and accomplishing a coordinated, adjusted, and harmonious development of the area which will, in accordance with present and probable future needs and resources, best promote the health, safety, morals, order, convenience, prosperity, and general welfare of the inhabitants.”

“Such plan...shall show the commission's long-range recommendations for the general development of the territory covered by the plan.”

“The Comprehensive Plan shall be general in nature, in that it shall designate the general or approximate location, character, and extent of each feature shown on the plan.”

“The Comprehensive Plan shall recommend methods of implementation such as including, but not limited to: Official Map, Capital Improvement Program, Subdivision Ordinance, and Zoning Ordinance.”

MISSION STATEMENT

The governing body of the Town of West Point is dedicated to providing exemplary levels of competence and service to every citizen and enterprise in our community through professionalism of elected officials, administrators, and staff with the insistence that the Town's heritage be preserved and that the highest quality of life be insured.

INSERT LOCATION MAP
HERE
MAP #1

INSERT TOWN OF WEST POINT STREET MAP
HERE
MAP #2

Part One – Inventory and Analysis

HISTORY

The Town of West Point has a long and unique history related to its location in Colonial Virginia and its American Indian Heritage.

Once the site of an Indian village named Cinquoteck, the West Point area, in 1664, became part of a large land grant made to Captain John West. In 1691, an act by the General Assembly arranged the purchase from West Point Plantation of 50 acres of land for the development of Delaware Town. A rail line was completed in 1859 to White House across the Pamunkey from West Point, and, in 1860, an iron drawbridge was built across the river. Union forces destroyed both the Town and the railroad during the Civil War. Only four houses that survived the torching remain intact today.

West Point became an incorporated town in 1870, and, during the late 19th and early 20th century, was a popular tourist destination. After the decline of tourism, a shipyard, built in 1917, and a pulp mill, built in 1918, revitalized the Town.

Today, West Point remains the setting of a “turn-of-the-century industrial town.” Within the community, many examples of Victorian, Greek Revival and Sears mail order houses can be seen, and the Main Street downtown district contains excellent buildings of Richardsonian Romanesque architecture.

ECONOMY

Today, West Point is a regional center for both manufacturing and retail trade activity. Several economic advantages, both natural and man-made, are responsible for this business activity. The proximity to rivers and the construction of port facilities helped the Town become an early transportation link. The extension of the railroad lines in the 1850s supplemented the natural transportation advantages of the Town and provided the real impetus for growth. The beauty of the riverside aided development as a recreation center in the late 1800s and early 1900s. The completion of I-64 and the four-lane connector (Highway 33) to West Point assures continuing growth in the future.

The economic advantages and early development of the Town provided the attraction for the location of a major pulp paper mill, the Chesapeake Corporation, in the early 1900s. In 1997 the Chesapeake Corporation sold the paper mill to a Canadian-based corporation, St. Laurent Paper Products Corporation, which was recently acquired by Smurfit-Stone. As the industrial base for the Town grew, West Point also began to function as a regional trading center, resulting in a local economy not dependent on one business activity.

West Point has diversified major economic activities: manufacturing, which is dependent on global demands; retailing, which is dependent on regional demands; service, which is dependent on local demands; and electronic commerce, which is dependent of global demands.

The following pages contain data regarding the economy of the Town of West Point. An analysis and projections of trends based on this information is as follows:

Table 1: Persons Employed by Industry in West Point and the State

Industry	1990		2000	
	Number Employed	Percent	Number Employed	Percent
Employed persons 16 years and over	1,457	100.00%	2123	100.00%
Agriculture, forestry, and fisheries	0	0.00%	0	0.00%
Mining	0	0.00%	3	0.10%
Construction	72	3.90%	101	4.80%
manufacturing	342	23.50%	534	25.20%
(Durable goods)	150	10.30%	208	9.80%
Transportation, communications, & other public utilities	10	0.69%	25	1.20%
Wholesale and retail trade	347	23.80%	431	20.30%
Finance, insurance, and real estate	47	3.20%	74	3.50%
Business and repair services	18	1.20%	27	1.30%
Personal, entertainment, and recreation services	88	6.00%	132	6.20%
Professional and related services	294	20.20%	480	22.60%
Public Administration	78	5.40%	108	5.00%

Source: U.S. Bureau of the Census, General Social and Economic Characteristics, 1990; data are estimated based on a sample 2000 data projections were based on the U.S. Bureau of the Census, General Social and Economic Characteristic, 1970, 1980, and 1990. Projections were made using the linear curve method

Table 1 illustrates that in 2000 West Point will have 25.2% of its employed population employed in manufacturing versus the 1990 average of 23.5%. This high percentage of employment in manufacturing in West Point accounts for the general economic well-being of the Town and general prosperity that West Point has enjoyed for many years, and should continue well into the future.

Table 2: Major Occupation Groups of Residents of West Point

Industry	West Point			
	1990		^2000	
	Number Employed	Percent	Number Employed	Percent
Employed persons 16 years and over	1,457	100.00%	1,725	100.00%
Managerial and professional specialty occupations	370	25.40%	451	26.10%
Executive, administrative and managerial occupations	172	11.80%	210	12.10%
Professional specialty occupations	198	13.60%	241	14.00%
Technical, sales and administrative support occupations	481	33.00%	550	32.00%
Technicians and related support occupations	37	2.50%	41	2.50%
Sales occupations	207	14.20%	233	13.50%
Administrative support occupations, including clerical	237	16.30%	276	16.00%
Service occupations	109	7.50%	155	9.00%
Private household occupations	0	0.00%	5	.30%
Protective service occupations	7	0.50%	3	.20%
Farming, forestry and fishing occupations	10	0.70%	14	.80%
Precision production, craft and repair occupations	200	13.70%	230	13.30%
Operators, fabricators and laborers	287	19.70%	325	18.80%
Machine operators, assemblers and inspectors	132	9.10%	150	8.60%
Transportation and material moving occupations	95	6.50%	105	6.10%
Handlers, equipment cleaners, helpers and laborers	60	4.10%	70	4.10%

Source: U.S. Bureau of the Census, *General Social and Economic Characteristics, 1990*

^ Year 2000 projections performed the Middle Peninsula Planning District Commission using a linear curve model.

Table 3: Major Employers in the Town of West Point, 1999

<i>Firm</i>	<i>Product/ Service</i>	<i>Employees</i>	<i>Year Est.</i>
Smurfit-Stone	Paper	800	1913 - Mill 1994 - Corp.
Citizens & Farmers Bank	Banking	127	1933
West Point Public Schools	Education	125	
Coldwater Veneer	Veneer	100	1996
J. Sanders Construction Company	Construction	80	1986
Public Services	Government	75	
Food Lion	Grocery	60	1988

Source: Information was compiled by the town of West Point, 1999

Table 4: Projected Household Incomes in West Point, 2000

Income	West Point	
	Number	Percent
\$0 - 4,999	111	7.60%
\$5,000 - 9,999	163	11.10%
- - 14,999	166	11.30%
\$15,000 - 24,999	302	20.60%
\$25,000 - 34,999	243	16.60%
\$35,000 - 49,999	234	15.90%
\$50,000 - +	249	16.90%
Total	1,468	

Source: Projection based on the U.S. Bureau of the Census, General, Social and Economic Characteristics, 1970, 1980, and 1990. The linear curve method of projection was used.

Table 5: Family Incomes in West Point and the State, 1990

	West Point	Virginia	West Point as a Percent of Virginia
Number of Families	847	14,047,745	0.05%
Family Median Income	\$40,506	\$38,213	106.00%
Family Mean Income	\$42,309	\$40,760	103.80%
Percent of Families below the Poverty Level	4.80%	7.70%	62.35%
Per Capita Income	\$16,085	\$15,713	102.36%

Source: U.S. Bureau of the Census, General, Social and Economic Characteristics, 1990. Based on a sample

Table five shows that West Point residents' incomes compare very favorably with State income figures, with West Point incomes higher in every category. The number of families classified below the poverty level is 62.35% higher for the state than in the Town of West Point.

Economic Growth occurred throughout the 1950-1970 period in manufacturing and retail trade. There were also increases in the categories of transportation, communication and public utilities; wholesale and retail trade; finance, insurance and real estate. Maintaining diversity and a broad base in employment is important to the stability of a local economy.

The high percentage of persons employed in manufacturing, wholesale and retail trade, and

professional and related services (Table 2) indicates that the local economy is benefiting from income produced by the sale of local goods and services to those outside the area.

West Point residents' incomes compare favorably to state income figures. These income figures serve as an additional indicator of the town's economic health. The comparatively low percentage of families below poverty level is also significant.

Population

The population of West Point as of 1990 is composed of a diverse mix of racial and ethnic origins and backgrounds, which has remained relatively constant over the past 20 years.

During the 1950's the population of West Point reached 1,919. Population declined slightly in 1960 to 1,678. By 1970 the population grew to 2,600, largely due to an annexation in 1963 of an area that houses approximately 800 persons. Between 1970 and 1980 the population reached 2,726. Since then the most recent census reveals a population of 2,938, and the projected population for the year 2000 is 3,464. The following table shows the population of West Point over the past fifty years.

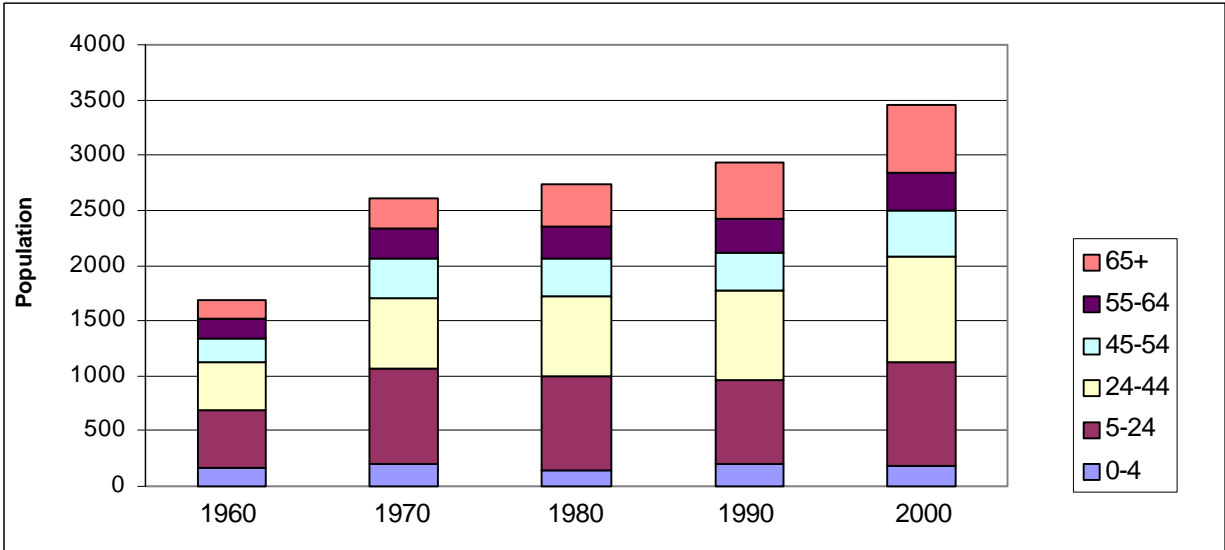
Table 6: Population by Age Group in West Point

Age	1960		1970		1980		1990		^2000	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0-4	159	9.50%	206	7.90%	144	5.30%	192	6.50%	185	5.30%
5-24	520	31.00%	859	33.10%	852	31.30%	771	26.20%	937	27.10%
24-44	436	26.00%	633	24.40%	732	26.80%	815	27.70%	963	27.80%
45-54	217	12.90%	365	14.00%	329	12.00%	348	11.80%	404	11.70%
55-64	186	11.10%	269	10.30%	303	11.10%	302	10.30%	361	10.40%
65+	160	9.50%	268	10.30%	367	13.50%	510	17.40%	614	17.70%
Total	1,678		2,600		2,726		2,938		3464	

Source: U.S. Bureau of the Census

^ Middle Peninsula Planning District Commission projections using the linear curve model

Figure 1: Population by Age Group in West Point



This table and figure also present the age group breakdown of population. Shifting within age-group percentage is indicative of growth in the elderly population segment (65 years and older). The 1990 population shows an increase in the 0-4 and 21-44 age groups representative of new and young family households. The relatively constant growth in population and shift toward higher median age reflect the stability of the area. This is further evidenced by an increase in the pre-school age group (0-4 years) in 1990. The projections for 2000 show that this trend will continue.

The shift to a slightly older population is also responsible, in part, for a decrease in the average household size: 2.78 person in 1980 to 2.67 persons in 1990. The percentage of change in number of households was 17.8% between 1970 and 1980 and 12.1% from 1980 to 1990.

Table 7: General Age and Household Characteristics

Year	Total Population	General Age Groups (%)			Number Occupied Households	Average Number of Persons per Households
		18	18-64	65+		
1980	2,726	28.5	58.1	13.5	980	2.78
1990	2,938	24.6	58	17.4	1,099	2.67
^2000	3,464	27.4	54.9	17.7	1,249	2.77

Source: U.S. Bureau of the Census

^ Year 2000 projections performed the Middle Peninsula Planning District Commission using a linear curve model.

Table 8: Racial Composition of West Point, 1990

Year	Total Population	White	Black	American Indian, Eskimo, Aleut	Asian and Pacific Islander	Other
1980	2,726	2,175	486	7	48	10
1990	2,938	2,328	559	31	17	3

Source: 1980,1990 Census, STF 3

Racial composition of the Town has remained relatively constant from 1980 to 1990. The major change was an increase in the American Indian category attributable to two American Indian settlements, the Mattaponi and Pamunkey, located in King William County.

Table 9: Population of West Point and Surrounding Counties

	Population				Percent Change 1980-1990	Projections 2000
	1960	1970	1980	1990		
West Point	1,678	2,600	2,726	2,938	8	3,464
King William	7,563	7,497	9,334	10,913	16.9	13,396
King and Queen	5,889	5,491	5,968	6,289	5.4	6,698
New Kent	4,504	5,300	8,781	10,445	19	13,205
Total	19,634	20,888	26,809	30,585	14.1	36,763

Source: U.S. Bureau of Census

Table nine contains population counts for West Point and the adjacent counties for the time period of 1960 to 1990, and population projections for 2000. The percentage of change in each location between 1980 and 1990 is included in the fifth column. According to the 1990 census, West Point accounted for 26.9 percent of King William County's population.

**Table 10: West Point Public Schools Fall Membership Projection
Grades K - 12**

School Year	Enrollment
1995-96	746
1996-97	768
1997-98	775
1998-99	802
1999-00	829
2000-01	851
2001-02	865

Source: Virginia Department of Education

Table ten illustrates West Point Public School Fall Membership Enrollment for 1995 - 1999. This table also has projections for 2000-2001. The school system's fall membership through the year 2001 is projected to gradually increase each year. For the 1999-2000-fall semester, 25% (213) of the students enrolled in the West Point Public School system were tuition paying students.

NATURAL RESOURCES

Geology

The Town of West Point lies at the extreme southern end of King William County where the Mattaponi and Pamunkey Rivers join to form the York River. The Town is in the Coastal Plain province and is underlain by sand, gravel, clay and marl strata. Some of these deposits are mined commercially in the surrounding counties of King William, King and Queen, and New Kent.

Topography

The Town of West Point is relatively flat. Large sections of the Town, particularly on the Mattaponi River, are tidal marshes. The highest elevations occur in the northern part of Town at a height of 30+ feet ([Map 10](#)). Most of the Pamunkey River waterfront is on a bluff averaging 20 feet.

Climate

West Point has a mild climate. According to the National Climate Data Center, temperatures average 41degrees in January and 78 degrees in July. Yearly precipitation is about 43 inches. These figures are a 30-year average based on records kept by the National Weather Service.

Rivers

The rivers are tidal at West Point, having an average rise and fall of three feet. The brackish water line extends up the rivers northward to about Walkerton on the Mattaponi. River depth is the deepest on the Pamunkey, which can accommodate ships drawing up to 18 feet. The river area surrounding West Point is primarily used for recreation and barge access for St. Laurent Paper Products Corporation and Old Dominion Grain Corporation.

Groundwater

Groundwater occurs under both artesian and water table conditions. Several principal aquifers support groundwater withdrawal rates permitted for a total of 24 MGD without significant impact on group water sources underlying the Town of West Point. Currently daily rates of groundwater withdrawal are approximately 80% of the permitted use. This use includes the public water and local industrial demands.

Shallow aquifers contain water under water table conditions, ranging from five to fifteen feet below ground in the lower areas. Springs that flow less than 10 gallons per minute are common in draws where erosion has breached the shallow aquifers.

Water Quality

York Eastover Aquifer: The principle aquifer produces water of a moderately soft-bicarbonate type, and all major chemical parameter values are less than those of the water table aquifer. The

upper artesian aquifer is suitable for potable use.

Potomac Aquifer: The principal aquifer system contains soft sodium-bicarbonate type groundwater, which has very low hardness and moderate to high amounts of dissolved solids. A high ratio of total dissolved solids to hardness in the aquifer is in contrast to a lower ratio for the same parameters in the upper artesian aquifer.

Fluoride concentrations are higher for the principal aquifer than they are in the water table and upper artesian aquifer. Concentrations may increase with depth as indicated by a deep well in West Point that showed 4.1 ppm fluoride at a depth of 1275 feet.

Demand Center Analysis

The West Point demand center consists of a single-service area. The Town of West Point serves residential, commercial, and institutional customers as well as several industries with potable water. St. Laurent Corporation, a pulp and paper manufacturing facility, purchases its potable water from the Town and supplies its process water from company-owned wells. In 1992, the Chesapeake Corporation established new wells at their Mann Tract, five miles north of Town, with the water line paralleling the Norfolk-Southern Railway track. The only adjacent land area is to the north, in King William County, which is rural in nature and supplied by individual wells.

According to current data and interviews conducted with municipal personnel, table eleven shows projected population for the West Point demand center. The “Total” figure represents the population within the demand center served by both the municipal system and individual wells while the “Total Served” figure represents only the municipally supplied population. The projected populations were based on the assumptions that the Town would continue to grow at the same rate as the Virginia Department of Planning and Budget predicted rate for King William County.

Table 11: West Point Demand Center Population Projections

	2010	2020	2030
Total	3602	3824	4060
Total Served	3567	3787	4020

Source: 1994 Town of West Point

Water Demands

The municipal water system (table 12) serves approximately 2,950 people using .450 MGD (million gallons per day) or 153 gpcd (gallons per capita per day). The Town system has a production capacity of 1.450 MGD and elevated storage of .600 MGD to meet peak demands for domestic, fire and industrial connections. Currently, the town has a total of about 1100 connections: 975 residential, 116 commercial, 6 industrial, and 3 institutional. Limited service is provided beyond the boundaries of the Town limits.

Municipally-supplied domestic, commercial and institutional water use accounts for 73% of the total use in the service area and 1.8% of the total use in the demand center. The remaining 27% of the municipally supplied water use within the service area is divided between the four industries (17%) and unaccounted for water loss in the distribution system (10%).

Existing Facilities

Water for the Town of West Point is supplied entirely from the upper Potomac Groundwater Aquifer by extraction using three deep wells at equally spaced intervals within the Town limits.

Each of the three wells are designed to pump approximately 500 GPM (gallons per minute) from intake screens set between 322 feet and 718 feet to produce the highest quality of water and reliable yield.

Distribution of well water services is achieved though approximately 25 miles of water mains. Significant improvements in main sizing and networking coupled with elevated storage facilities, having a capacity of 600,000 gallons, has insured water flows, works pressure, and quality control for normal and peak demands.

The Town system has undergone compliance inspection by the Virginia Department of Health and was found to meet all required State permit and Federal Environmental Protection Agency operational parameters. Water quality was such that chlorinating became necessary only as a preventative measure of control within the distribution system.

Distribution pressures average 45 to 55 PSI. Storage reserve averages .400 MG during flow demand period. Combined production rates from all three wells average .450 MGD. Combined production capacity for all three wells is 1.450 MGD. Distribution networking enables any one of three well sources to meet the normal demands of the entire Town.

Table 12: West Point Demand Center Current and Projected Water Demand
(million gallons per day)

	1995	2000	2010	2020	2030
<i>Without Conservation</i>					
GPCD (gallons per capita per day) Usage	153	153	153	153	153
Domestic/Commercial/Institutional	0.328	0.391	0.424	0.451	0.478
Industrial/Manufacturing	0.076	0.108	0.108	0.108	0.108
Unaccountable	0.048	0.076	0.081	0.085	0.089
Subtotal	0.450	0.575	0.612	0.644	0.675
Self-Supplied Domestic/Commercial/Institutional	0	0	0	0	0
Self-Supplied Industrial/Manufacturing/Mining*	18.000	19.000	20.500	21.500	23.000
Unaccountable	0.048	0.073	0.077	0.081	0.085
Subtotal	0.450	0.552	0.587	0.617	0.647
Self-Supplied Domestic/Commercial/Institutional	0	0	0	0	0
Self-Supplied Industrial/Manufacturing/Mining*	18.000	19.000	20.800	21.500	23.000
<i>Subtotal</i>	<i>18.000</i>	<i>19.000</i>	<i>20.500</i>	<i>21.500</i>	<i>23.000</i>
Grand Total	18.450	19.552	21.087	21.117	23.647

(* Groundwater only)

Source: Virginia State Water Control Board

Transportation

Highways

Four-lane roads connect West Point to two major highways, Interstate 64, 5 miles west via Route 33, and U.S. Route 17, 12 miles to the east, also via Route 33.

The highway network of West Point consists of several parts. Two regionally significant highways, Route 30 and Route 33, intersect in the Town. These two roads carry the largest volume of traffic in the Town, providing for through and local traffic.

The annexed parts of Town have large land areas which front on dedicated but unimproved streets. Few areas have curbs, gutters, and sidewalks. In 1992, Chelsea Road was extended. This provides an alternate north-south avenue other than King William Avenue.

Several truck lines connect West Point to Richmond and other areas and provide overnight truck service to most major transportation centers in the East.

Available daily traffic counts for Route 30 and Route 33, compiled on an annual basis by the Commonwealth of Virginia, Department of Highways and Transportation (“Average Daily Traffic Volumes on Interstate, Arterial, and Primary routes,” 1990, and 1997) are included in the following table.

Table 11: Arterial and Primary Traffic Tabulations

Year	Route Number	From	To	Passenger Cars	Single-Unit Trucks	Tractor Trailers/ Buses	Total Vehicles
1990	33 & 30	West Point	Rt. 273 West of West Point	11,480	400	590	12,470
	30	West Point	Rt. 633	3,030	170	370	3,570
1997	33 & 30	West Point	Rt. 273 West of West Point	12090	390	520	13,000
	30	West Point	Rt. 633	5301	171	228	5,700

Source: Virginia Department of Transportation “Average Daily Traffic Volumes 1997”

Highway improvements scheduled for the Town of West Point in the Virginia Department of Highways and Transportation Six-Year Improvement Program, Fiscal Years 2000-2005 are:

1. The study, repair, and replacement of the Mattaponi and Pamunkey bridges.
2. Street-scaping along the town’s main business thoroughfare and along the downtown historic district walking tours area.

Waterways

West Point has the advantage of water-borne transportation. Ocean-going vessels drawing up to 18 feet of water can navigate safely the length of the York River and a short way up the Pamunkey River. This water commerce is associated with the Smurfit-Stone. In addition to this deep-water commerce, West Point is accessible by barges and shallow-draft, intercostal traffic.

Airports

The Middle Peninsula Regional Airport is owned by the Town of West Point, and is located near the Town of West Point in King and Queen County. Some of the basic information concerning the facility is as follows:

Airport elevation	25 ft
Number of runways	1
Longest runway length	3700 ft
Runway lighting	MIRL
Taxiway	partial parallel
Instrument approach	non-precision

The nearest airport offering commercial airline service is Richmond International Airport, about 35 miles from West Point. This field is served by Air Ontario, American Airlines, American Eagle, Atlantic Southeast Airlines, Comair, Continental Airlines, Delta Air Lines, Northwest Airlines, Trans States Airlines, Trans World Airlines, United Airlines, and US Airways. It provides extensive air passenger and freight services and connections to all parts of the nation and the world. All types of repairs, fuel, charter service, and other services for business and corporate aircraft are available there.

Railroads

The Norfolk Southern Railway operates an "A" rated branch line from Richmond to West Point. This line is used by the industries in West Point, primarily Smurfit-Stone. Pulp, paper, and allied products are second among the ten leading commodities shipped by rail in Virginia.

Part Two–The Comprehensive Plan

GOALS AND OBJECTIVES

Since the last Comprehensive Plan, the Town of West Point has achieved many of its objectives. Accomplishments of the Town include:

1. Re-codification of the Town Codes and Zoning Ordinance to insure that any development will allow the highest quality living environment.
2. Construction on the storm drainage system to correct inadequacies addressed in the Comprehensive Drainage Study.
3. Creation of Police Department.
4. Construction of an Industrial Park so intrusion on residences will be minimal.
5. Development of a Marketable Target Analysis to attract quality industry that will not deter from the quality of life provided in West Point.
6. Implementation of a Facade Grant Program to encourage merchants to maintain attractive storefronts.
7. Implementation of a Downtown Streetscape Program to beautify and enhance the aesthetics of the Downtown District.
8. Provision of a Public Transportation System to provide citizens adequate access to Town facilities.
9. Work with State Officials to address the Eltham and Lord Delaware Bridges as well as make improvements to 14th Street for future vehicular loads.
10. Mandating that all new developments have street access provided by the developer.
11. Creating recreational activities for citizens of all age groups through the Parks and Recreation Department.
12. Establishment of a Storm Water Management Program.
13. Construction of a Bike Trail and Scenic Vista.
14. Development of an Erosion and Sediment Control Program.
15. Implementation of Computerized Records Management System
16. Relocation of all Town Staff Offices to provide convenience for citizen access.
17. Establishment of a Farmer's Market.
18. Establishment of a Best Management Practice Program to protect and preserve the natural resources and community assets.
19. Construction of a retirement housing and care facilities for the elderly.

The development of Goals and Objectives is a necessary part of the Comprehensive Plan process. Goals and Objectives serve to provide an overall framework within which development should occur. The Goals and Objectives that follow are the Planning Commission's recommendations for the Town of West Point.

General

- Goal:** All Future development in West Point should be carefully guided in order to maintain the highest quality living environment possible.
- Goal:** All future development in West Point should be located and designed in such a way that it complements existing development and provides maximum choice for present and future residents.
- Goal:** The town should seek to become self-sufficient, encouraging diversified and balanced residential, commercial, and industrial growth.
- Goal:** High-Speed Internet access should be available to all businesses, industries, and residential units in the Town.

Land Use and Natural Resources

- Goal:** Protection and utilization of West Point's natural resources is critical to both the economic and social well being of the residents. The encouragement to protect and enhance these resources should be emphasized to citizens and developers alike.
- Objective:* Establish an educational program to increase the public's awareness of all natural resources available in the Town through brochures, public forums, etc.
- Objective:* The Town will rely on the Chesapeake Bay Preservation Act to guide development in and around environmentally sensitive areas.
- Objective:* The Town should protect its water resources, ground and surface, wetlands and shellfish grounds from pollution, wasteful usage, sediment, and erosion by carefully regulating development.
- Goal:** Increase public access to the Mattaponi, Pamunkey and York Rivers as well as the West Point Creek.
- Objective:* Establish recreational programs through the Parks and Recreation Department, to allow the public an opportunity use the water resources.
- Objective:* Construct additional boat landings for access to the rivers.
- Objective:* Develop playgrounds and marsh walks.
- Objective:* Develop a Marina
- Goal:** Promote the preservation and growth of trees and other natural vegetation.
- Objective:* Planting of new vegetation and maintenance of existing trees, shrubs and other natural vegetation should be encouraged.
- Objective:* Destruction of trees, during construction and development, should be kept to a minimum.
- Goal:** The Town should promote the maintenance and/or enhancement of the aesthetic qualities within West Point.
- Objective:* The aesthetic qualities associated with West Point include clean water, clean air, a historic setting, and many well-landscaped attractive residential areas. In some areas, the aesthetic qualities could be enhanced and the maintenance of the quality of life in the Town of West Point should be maintained.

Residential

Goal: Ensure that residential development is designed in a systematic way to promote an orderly pattern of growth.

Objective: Single-family residential areas should have utilities, paved streets, and adequate drainage.

Objective: Multi-family projects should be connected to a system of collector and arterial streets, have adequate utilities, have all public improvements in existence, and be developed in the vicinity of commercial and/or service facilities.

Objective: Residential developments should be required to provide open space areas and be designed to preserve any unique natural features.

Goal: The Town should respond to the need for housing for the elderly and the low and moderate income population segments.

Objective: The Town should provide affordable housing for elderly, low, and moderate income by maintaining zoning, subdivision, and building codes that will not prohibit such development through onerous or unreasonably expensive requirements and procedures.

Objective: Given the high and growing proportion of elderly, some special consideration may be warranted for retirement housing and care facilities.

Industrial

Goal: Industrial development should be encouraged so the economic structure of West Point and King William county can be strengthened as well as provide jobs for those who are currently unemployed and underemployed.

Objective: The IDA should develop an updated master plan for the Industrial Park.

Objective: The Industrial Park and other industrial sites should be adequately protected from the encroachment of non-compatible land uses.

Objective: Adjoining land to industrial sites should be zoned so friction along these zonal boundaries are reduced as the land is developed.

Objective: Adequate water, sewer, gas, electricity, and high-speed Internet access lines should be available in industrial areas of Town.

Objective: A marketing plan and promotional literature should be developed for the Industrial sites in town and the Industrial Park as well as those overlapping areas in the county.

Objective: Adequate land should be provided for any expansions of the Industrial park. Property adjoining the Industrial Park Boundary Lines should be considered for any of these expansions.

Objective: The Industrial Park should be marketed towards specific Standard Industrial Code (SIC) companies. Sporadic placement of industry could be detrimental to the development of the Industrial Park.

Objective: Town officials should meet with management from each industry to discuss concerns by all and for town officials to learn that industry's future plans.

Commercial

Goal: Commercial development should be designed in an efficient and orderly fashion so that it will blend with existing land uses.

Objective: Encourage new commercial development to design their structures to project the historical features that make West Point a unique place to live and work.

Objective: The preservation and redevelopment of the central business district should be encouraged.

Objective: Commercial uses focused on pedestrians should be grouped together.

Objective: Adequate traffic circulation and off-street parking should be provided within commercial development district.

Objective: Commercial activities should buffer the surrounding residential area from signs, lights and debris problems.

Objective: The Town should promote commercial development on the main corridors into West Point.

Objective: Since the Town is located in an area enriched by water influence, the Town should encourage waterfront development that is consistent with the Town's effort to protect its natural resources.

Transportation

Goal: The Town should strategically plan both street and highway development in the best interest of serving the residents, businesses, industries and through traffic.

Objective: Through streets should be developed for alternative routes to travel in Town.

Objective: Developers should be required to provide new streets to any subdivided land where none exists.

Objective: The bridges and 14th Street should be configured to provide the residents easy access to all areas of Town. They also should provide easy access in and out of Town, easy and visible access to all commercial areas, a smooth flow of traffic for all through traffic, as well as preserve the 14th Street corridor.

Recreation and Open Space

Goals: The Town should provide its citizens with adequate recreation, open space, and cultural opportunities.

Objective: The Town should improve public access to the waterfront through acquisition of property or easements.

Objective: The Town should study the feasibility of constructing a recreational complex to accommodate all Town recreational activities. The complex should include an indoor pool, basketball courts, multi-purpose rooms, and childcare.

Objective: A volunteer Citizen's Committee should be formed to explore the

availability of appropriate property with the construction of playgrounds and parks. This committee could also explore cost-effective ways of obtaining landscaping and equipment for parks and playgrounds.

Objective: Developers of subdivisions should provide open space, green space, or park and playground areas.

Objective: A tour of historic sites should be designed.

Objective: Construction of an Auditorium and Fine Arts Center

Objective: An Arts Council to promote the arts in the community should be appointed.

Objective: The town should continue to further develop the Town's Museum, both its content and facilities.

Objective: The new bridges should be equipped for pedestrian and bicycle traffic.

Public Facilities and Services

Goal: The Town should ensure that the citizens, businesses and industries are provided with adequate and efficient public services and facilities.

Objective: The Town should continue to develop and implement its storm water management program.

Objective: Storm drainage systems should be maintained, improved, modified and constructed to accommodate existing and future demands.

Objective: New storm drainage systems and storm water management facilities should be designed and constructed to alleviate or prevent flooding, and reduce erosion.

Objective: The Town should continue to improve its public water supply and distribution system.

Objective: Emergency power generators should be installed at each water supply well to ensure the Town's ability to provide an adequate supply of water during prolonged power outages.

Objective: The Town should encourage HRSD to expand the Wastewater Treatment Plant to accommodate future industrial, commercial, and residential growth.

Objective: Sufficient park and school sites should be reserved for future use.

Objective: The Town should require that all new utilities be placed underground.

Objective: The Town should encourage the development of a Visitor Center.

Objective: The Town should develop a policy to limit the use of Septic Tanks.

THE PLAN

Introduction

The Planning Commission for the Town of West Point has developed a Comprehensive Plan for the Town based on its review of the data presented in the preceding sections. This plan is the result of an analysis of the Town's resources and needs and is directed toward a planning horizon of the year 2005.

The Comprehensive Plan is intended to provide direction for future public policy and regulation. However, a plan must be somewhat general in order to provide flexibility in adapting to unexpected development needs which may arise. Implementation strategies are meant to be specific in dealing with a particular situation as guided by the goals and objectives of the Comprehensive Plan.

This section of the Comprehensive Plan will discuss future growth in the Town of West Point and its bearing on land use patterns, housing activities, commercial activities, transportation needs and public facility improvements.

The Town Planning Commission at least once every five years as provided in the State Code of Virginia should perform review and update of this plan. This incorporation of accurate and up-to-date information as it becomes available will ensure the continued viability of this document as a planning tool.

Citizen Survey and Small Urban Area Transportation Study

In 1994, a survey of local citizen opinions of the Town was completed. The survey was coincidental with the Comprehensive Plan revision and provided positive support for the Town and its operation. It also highlighted suggested improvements that will be put to good use in this Plan and the next update as well as future efforts of Town government. In 1998, a citizen-based study was conducted to assess the role transportation has on business, citizens, education, faith community, local government, recreation, tourism, and transportation. The conclusions of this study provided support for Town and citizen based planning efforts.

Land Use

Development patterns that have occurred over time in West Point are discussed throughout the preceding resource inventory. The Comprehensive Plan forms an important link between these patterns and the regulations designed to direct and control development within the Town. This plan serves as a general directive for the future growth and development while zoning is specific in regulations of individual land uses. Land use patterns in West Point have been influenced by a zoning ordinance adopted in August of 1967. This ordinance was revised in March of 1989 and the zoning map is being revised. (Appendix B) The Future Land Use Plan Map should serve as a reference and an integral part of the Future Land Use Plan. The map has been prepared in conjunction with this newly revised plan. A map is enclosed as Appendix C. The Future Land

Use Plan recommendations for the development of the Town are illustrated on the Future Land Use Map. Explanations of the characteristics of each district are included in the following paragraphs.

Residential Areas: The majority of the development will be to provide living areas for people working in the Town and surrounding counties. This development will supplement the existing housing and should be able to offer a wide variety of housing types to meet existing and new life styles. Single-family dwellings should continue to be the predominant form of housing, but apartments, townhouses, and other forms will become more important. To meet the differing housing needs, several densities of living areas are shown. Specific densities within each are determined in the Zoning Ordinance.

General Business Areas: The traditional shopping area, a second commercial area (along 14th Street and King William Avenue from 14th Street to the old Town line), and a commercial area along King William Avenue in the northern section of town centered around a shopping center represent distinct commercial areas. The downtown area, which was the original center of commerce, contains many older buildings housing several long established uses. This area has maintained a variety of shops and services despite the evolution of other commercial areas heavily dependent on vehicular traffic. The downtown could benefit from a coordinated beautification and marketing effort and the addition of some specialty shops. The area along 14th Street and King William Avenue will continue to develop in highway-oriented and general business uses. Both Town residents and people passing through will frequent businesses in this area. New construction should be carefully regulated due to the location of this area along heavily traveled roads. The shopping center and other businesses and uses combined with residential in a special development area in the north section of town.

Special Development Area: Two special development areas have a mixture of land uses. The Plan shows both areas are being used to meet future commercial needs as well as present and future residential uses. Retail businesses, highway oriented facilities and the service sector will locate there, where they can conveniently serve both Town and regional needs. A mixture of commercial and residential, located along a major travel artery, requires careful utilization of design standards, adaptive screening and other buffering techniques. Hence, special use permits and plans for development are incorporated into the ordinance.

Public and Semi-Public Areas: Locations of public facilities and sites directed toward the use and benefit of the community at large should be designated as public or semi-public areas.

Industrial Areas: The industrial areas, such as the industrial park in the northern section of Town and the IDA (Intensely Developed Area) Zone, shown on map 16 recognize existing concentrations of industrial development plus vacant areas where additional industrial development would be appropriate. The existing site along the Pamunkey has excellent transportation links and favorable topography. Intensive industrial development has centered on this area. The plan designates additional sites that could accommodate different and less intensive industrial uses. The plan determines that all industrial sites must be screened from

adjacent residential developments.

Conservation Areas: Some parts of the Town are best suited to remain in conservation or open space uses. Some areas subject to the jurisdiction of the 1972 Wetlands Act, Chesapeake Bay protection areas and those areas designated as marsh, wooded marsh, or submerged marsh on the West Point Quadrangle⁴, are included in the conservation and open space designation. These include marsh along West Point Creek, and Mattaponi, and Pamunkey Rivers.

Designated conservation areas are those areas within the jurisdiction of the Wetlands Act and are considered to be environmentally fragile areas. These areas are recognized to be valuable in filtering groundwater runoff providing wildlife habitats and minimizing erosion. A copy of the Chesapeake Bay Act map ([Map 3](#)) shows the general locations of the 100 foot Resource Protection Area (RPA), West Point's Resource Management Area (RMA) and West Point's Intensely Developed Area (IDA). The Chesapeake Bay Preservation Area Overlay District is comprised of RPA and RMA areas and is generally represented by the CB-1 District on the official Town Zoning map.

Areas designated as commercial and residential on the Future Land Use Map ([Appendix C](#)) are generally already established in those areas. Industrial uses and public facilities are designated much as they are presently located. In addition, some undeveloped land has been designated as a potential location for future industrial development. Adjacent land in King William County offers the potential to expand an industrial site to its full potential.

The Future Land Use Map does not designate areas in Town that are presently in open space or agricultural uses; however, these uses should be protected and allowed to continue where they are compatible with surrounding use.

Housing

The total number of housing units the 1990 census for West Point was 1,184 with 1,099 units shown as occupied. Of those, 68% were owner occupied. The vacancy rates in 1990 were 7% for owner occupied and rental property. There are reports that adequate rental housing is difficult to secure. This could be due to the presence of substandard units among those counted as vacant-for-rent and low availability of rental housing within the financial means of those persons in the rental market.

It is difficult to assess the condition of the available housing stock within the Town of West Point; however, source of water, method of sewage disposal and household size can provide an indication of the presence of substandard dwellings. Derelict dwellings, however, are evident. Building codes have been applied over the last several years thanks to the efforts of the building inspector to eliminate all hazardous or substandard structures. Much progress has been made in the past several years to condemn and demolish substandard housing. This has dramatically improved the appearance of the Town. Based on the available information, occupied substandard units comprise only a small percentage of the residential units in Town.

⁴ 7.5 minute topographic map series, United States Department of the Interior, Geological Survey.

Commercial Activities

During the course of the Comprehensive Plan review, the West Point Planning Commission identified community development activities and needs. Foremost among those areas needing attention are Downtown and the commercial areas in general throughout Town.

The central business areas in West Point combine a variety of businesses, government service activities and commercial uses catering to shoppers and the general public. A most worthwhile project of community need is the continued support and assistance to the Town's merchants in maintaining and enhancing the commercial districts.

Substantial revitalization, as a result of the Town of West Point Downtown Streetscape-Transportation Enhancement project award has taken place. Storefront beautification, walkway greenery, parking needs, visual coordination, pedestrian safety, shopper needs, and business stimulation have resulted from this effort.

The commercial area of 14th Street also needs the Town's attention: beautification, traffic flow, overhead wires, visual coordination, pedestrian and bicycle safety, and full use of available property and buildings. Fourteenth Street is the only section of West Point seen by most through traffic. The passage through this short stretch of highway needs to be visually pleasing.

Upper King William Avenue and the West Point shopping area make up another important commercial center. This is an area of great difficulty to manage due to the mixture of residential and business. The Town must remain vigilant to maintain aesthetics and some continuity of use.

West Point Shopping Center remains an important focus for the Town's commercial and retail businesses. The Town should maintain a close relationship with the owners/leasing agency and encourage full utilization of all space.

Approach

As a motorist approaches West Point, there are many indications that a town lies ahead. St Laurent and the water tower are visible from a great distance. They serve as landmarks to a motorist entering the town. New Welcome to West Point signs have been erected at all entrances and tell visitors where they are. These could be expanded to provide a few parking spaces and information in pamphlet form on what businesses are located in West Point, historical sites, and local events such as the West Point Annual Crab Carnival. The areas have been landscaped and arranged for easy access to invite the motorist to pull over and get acquainted with West Point. Additional entrance beautification projects are planned for the future. The Virginia Department of Highways Gateway Program can be employed to assist in this effort.

It should also be noted that the Town can be approached from the World Wide Web. In an effort to promote the Town to the world, WWW.westpointva.com has been secured and is being designed to offer considerable important information about West Point to the public.

Graphics and Lighting

The purpose of a sign is to inform a pedestrian or motorist. Traffic signs, business signs, and street signs all share space on our roadways.

The Town should occasionally review its sign ordinance and keep a limit on the number and location of signs per business. The amount of information might be limited to the name of the business and the service it provides. Signs directed at pedestrian traffic might be located at a lower height and scaled down in size.

Lighting throughout the Town has been upgraded with sodium vapor lamps. Lighting might be converted to styles that compliment the architecture in the area, such as in the downtown areas. The central business district could employ old-fashioned corner street lamps, for instance.

Plantings and Parking

Fourteenth Street has many potential locations for low shrubs and flowerbeds. These include the areas of vacant space at street corners, under signposts and at entrances and exits to buildings. These plantings could aid the motorist in identifying parking lots and street corners and would add much to the appearance of businesses along the street. Where overhead wires permit, trees could be planted to enhance, accent and screen. Existing trees should be maintained whenever possible.

In the central business district, trees could be planted to provide shade for pedestrians and shop windows. These plantings and street furniture could be located first on one side of the street and then the other in alternate blocks. Pedestrian crosswalks should be clearly defined for the motorist and parking areas, clearly indicated.

Parking areas should be clearly defined through screening and plantings. Pedestrian walkways from parking areas to the street could be established in existing alleys. Plantings and street furniture could be located in these walkways.

Storefronts

The buildings in the central business district display interesting rooflines and unique facades. Many of the stores and shops are located in older buildings that have been maintained and blend well with the newer buildings. Some of the old storefronts have been covered with contemporary materials. Where feasible, these might be removed and the old fronts restored, depending on the condition of the original front. In many cases, a new coat of paint in harmony with an overall color scheme is all that is needed. Several stores in the Main Street central business district exhibit attractive color combinations.

Historic District

Since West Point has a fine variety of both residential and commercial historic buildings, interest exists among residents to maintain these edifices as part of a historic district. The West Point Area Chamber of Commerce has pursued the application process with The State and the National Registers of Historic Places, and categorization of buildings is underway.

Transportation

The Virginia Department of Highways and Transportation determines the provision of transportation routes, their expansion and maintenance. Local governments have an opportunity to provide input to the planning process through the Department's annual hearing and budgeting process. Maintenance, expansion, and extension of curbs, gutters and sidewalks, or correction of problematic roadway configurations are addressed through the VDOT six-year plan.

There are traffic flow problems along Route 33 due to a variety of factors that include the railroad crossing, replacement of the Mattaponi and the Pamunkey bridges and the interruption of traffic, and inadequate curb radii at intersections. A 1997 count showed an average of 13,000 vehicles per day pass along Route 33 in West Point.

Because of the growing transportation issues in the Town, a Small Urban Transportation Study was initiated in 1998. This study was a citizen participatory approach where eight focus groups were established: business, citizen, education, faith community, local government, recreation, tourism, and transportation. These eight groups were charged to strategically assess the current and future needs of the town related to transportation.

The number one goal identified during this effort was to "Speed Up-Influence The Bridge Construction Process". The citizens developed the following action plan:

- 1 Coordinate local government and citizens regarding construction with communities throughout the region.
- 2 Ensure strong and vocal municipal government, business, and citizen representation at the State Transportation Fund Allocation Hearing, and all future pre-allocation and allocation hearings.
- 3 Publish and distribute to the community bridge construction designs and timetables.
- 4 Arrange for periodic status reports at all phases of planning and construction to be disseminated to the public in a variety of forms.
- 5 Engage, lobby, and encourage political leaders to support bridge expansion and the town's interest.
- 6 Explore possibilities of using existing structures for recreational pursuits.

Public Facilities and Recreation

The most notable public facility achievement since the last comprehensive plan was the establishment of the West Point Police Department and expansion of Town Hall.

Additionally, Small Urban Transportation Study and Citizen Survey revealed the need for additional recreation opportunities in the Town. The Town has taken steps in this direction, notably the recent completion of a handicapped-accessible fishing pier at Glass Island. This was possible through a Department of Game and Inland Fisheries grant and the Chesapeake Corporation's provision of services and materials.

The 1992 completion of two ball fields adjoining the school ball field complex has met needs for baseball and softball in Town. This project was a joint effort between the Town and Chesapeake Corporation.

Additional parks or mini-parks are needed around Town—both playground areas and landscaped gardens. Town government should remain vigilant for locations for these possibilities.

Indoor recreation could take several forms: additional indoor basketball or racquetball facilities, or even a youth recreation center. A public or semi-public swimming pool, whether indoor or outdoor, would be an asset for the Town.

NATURAL RESOURCES PROTECTION AND CHESAPEAKE BAY PRESERVATION AREA PLAN ELEMENT

The Town of West Point values the natural environment and will rely on the Chesapeake Bay Preservation Act to guide development in and around environmentally sensitive areas. The natural resources of the Town, its wildlife, wetlands, riverfront, highland and creeks are a treasured resource to be shared by all that live and visit the Town. The Town of West Point encourages citizens to review the Chesapeake Bay Preservation Area Overlay District guidelines, adopted by the Town Council on November 6, 1991. The intent of this district is to meet the mandates imposed by the Chesapeake Bay Preservation Act of 1988 and to provide for the health, safety, and welfare of the present and future citizens of the Town.

The Chesapeake Bay Preservation Act

The Chesapeake Bay Preservation program, launched by the state in 1988, establishes a baseline for protection of resources whose disturbance or over utilization can and often has adversely effected water quality in those Bay system tributaries that border and penetrate the Town of West Point.

In response to interstate agreements between Virginia, Maryland, Washington D.C., and Pennsylvania to clean-up the Chesapeake Bay, the State of Virginia has adopted the Chesapeake Bay Preservation Act which mandates all tidewater Virginia localities to establish program plans, and ordinances to protect and improve Bay water quality. These “local programs” must be in conformance with the Chesapeake Bay Preservation Area Designation and Management Regulations adopted by the Virginia Legislature in September 1989.

Purpose of the Regulations

The purpose of the regulations is to protect and improve the water quality of the Chesapeake Bay, its tributaries, and other state waters by minimizing the effects of human activity upon these waters and implementing the Chesapeake Bay Preservation Act, which provides for the definition and protection of certain lands called Chesapeake Bay Preservation Areas. Development of these lands if done improperly may result in substantial damage to the water quality of the Chesapeake Bay and its tributaries.

The regulations establish the criteria that West Point has used to determine the extent of the Chesapeake Bay Preservation Areas within its jurisdiction. The regulations establish criteria for use by the Town in granting, denying, or modifying requests to rezone, subdivide, or to use and develop land in Chesapeake Bay Preservation Areas. Regulations identify the requirements for changes which Town governments like West Point must incorporate into their comprehensive plans, zoning ordinances, and subdivision regulations to protect the quality of state waters pursuant to the Chesapeake Bay Preservation Act.

The purpose of the West Point Chesapeake Bay Preservation Program Comprehensive Plan Element is to collect and analyze data, explore issues and alternatives, and develop policies and implementation strategies, providing a basis to take local action to protect and improve the water quality of the Chesapeake Bay, its tributaries, and other state waters.

Data Collection and Analysis

The Chesapeake Bay Preservation Program for the Town of West Point relies on the collection and analysis of water and land use data and characteristics. The information sources utilized for the adoption of the program are those which are the best in accuracy currently available. Recognizing that in some areas data may be incomplete or on a reduced level of accuracy, the Town, in conjunction with the Chesapeake Bay Local Assistance Department (CBLAD) and the Middle Peninsula Planning District Commission (MPPDC), will strive to produce future inventories and studies to best reflect the current and changing characteristics of the lands and waters.

The goal of the inventory of natural and manmade features is to identify the areas within the Town which require and should be considered for preservation under the Chesapeake Bay Preservation Act (CBPA) regulations. These areas include: tidal wetlands or tributary streams, tidal shores, floodplains, highly erodible soils, highly permeable soils, and other environmentally sensitive features whose characteristic may have a significant impact on water quality protection.

West Point contracted with the MPPDC to produce an inventory of the land categories identified above. The MPPDC utilized the following information sources in conjunction with an automated Geographic Information System (GIS) to analyze, compile, and map the inventoried features:

- United States Geological Survey - Digital Line Graph: includes tidal wetlands, tributary streams, tidal shores, roadways, and Town boundaries.
- U.S. Fish and Wildlife Service - National Wetlands Inventory: includes tidal and non-tidal wetland and classification of each.
- Town of West Point GIS - A variety of digital information of the Town of West Point
- U.S. Department of Agriculture Soil Conservation Service Soil Survey of the Town of West Point, Virginia: includes soil characteristics necessary to determine permeability and erodibility of soils.
- Federal Emergency Management Agency - Flood Insurance Rate Map: includes 100-year event floodplain for the Town of West Point.
- Town of West Point Comprehensive Plan- 1994

The MPPDC has published the Comprehensive Water Quality Management Plan for the Middle Peninsula and a *DRAFT* Regional Strategic Plan for Managing Water Resources of the Middle Peninsula. Both documents provide analysis and policy review concerning water quality issues in the region.

These two documents provide information relevant to on-site wastewater treatment, potable water supply, boating facilities, living resources, waterfront access, existing land use and water quality (including pollution sources), and a general description and economic analysis of the region.

Other documents referenced directly or through familiarity include the CBLAD's Local Assistance Manual; the Virginia Institute of Marine Science's (VIMS) Shoreline Situation Report for the Town of West Point, and other federal, state, and local studies.

PHYSICAL CONSTRAINTS TO DEVELOPMENT

Environmental Policies of the Town of West Point

Streams and Stream Buffers

- It is the policy of the Town to require a 100-foot RPA buffer adjacent to all stream systems within the Town.

Highly Permeable Soils

- It is the policy of the Town to discourage development in areas characterized with highly permeable soils by limiting permitted development densities.

Shoreline Erosion and Protection

- It is the policy of the Town to minimize erosion activity.

Resource Management Areas

- It is the policy of the Town to minimize development pressure in sensitive areas when possible.

Protection of Potable Water Supply

- It is the policy of the Town that potential sources and effect of pollution on the Town water supply be investigated
- It is the policy of the Town to limit new on-site septic systems

Fisheries Protection

- It is the policy of the Town that waters presently approved for the harvest of shellfish be protected from degradation due to pollution from point and non-point sources by including surrounding lands in Chesapeake Bay Preservation Areas.

Waterfront Access and Boating Facilities

- It is the policy of the Town that any new water dependant development consult with the Virginia Marine Resources Commission to follow siting criteria established for the protection and management of water dependent development sites

Existing Pollution Sources

- It is the policy of the Town to ensure that the most appropriate technology be used in conjunction with VPDES discharge.
- It is the policy of the Town to protect all its animals, crustaceans, plants, and other organisms that inhabit our rivers, marshes, and shores.
- It is the policy of the Town that non-point sources can be more effectively managed and the Town will do such.
- It is the policy of the Town to review all land use ordinances at least every five years to determine the best means of effective management of point and non-point source pollution sources.

Redevelopment of Intensely Developed Areas

- It is the Town's redevelopment policy to utilize low maintenance and native plant species to establish a buffer and to utilize BMPs in the design of storm water management facilities, and to encourage the onsite re-use of storm water runoff for irrigation of open spaces.

Resource Protection Areas

Resource Protection Areas (RPAs) perform natural pollution control functions. Biological activities and physical characteristics in these areas are especially effective in controlling runoff, trapping sediment, and recycling nutrients and pollutants. Components of RPAs are certain wetlands, tidal shorelines, and buffer areas ([Map 3](#) and [Map 4](#)).

Wetlands benefit water quality by acting as a filter in trapping and holding nutrients, microbes, and other pollutants that come from upland runoff. Wetlands, also act as a sponge by slowing down fast moving water, absorbing the energy of it for flood control and storm damage protection, and acting as a buffer against coastal erosion from wave action. The tidal shoreline interface, where water meets the land, is the site of dramatic changes caused by the natural forces of wind and water. Tidal shore stability is generally governed by three main determinants: the amount of beach material, the intensity of natural and human forces, and the stability of sea level. The occurrence of tidal shore erosion is considered a natural process and becomes a serious problem only when structures and activities unnaturally intrude into this process.

Buffer areas are zones of undeveloped vegetated land that are managed to reduce the impact of land disturbing operation in adjacent areas. Vegetated buffer areas provide a wide variety of environmental benefits, including sediment control, nutrient assimilation, stream bank stabilization, in-stream temperature maintenance, flood control and protection, groundwater recharge area protection, and runoff volume reduction.

The components of the RPA are prescribed by Virginia statute, with the local option to include other lands for which RPA designation is necessary to provide a high level of protection to the quality of state waters.

The Town of West Point has designated a RPA which consists of all tidal wetlands; non-tidal wetlands, including impounded lakes and ponds connected by surface flow and contiguous to tidal wetland or tributary streams; tidal shores; and an additional buffer area 100 feet in width, except where reductions are allowed within its jurisdiction boundaries. The RPA serves the purpose of protecting environmentally sensitive land and water areas from the adverse effects of human activities.

The intent of RPA designation is to limit land disturbance and development to only those activities classified as “water dependent” or otherwise exempted in the Town’s Chesapeake Bay Preservation Area Overlay Zoning District. The integrity of the RPA and mechanisms associated with the CBPA Program will serve to preserve those features most associated with the high quality of life in West Point—clean water and attractive landscapes for the beneficial use of both society and the natural ecosystem.

The implementation of the RPA goals is through an overlay district of the Town of West Chesapeake Bay Ordinance. The ordinance includes a general designation RPA map in addition to performance criteria to be included on specific site plans. The subdivision, erosion and sedimentation control, and floodplain ordinances will also include provisions related to preserving water quality as related to Chesapeake Bay Preservation Areas (CBPA). To truly provide for successful implementation, it is necessary to educate Town staff and the general public about issues related to Chesapeake Bay Program enforcement and management.

Streams and Stream Buffers

Lands in the Town which are designated Resource Protection Area include those lands which are required to bear such designation under the terms of the Chesapeake Bay Preservation Act, including tidal wetlands, non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or tributary streams, tidal shores, and buffer areas.

It is the policy of the Town to require a 100-foot RPA buffer adjacent to all stream systems within the Town ([Map 3](#)). Buffering shall include:

- Protection of streamside (riparian) forest cover where it exists, through proper implementation of BMPs,
- Re-establishment of forest cover or reforestation where it does not presently exist along streams.

Floodplains

Floodplains serve a number of resource protection functions including moderating the impact of floodwaters and reducing erosion and sedimentation. Floodplains help maintain water quality,

recharge groundwater supplies, protect fisheries, and provide habitat and natural corridors for wildlife movement.

[Map 5](#) identifies the general location of floodplains in the Town. Floodplains are generally located adjacent to large wetland areas and streams. In most cases extending the 100-foot buffer recommended for stream protection will provide substantial protection to collocated or adjacent floodplain resources which are often located within the buffer.

Highly Permeable Soils

Highly permeable soils are highly susceptible to pollutant leaching, and thus have a greater potential for groundwater pollution as well as pollution of surface waters ([Map 6](#)). Soil permeability is particularly important in relation to design of soil drainage systems and septic tank absorption fields ([Map 9](#)). Excessive seepage or infiltration from septic tank absorption fields can cause health problems through pollution of underground sources of domestic drinking water.

Other pollutants such as organic wastes, heavy metals, road salts, and pesticides can adhere to soil particles and be leached lower into the soil horizon and reach groundwater storage areas. The cumulative effects of septic tank and chemical pollutants leaching into groundwater resources over time can increase the potential for water resource pollution in the Town.

Town policies will discourage development in areas characterized with highly permeable soils by limiting permitted development densities. The Town will periodically review the Town Land Use Plan and Zoning structure to limit the density of development permitted on highly permeable soils in these areas, particularly where no waste treatment facility alternatives to conventional septic systems are practical.

Use of alternative waste treatment technologies will also be considered as an alternative to on-site waste disposal (OSWD) systems in those areas with sensitive soils not served by municipal services (either highly erodible or highly permeable). However, until such time as alternative waste treatment technologies can be demonstrated to be both cost effective and protective of surface water and groundwater quality, the Town should rely on measures to better manage the design, operation, and maintenance of septic systems while limiting their prospective location by assisting with public utility hookup.

Highly Erodible Soils

As [map 7](#) illustrates, most erodible soils are found down the centerline of the Town and along the western shoreline of the Town. Highly erodible soils are sensitive to development disturbances, and when such soils occur in combination with steep slopes ([Map 8](#)), they are particularly subject to greater rates of soil erosion. However, the Town has identified no areas with steep slopes so soil erosion due to slope is not likely to occur.

In erodible locations, it is the policy of the Town to use Best Management Practices (BMPs). The Town supports BMP activities that:

- minimize the land disturbance necessary at the project site
- preserve natural vegetation and trees, as much as practical, during development
- prohibit site clear-cutting for development purposes
- protect mature trees (If tree removal is unavoidable, Erosion and Sediment Control replacement standards should be followed. Where vegetation is removed, temporary grass seeding should be required for erosion control if the site remains untreated for more than one week.)

Shoreline Erosion and Protection

Since the Town of West Point is bordered by the Mattaponi, Pamunkey and York Rivers, shoreline erosion management is of critical concern. Soil erosion along shorelines occurs when water or wind carries off soil particles. The transport of soil particles is generally referred to as runoff. Runoff can wash fertilizer and other pollutants into the Mattaponi, Pamunkey and York Rivers and should be kept to a minimum. The Town uses the Virginia Erosion and Sediment Control Handbook for erosion guidance. Additionally, the Department of Conservation and Recreation's Shoreline and erosion Advisory Services (SEAS) provides additional guidance for Tidal and non-tidal erosion. Interested parties are encouraged to visit www.state.va.us/~dcr/sw/seas.htm for additional information. The following characteristics generally identify erosion activity:

- Bare spots on land
- Exposed roots
- Small rills or gullies on slopes
- Sediment collects in low areas

Erosion can vary from low, moderate, and high. Shorefronts subject to low and moderate rates of erosion may often represent candidate sites for non-structural shore protection through the use of wetland plantings and sills (continuous small rock breakwaters used to slow wave energy to establish inter-tidal marshes). Marsh vegetation and plantings in such areas can provide long term stabilization at a fraction of the cost of conventional structures such as bulkheads and stone revetments. Such treatment of shore erosion conditions also improves water quality and increases habitat availability.

Erosion control structures built in the past have sometimes caused the disappearance of beaches downstream, as the movement of sand or sediments are impeded by these structures. Unified treatment of whole reaches of shoreline can improve opportunities to assure that solutions to erosion conditions on one site do not create greater rates of erosion on adjacent sites.

The Virginia Institute of Marine Science completed a shoreline and erosion study of King William County and the Town of West Point in 1999. Several classifications of erosion are present along the shoreline of the Town boundary ([APPENDIX A](#))

Shoreline along the Mattaponi River has minimal erosion activity. The majority of erosion activity is classified as 0-5 ft bank height / low erosion with marsh conditions. Just north of the Mattaponi River bridge is a 1,500 ft section of 5-10 ft bank height /low erosion area with marsh conditions. Shoreline along the York River has minimal erosion activity. Erosion activity along this stretch is classified as 0-5 ft bank height / low erosion with marsh conditions. Shoreline along the Pamunkey River has three classifications of erosion activity. From the York River up to the Pamunkey River Bridge, erosion activity is classified as 0-5 ft bank height / low erosion with marsh conditions. From the Pamunkey River Bridge up river, the erosion levels increase. The majority of erosion activity is classified as greater than 10ft bank height / low erosion. There are isolated sections of high erosion with bank heights greater than 10ft.

It should also be noted that the 1999 erosion study of King William County and the Town of West Point did not contain data addressing the condition of shoreline structures or how these structures impact water quality. The Town will assist VIMS, in the future with the collection and assessment of this data.

Resource Management Areas

The Chesapeake Bay Preservation Act and Criteria Regulations establish the Resource Management Area (RMA) as the landward component of Chesapeake Bay Preservation Areas (Map 3). Lands to be considered for designation as RMA include the following: non-tidal wetlands, floodplains, highly erodible soils, highly permeable soils, and other land at local discretion.

RMAs are important in terms of water quality because if improperly used or developed, they could release significant amounts of non-point source pollutants into the surface and ground water systems. The regulations do not limit the types of land use and development that may occur within the RMA. Instead, a variety of performance criteria are applied to any use or development within RMAs to ensure that those land disturbances that do occur will minimally effect water quality. The performance criteria apply to stormwater management, on-site sewage disposal, and land disturbance/stabilization.

The designation of RMAs in the Town of West Point has been based on the consideration of the sensitive land types listed above and described below.

Floodplains are areas which are subject to predictably recurring overflows from nearby bodies of water, including streams, rivers, bays, and oceans. A floodplain acts as a natural reservoir for such an overflow by storing excess water and thus reducing the volume and speed of the floodwater's effects downstream. The removal of natural vegetation through land development within a floodplain diminishes the natural flood control capacity of the area. The result can be an

increase in non-point source pollution of the water body through soil erosion.

Highly erodible soils, if improperly disturbed or exposed, can contribute to water quality degradation through sedimentation and siltation of water bodies. In addition, nutrients and toxins may be attached to soil particles, which can be transported and released to the aquatic environment through erosion.

Highly permeable soils transmit water at such a rate that there is a potential for surface pollutants such as nutrients and other chemicals and sewage wastes to infiltrate, undegraded, into the nearby surface water and ground water systems. This possibility of the highly permeable soils becoming a “highway” for pollutants indicates the need for management of development in these areas.

Town designation of other lands to be included in the RMA classification is based on several factors, including the distribution of the other land types listed above, the hydrology of the locality, and the general characteristics of the landforms in the locality. The regulations of the CBPA also require the RMA to be contiguous to the RPA.

The extent and distribution of the land features considered as RMA components are such that much of the Town contains these features. It is also recognized that all land within the Town is contained within the Chesapeake Bay watershed and activities upon these lands can effect the water quality of the Bay. In order to maintain the goal of high water quality within the Town and region, the policy of the Town is to minimize development pressure in sensitive areas when possible.

The lands and waters within the Town of West Point have varied characteristics and natural function. Variations in topography, hydrology, soil type, vegetation, and geographic location all serve to influence land development. Advances in construction methods, materials and sewage disposal technology together with the increase in population and property values, mean that land that once may have been considered impossible to develop is being engaged for development pursuit. In addition, the use of methods of limiting or preventing non-point source pollution, such as Best Management Practices (BMP’s), shows that there are reasonable means to reasonable development. To further explore the compatibility of development around sensitive sites, an analysis of development and capacity is needed.

Perhaps the most obvious factor to consider when analyzing a site for development suitability is soil characteristics. Soils play the important role of determining weight loading capacities, on-site sewage treatment assimilation (Map 9), erosion potential, and vegetation growth.

An additional factor of importance is the location of “poorly” or “marginally” developable soils in relationship to streams, water bodies, and wetlands. Development on such soils in close proximity to designated RPA’s can have adverse effects on water quality.

A Water Quality Impact Assessment analysis can provide the necessary detailed information on both the most and least desirable portion of a parcel for development. With this information in hand, the Town and the land developer can arrive at the development solution that presents the

highest compatibility between the use and the environment.

Consideration has been given to the extent of analysis needed to determine the suitability of a site for development. A detailed, site-specific soil survey would provide the information necessary to determine the suitability of the site for the proposed use. The topography and hydrology of the site should be of a detail such that overland sheet flows of stormwater can be predicted. Knowledge of the vegetation and wildlife habitat present on the site is important for the subject site as well as for the surrounding areas. The comprehensive analysis of all these features can lead to development sensitive to the natural resources of West Point (Map 10).

To preserve the development rights of landowners, options to mitigate impacts and utilize BMPs should be allowed. Conducting a suitability analysis will provide the owner with information to balance development with features present on the site.

The Town of West Point has determined a Water Quality Impact Assessment (Town of West Point Code Section 15-310) to be of benefit to the developer. This will provide for the optimum function, design, and environmental preservation of land development sites. The Water Quality Impact Assessment at a minimum includes a detailed inventory of soils with the capacities for on-site sewage treatment, erosion potential, and vegetation growth documented. Mitigating factors, such as the use of BMP's will be included. This analysis will be conducted for all proposed development exceeding 5,000 square feet in land disturbance within Chesapeake Bay Preservation Areas.

The requirement to conduct a Water Quality Impact Assessment is currently implemented through the Chesapeake Bay Preservation Area Overlay District (Code Section 15-300), zoning and subdivision ordinances, and local health department requirements.

Protection of Potable Water Supply

An aquifer is layer of soil media, such as gravel, sand, shell, or rock, in which usable amounts of water can be found. The aquifers are separated from each other by confining layers of rock or clay, which retard the vertical movement of water. The upper aquifers are used primarily for domestic purposes because of lower yields.

The Coastal Plain aquifers of Virginia provide the groundwater for domestic and industrial uses. These are the Yorktown-Eastover and the Columbia aquifers. High yield can be found in the artesian aquifers known as the Chickahominy-Piney Point and Aquia aquifers. Sufficient groundwater quantities for sub-division, light industry, and agriculture uses can be tapped in these layers. The lower three aquifer layers, the Brightseat-Upper Potomac, Middle Potomac, and Lower Potomac, can supply large amount of water; however, the quality is impaired by high concentrations of minerals and chlorides.

The types of land uses and the practices in an area can affect the quality of both surface and ground water supplies. Runoff from lands adjacent to surface water reservoirs may contain chemical and biological contaminants. Pollutants can originate from agricultural practices,

residential lawn care, pesticides, petroleum spills, and failing septic systems. Groundwater can be contaminated by these sources by infiltration through the soil to the water table (Map 11 and Map13). Other groundwater contaminant sources include leaking underground storage tanks and improperly designed landfills. One significant pollutant of groundwater is nitrate. Nitrate can come from a variety of sources including fertilizers, animal wastes, and septic systems. From the types and sources of contamination of drinking water supplies, it is evident that responsibility lies among the many parties, residents, businesses, industries, farmers, and governments. The Town has taken a proactive step in addressing septic issues by applying for grant funds to develop a septic pump out program for the few remaining residential sites using conventional septic systems.

A priority in the protection of groundwater is understanding the movement and recharge in the aquifer, the movement of pollutants, and the effect of high withdrawal (Map12). This can best be accomplished under the modeling studies conducted by the U.S. Geological Survey (U. S.G. S.). The Middle Peninsula Water Resource Committee, of which the Town is an active member, is in support of the proposed update to the USGS model study.

Given the population served by the Town's municipal water supply facilities and expected growth around the Town, it is the policy of the Town that potential sources and effect of pollution on the Town's water supply be investigated. Sources may include on-site sewage deficiencies, petroleum storage tanks, abandoned wells, former refuse sites, and urban run-off.

The Three Rivers Health District monitors on-site sewage deficiencies within the Town. The Shoreline Sanitary Survey, updated in May of 1997, indicates the presence of on-site sewage deficiencies (Map 13). On-site sewage deficiencies contribute directly and indirectly to the quality of potable water. The Town considers any on-site deficiency a threat to public health and will explore remediation options.

It is also the policy of the Town to limit new on-site septic systems. The Town recognizes that areas not served by public sewer have development potential, however utilizing on-site septic systems to develop these sites are potentially problematic. To protect environmental health and public health, the Town will:

- Work with Hampton Roads Sanitation District to develop a long range plan to extend sewer coverage to the entire Town
- The Town will use all available tools to best manage on-site septic placement to protect environmental health and public health.
- Work with the Three Rivers Health District and the Middle Peninsula Planning District to provide financial assistance for on-site sewage deficiencies identified by the local Department of Health.

Additional information regarding on-site sewage deficiencies within the town can be obtained from the King William County Health Department.

Another potential source of groundwater contamination in the Town is from industrial contaminants. Industrial contaminants, such as the isolated effects of leaking underground

storage tanks, can have an adverse effect on water quality.

The Department of Environmental Quality (DEQ) currently monitors above and below ground petroleum storage tanks in the Town of West Point. As of March 21, 2000 DEQ, records indicate 47 registered active and/or inactive tanks. Of the 47 tanks, 35 show no leakage and 12 show leakage. Specific site information can be accessed from the Department of Environmental Quality web site at WWW.deq.state.va.us/tanks/ or by calling the Department of Environmental Quality Piedmont Regional Office.

In an effort to address leaking underground storage tanks and other pollutant sources and improve the quality of water resources within the Town of West Point, the Town will:

- work with the Department of Environmental Quality to develop appropriate programs to mitigate any water quality problems associated with leaking petroleum storage tanks
- explore the development of a Wellhead protection ordinance
- conduct a town wide survey asking residents to locate abandoned wells
- develop a program to provide these citizens with assistance for well closure

The Town also recognizes that industrial users of water have caused a cone of depression. This cone is attributable to withdrawal for the use in industrial applications. Town representatives serving on the Middle Peninsula Water Resource Study Committee have brought cone of depression issues to the attention of the region and the committee. The Town is awaiting the results of the Middle Peninsula Water Resource Committee's strategic plan for additional recommendations to protect and manage the water resources of the Town.

This protection of potable water can be further accomplished by working with U.S.G.S., requesting technical assistance from Chesapeake Bay Local Assistant Department or the Middle Peninsula Planning District Commission's -Water Resource Committee. The Middle Peninsula Water Resource Committee is completing a regional and locality specific strategic plan for the management of water resources. Recommendations for protection of the water resources of the Town will be presented to council for future consideration.

Fisheries Protection

The living resources of West Point are directly related to and dependent upon ground water and surface water. The surface water holds a treasure of commercial fisheries as well as sport species. A disruption in the eco-system can cause far-reaching effects, threatening the livelihood and health of those dependent upon these resources. Groundwater travels slowly through the unconsolidated soils of the region, making its way to the surface springs and wetlands. Along the way, contaminants from the land can be swept along the groundwater and find their way into the open water systems. Based on these observations, two things are evident. First, there are direct relationships and pathways between the uplands, wetlands, and water bodies as well as the inhabitants of each. Secondly a number of small, seemingly insignificant environmental degradations add and multiply in overall impact and damage.

Shore and water habitat are important both to wildlife and water quality (Map 14). As land disturbance and sewage wastes increase with the development of residential and commercial uses, the impacts on these habitats also increase. Two areas of particular concern are the loss of fishery habitat and the restriction on shellfish harvesting waters.

Aquaculture projects, including shellfish grow-out facilities, depend on quality water and should be considered 'Water Dependent Facilities' for purposes of compliance with local land use ordinances. It is the policy of the Town that waters presently approved for the harvest of shellfish be protected from degradation due to pollution from point and non-point sources by including surrounding lands in Chesapeake Bay Preservation Areas.

The Virginia Department of Health, in August of 1998, re-established a Notice and Description of Shellfish Area Condemnation Number 4, Upper York River, and shall consist of areas A and B. This re-designation makes it unlawful for any person, firm, or corporation to take shellfish from Area A for any purpose, except by permit granted by the Marine Resource Commission, as provided in section 28.2-810 of the Code of *Virginia*. It shall be unlawful for any person, firm, or corporation to take shellfish from Area B for any purpose (Map 13). Section B is a buffer area surrounding Hampton Roads Sanitation District discharge point.

The Town also recognizes the Mattaponi and the Pamunkey tributary systems are important Essential Fish Habitat (EFH) for Anadromous fishes and that essential habitat features are prevalent in and around the Town (Map14.) The Town of West Point recognizes that land use activities contribute pollution to Pamunkey, Mattaponi and York Rivers. The Town's Chesapeake Bay Preservation Program offers an opportunity to incorporate fisheries protection measures in local land use ordinances. The designation of Chesapeake Bay Resource Protection Area buffer requirement will offer protection to wetlands and other shallow water habitat vital to fisheries. In an effort to improve the habitat conditions further for shellfish, the Town will:

- Require a 100% reserve drainfield area for all new land development not served by public sewer
- Develop a five-year pump-out program for septic systems
- Develop an educational program to promote land use maintenance activities that will protect Essential Fish Habitat

The Town has applied for funds to develop a regular pump-out of septic systems program in compliance with Chesapeake Bay Preservation Act requirements.

Based on the knowledge and experience provided by local health officials, those measures that can be cost effectively implemented should be used to protect surface and groundwater resources from the effects that can be brought on by the use of septic systems to treat waste. Additional information concerning septic system management measures are provided in Chapter VI of the Local Assistance Manual prepared by the Virginia Chesapeake Bay Local Assistance Department.

Waterfront Access and Boating Facilities

The Mattaponi, Pamunkey and York River, and flowing streams of the Town are resources belonging to the citizens of Virginia. These waters traditionally offer recreational and commercial use and still serve as a solid economic base for the area. With the subdivision of waterfront property into smaller lots comes the competing interests of those water front property owners seeking privacy and the upland residents and tourists seeking use of the waters. The increasing use of waterways leads to concern of environmental damage due to improper or reckless activities, such as unmanaged marsh walks in sensitive areas or boat propeller destroying Submerged Aquatic Vegetation (SAV). These activities can cause habitat destruction or pollution. This concern leads to the need of greater management capability over waterfront access and water uses.

The Town has identified two waterfront issues that require planning. First, the use of the waterfront for boating access, whether it be at a marina, a boat dock, ramp and pier, or car-top boat landing (Map 15). Second is the utilization of the shoreline and near-shore areas for recreational activities such as swimming, bank fishing, nature studying, and picnicking.

Either public or private facilities can provide these activities. Both boating and shore recreation are allowed exemption as water dependent facilities" under the requirements of the CBPA, provided that non-water dependent components are located outside of the RPA:

Boating access to the tidal waters of Town is provided at a public dock and park, and by individual or community piers.

Two publicly owned sites provide limited boat launching, fishing and swimming facilities. These include:

- A Department of Game and Inland Fisheries Boat Ramp Site on State route 1130 and a public park nearby
- A small car top landing and park at the end of Main Street

Due to the limited number of boating facilities and the generally low level of daily boating activity in the Town, no significant water quality problems are known to exist as a result of boating activity; however in future years as development occurs, the Town will monitor such activities. As consistent with the recreation goal of improving open space, the Town will explore opportunities to expand public access, but does not anticipate any such improvements in the near future. When new facilities do occur, it is the policy of the Town to locate these facilities where:

- There is sufficient water depth, without frequent dredging
- There are not public or private shellfishing grounds which would be impacted
- There is adequate tidal flushing
- There are suitable soils for sanitary facilities or connection to a municipal sewer system
- There is limited harm to fish and wildlife habitat
- There are compatible existing land and water uses nearby

Waterfront recreation areas are also provided through public and private avenues. Public beaches and parks are options for recreation and nature study. Public and private access to the water and shoreline areas are important to the economy and environment of the Town.

The only commercial marina in the Town is presently closed. The facility provided slips for 35 boats. Boat storage facilities were also provided. Any future development of marinas and other boat related facilities may have a number of adverse impacts on water quality and near shore habitats. Such impacts can include:

- Clearing of shoreline vegetation to provide access or accommodate parking facilities which can add impervious surface and in turn generate additional runoff, carrying pollutants and sediment loads to adjacent waters which can be harmful to marine wildlife habitat
- On-shore storage of fuel, oil, and sewage waste which may adversely impact water quality if not properly managed
- Dredging or channel widening, often required to provide access to boating facilities which can release settled pollutants and increased turbidity in the water and adversely impact shellfish
- Bulkheading to protect the shoreline which may obstruct the free passage of groundwater into the adjacent water body and/or may create reflection waves that tend to scour the bottom and increase turbidity

Operation of marine equipment can effect water quality. These effects include:

- Propeller cutting of rooted aquatic plants or submerged aquatic vegetation
- Boat wakes which may accelerate the cutting action of waves on the shoreline,
- Disturbance of bottom sediments and increased turbidity due to turbulence caused by propellers

Required maintenance of boats can involve periodic washing, scraping, and repainting of boat hulls. These activities, if carelessly done, can also adversely impact water quality. Soaps can initiate algae blooms and thus reduce dissolved oxygen levels in surrounding waters. Anti-fouling paints can also introduce copper and other toxic substances into adjacent waters.

It is the policy of the Town that any new water dependant development must consult with the Virginia Marine Resources Commission to follow siting criteria established for the protection and management of water dependent development sites. Additional information is available from the Virginia Marine Resources Commission.

Existing Pollution Sources

Pollution discharges can be defined as either point or non-point in their origin. Point source discharge from discrete and identifiable points. These discharges play a major role in determining the quality of the Town’s surface waters. Discharges tend to vary in chemical and physical composition as well as fluctuate in their concentrations. The Virginia Water Control Board (VWCB) regulates existing point source pollution discharges. The Town has little role in the enforcement of existing permit conditions, however, compliance is tied to land use ordinance approvals. The Town knows of only two waste water treatment point source discharges within the town boundary (Map11).

- VPDES St. Laurant discharge
- VPDES Hampton Roads Sanitation District discharge

It is the policy of the Town to manage land use by ensuring that the most appropriate technology be used in conjunction with VPDES discharge. To that end, the Town has arranged for the Hampton Roads Sanitation District (HRSD) to manage the treatment of point source discharges. HRSD also oversees the maintenance of all sewer lines to ensure proper delivery of point source contaminates for treatment.

The other major category of physical, chemical, and biological factors effecting surface water quality are non-point source pollutants. Non-point sources encompass all those sources that cannot be identified as having originated from a discrete discharge point. This category is by far the most significant in terms of its impact to surface water quality in the Middle Peninsula Planning District.

Table # Common Sources of Nonpoint Source Pollution in Urban Areas

<u>Nonpoint Pollutant</u>	<u>Pollutant</u>
Local Soil Erosion	Particulate
Local Plants and Soils (transported by wind and traffic)	Nitrogen & Phosphorus
Wear of Asphalt Street Surfaces	Phenolic Compounds
Spills and Leaks from Vehicles	Grease, Petroleum, Lead
Spills from Vehicles (Oil additives)	Phosphorus & Zinc
Combustion of Lead Fuels	Lead
Tire Wear	Lead, Zinc, Asbestos
Wear of Clutch and Brake Lining	Asbestos, Lead, Copper
Wear of Vehicle and Metal Parts	Copper, Nickel, Chromium

It is the policy of the Town to protect all its animals, crustaceans, plants and other organisms that inhabit our rivers, marshes, and shores. Nonpoint sources must be managed in an effective method to protect these resources.

The Town's Chesapeake Bay Preservation Program, Erosion and Sedimentation Control Ordinance, and participation in the activities of the local Soil and Water Conservation District are means of local management of Nonpoint source pollution. However, the Town considers these tools as a first level management effort. Therefore, it is the policy of the Town that Nonpoint sources can be more effectively managed and the Town will do such by:

- Developing an Urban Nutrient Management Plan to address all Nonpoint source pollution
- Developing a Stormwater Management Program

Additionally, the Town is known for its tree-covered streets. Although this is an aesthetically appealing characteristic, it can also cause problems by depositing large amounts of leaves into the Town's storm drainage system. The Town has an effective street-sweeping program and it is a priority of the Town to keep the streets clean. The Town is so committed to keeping the streets clean, that the first considered action during the implementation phase of the Town's Stormwater Management Program will be to purchase storm drainage baskets for the 177 existing drop inlets in Town.

The Town also recognizes the need for periodic review of the effectiveness of local ordinances. It is the policy of the Town to review all land use ordinances at least every five years to determine the best means of effective management of point and non-point source pollution sources. The Town will continue to seek financial and technical assistance from the Chesapeake Bay Local Assistance Department (CBLAD), Division of Soil and Water Conservation, Middle Peninsula Planning District Commission, and other state and federal agencies necessary for effective control of pollution sources in the future.

Redevelopment of Intensely Developed Areas

The designation of Intensely Developed Areas (IDA) is intended to address the unique land use patterns and water quality impacts of heavily urbanized areas ([Map16](#)). A portion of the Town is designated IDA. The area is characterized by industrial, commercial, residential, and institutional uses that are spatially concentrated, heavily trafficked, and largely devoid of natural vegetation. Development within these areas is usually confined to either redevelopment of previously developed sites or construction on small, vacant "infill" parcels ([Map16](#)). The concentration of intensive uses and prevalence of impervious surfaces in these areas contribute a variety of Nonpoint source pollutants, such as hydrocarbons and heavy metals, to surface waters.

The goal of designating IDAs is to focus development in areas where it is already concentrated and supported by existing infrastructure, while improving water quality. In recognition of the fact that the IDA is largely devoid of natural vegetation, activities within the IDA may be exempt from having to establish or maintain the full buffer areas as required for RPAs.

The CBPA regulations provide that IDAs may be designated in "areas of existing development and infill sites where little of the natural environment....provided at least one of the following conditions exists:

Development has severely altered the natural state of the area such that it has more than 50% impervious surface;

B. Public sewer and water is constructed and currently serves the area. This condition does not include areas planned for public sewer and water.

C. Housing density is equal to or greater than four dwelling units per acre.”

The designation of IDAs is intended to allow reasonable development where development already exists or surrounds a site, while at the same time providing at least a 10% reduction in stormwater runoff transported pollutants. This reduction can be achieved through a variety of means including creation of a vegetated buffer area to the greatest extent possible, reduction of impervious areas, and use of Best Management Practices (BMPs).

BMPs are facilities designed to reduce the impacts of pollutants and increased stormwater management on local streams or rivers caused by surface water runoff. BMPs operate by temporarily detaining or slowing stormwater, after which a number of pollutant removal mechanisms are employed. Two most common BMPs are dry ponds and wet ponds in urban areas and grass swales in rural areas. A variety of laws, including the Chesapeake Bay Preservation Act, the Virginia Stormwater Management Act, and the Federal Clean Water Act encourage or require the control of urban pollutants. BMPs are an essential part of the Town’s efforts to protect aquatic habitats. However, BMPs will fail prematurely if not properly maintained. Once a BMP fails, it will no longer perform its intended function and is very expensive to replace. As such, the Town of West Point will look to the Middle Peninsula Planning District Commission’s Environmental Program to develop regional solutions for Stormwater Management issues.

The Town will continue to seek opportunities to improve water quality through redevelopment, particularly as proposals for development within or adjacent to existing developed areas are submitted for review through the Town’s development review and approval process. In an effort to reduce impervious cover, it is the Town’s redevelopment policy to:

- Utilize low maintenance and native plant species to establish a buffer
- Utilize BMPs in the design of stormwater management facilities
- Encourage the onsite re-use of stormwater runoff for irrigation of open spaces

Summary

This chapter discusses the characteristics of environmentally sensitive Town lands and waters. It describes some of the important reasons for protecting the various natural features that comprise and contribute to the quality of the West Point environment. Recommended actions are stated which should achieve the Town’s environmental goals and objectives. Particular emphasis is

placed on Comprehensive Plan requirements of the Chesapeake Bay Preservation Act and Regulations.

All Town residents play an important role in the balance of West Point's environmental system. As the Town grows, susceptibility to system imbalance and environmental damage increases. Limits exist to the amount of growth and development that West Point can absorb without threatening environmental quality and resource supplies. According to the concept of "carrying capacity," West Point is equipped with a finite supply of natural resources, which can support a limited number of people. If its carrying capacity is exceeded, serious environmental degradation can occur, and solutions may be costly. West Point is reaching its threshold for some features and will not reach other thresholds for many years, but the influence of present activities on the Town's ability to grow and improve must be recognized.

The environmental attributes of West Point strongly influence the quality of life. The condition of the environment must be evaluated in terms of the potential impact upon the daily activities and the standard of living of the community. Environmental resources should be protected on behalf of the economic well being of the general public with regard to both individual property interests and collective taxpayer investments. The quality of West Point's environment is one of the factors that makes the Town such a desirable place to live and work. The intent of the Town's environmental protection measures is not to stop development, but rather ensure the compatibility of development with the continued productivity and value of environmentally sensitive land and water areas.

Implementation

The first step in implementing the plan is adoption. Once the plan is prepared, it is taken to the public for review and comment via the public hearing process. It is highly important that there is public understanding and support of the plan. The more the public is aware of and encouraged by the plan, the easier it will be to realize the plan's intentions. After the hearing, the plan is considered for adoption by Town Council.

Once adopted, the plan provides guidance for land use decisions. It has legal status in that it controls the general or approximate location, character, or extent of public improvements and private development. It provides a reference point for decision making. It contributes to an understanding of how one decision may impact upon other parts of subject areas of the Town.

Code Implementation Tools

The Town has mapping, which shows the legally established public streets, waterways, and public areas of that locality. After preparation and public hearing, the map is adopted by the governing body. Since this map shows public land holdings to a refined degree, it can then be used to coordinate development and assist in making development decisions.

The plan may be implemented by utilizing a *long range development program of public works*, often called a *Capital Outlay Improvements Program*. Each year, all capital projects for the ensuing five years are listed and analyzed. Construction costs are estimated and financial resources are projected. These three elements are combined to form a *Capital Improvement Program*, which establishes the time and order in which public improvements will be carried out. The program is then adopted by the governing body. This aids the locality in making the wisest use of its limited money. Public money is spent in a coordinated fashion so that projects can be developed in a timely manner and in concert with overall objectives.

A *subdivision ordinance* may be used to implement the plan. A subdivision ordinance provides for the orderly development of an area by regulating the establishment of lots, the laying out of streets, and the provision of public utilities. These matters must be approved by the locality before a subdivision can be recorded and lots sold. Once recorded, a subdivision normally has a permanent effect on a locality. Thus, one way to ensure that land development is in accordance with the plan is to have a subdivision ordinance which is based on the plan and which will aid in directing and coordinating development.

A *zoning ordinance* and/or *Chesapeake Bay Preservation Overlay District (CB-1)* may be used to implement the plan. This is the strongest implementation device, since it allows a locality to divide its territory into districts and to determine the type and character of development permitted by district. Whereas the plan designates parts of the locality to be developed or utilized in a stated manner, the zoning ordinance is the local law that controls that development

or use. This ordinance must be kept up to date and responsive to the Town's goals as expressed in this Plan.

Local Government Decisions

Virtually all decisions made by the elected, appointed, and administrative members of local government have an impact on land development. Whereas, the Code-authorized mechanisms are highly direct with a clear link between the action and impact, most other local government decisions are highly indirect, with the link between action and impact subtle or removed. Nevertheless, this mechanism is real and should be acknowledged for its effects on development.

Private Initiatives

The third mechanism for plan implementation is private initiatives. In this sense, the plan becomes a forum that introduces problems and concepts to the community. People react to these and some action may be forthcoming. As in local government decisions above, this mechanism is usually indirect.

APPENDIX A

APPENDIX B

APPENDIX C