

Cape Charles, Virginia

COMPREHENSIVE PLAN

**Prepared By
Cape Charles Planning Commission**

**Technical Assistance Provided By
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INTRODUCTION

The Comprehensive Plan is an official public document adopted by the local government and intended to guide future decision-making related to land use and community development. The Comprehensive Plan is not an ordinance, but rather, a reflection of the community's goals and objectives. It is intended to be flexible, generalized in nature, and designed for periodic review and revision. The Comprehensive Plan includes an inventory and analysis of existing conditions in the community, goals and objectives based upon this analysis, and future plans and implementation strategies to achieve the identified goals and objectives. Once the Plan is adopted, it should be used as the basis for guiding and regulating land use and physical development.

The Virginia General Assembly, recognizing the need and value for local planning within each area of the Commonwealth, adopted Section 15.2-2223 of the Code of Virginia, which requires that each city, county or town develop and adopt a comprehensive plan. Section 15.2-2223 states, "The comprehensive plan shall be made with the purpose of guiding and accomplishing a coordinated, adjusted, and harmonious development of the territory 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."

In addition to this mandate, the Virginia General Assembly, recognizing the economic and social importance of ensuring the long term viability of state waters and in particular the Chesapeake Bay and its tributaries, enacted the Chesapeake Bay Preservation Act (Section 10.1-2100, et seq., of the Code of Virginia). The Act is a cooperative effort between the state and local governments with a water quality improvement and protection focus. Section 10.1-2109 of the Act states that "Counties, cities, and towns in Tidewater Virginia shall incorporate protection of the quality of state waters into each locality's comprehensive plan consistent with the provisions of this chapter."

To achieve these ends, the Town Council and Planning Commission of the Town of Cape Charles have developed and adopted the following Comprehensive Plan. The current Plan is an update of the Town's 1990 Plan. Since that time, Cape Charles' corporate boundaries have changed due to the annexation of additional land. Funding for this document has been provided in part by a grant from the Chesapeake Bay Local Assistance Department. Accordingly, the awareness and protection of natural resources is one of the focal points of this Plan.

It is necessary, due to the nature of the Comprehensive Plan and its purpose, that the Town Council and Planning Commission regularly review the Plan and update the goals to keep pace with events and development affecting the Town's well being. As required by the Virginia State Code, the document should be reviewed at least once every five years, and amended if necessary to keep pace with the changing conditions facing the Town and County.

COMMUNITY PROFILE

The Town of Cape Charles is located in Northampton County, on Virginia's Eastern Shore. Cape Charles is situated on the Chesapeake Bay, near the southern tip of the Eastern Shore peninsula, as shown in Figure 1. The Town is comprised of a small peninsula, bordered by the Chesapeake Bay to the east, King's Creek to the north and Old Plantation Creek to the southwest. With a land area of 2,817 acres and a population of approximately 1,485 residents, Cape Charles is the largest of Northampton County's five incorporated towns, in land size as well as population.

HISTORY

From its very conception Cape Charles was a planned community. Created in 1884 as a railroad town, Cape Charles served as the southern terminus of the north/south railroad line constructed along the Eastern Shore. Although the Eastern Shore Railroad Company commissioned a survey to establish a railroad through the Eastern Shore, it was not until the 1870s that William L. Scott of Erie, Pennsylvania started the machinery which would result in the establishment of Cape Charles. Scott envisioned a Town to serve the needs of the railroad and its passengers and in 1884 he commissioned two engineers to do the official mapping of the Town. The original Town was approximately 136 acres divided into 644 equal lots. Seven avenues which run from east to west were named for Virginia statesmen; the streets which run north and south were named for fruits. The original layout of the Town is still very visible today.

In 1883 Scott became president of the New York, Philadelphia and Norfolk Railroad Company (NYP&N), and purchased three plantations comprising approximately 2,509 acres from the heirs of former Virginia Governor Littleton Waller Tazewell. Of this land, 40 acres were ceded to the NYP&N, and 136 acres went to create the Town of Cape Charles. Some of this land, named Cape Charles for the cape found to the south, Scott sold to the Railroad Company to serve as the southern terminus. In that same year, construction of the railroad began. In Cape Charles, the Railroad Company built a harbor to handle steamships and freighters from Cape Charles to Norfolk.

By November 1884, the first passenger and freight trains began running and by 1885 the first residential and commercial buildings existed in the Town along with a volunteer fire department, newspaper, school and churches. In less than two years, Scott built the railroad, harbor and Town.

On March 1, 1886 the Town was incorporated. The Town continued to grow and develop throughout the golden age of the railroads, through WWII with its mission of ferrying troops and supplies, and into the 1950s until the auto ferry was moved to Kiptopeke. At the Town's peak period of development in the early 1900s, as many as 300 cars per day were transported through the Town's harbor. In 1958 the last passenger train left Cape Charles. The railroad is still in operation, as it has been continuously since 1884.

With the decline of the railroad industry following World War II, due in part to the development of interstate highways and the opening of the Chesapeake Bay Bridge Tunnel in 1964, and the resultant

Figure 1
Town of Cape Charles

increase of truck shipping, the Town began to experience difficult times. Over the past fifty years, the Cape Charles economy has steadily declined; however, the Town has begun to experience a resurgence in its economic prosperity since 1988, and has experienced a great deal of growth in the past several years. Real estate sales have greatly increased, as have the number of new businesses in Cape Charles. Today Cape Charles is experiencing a renewed energy for positive change among its citizens as it enters into a new era of revitalization.

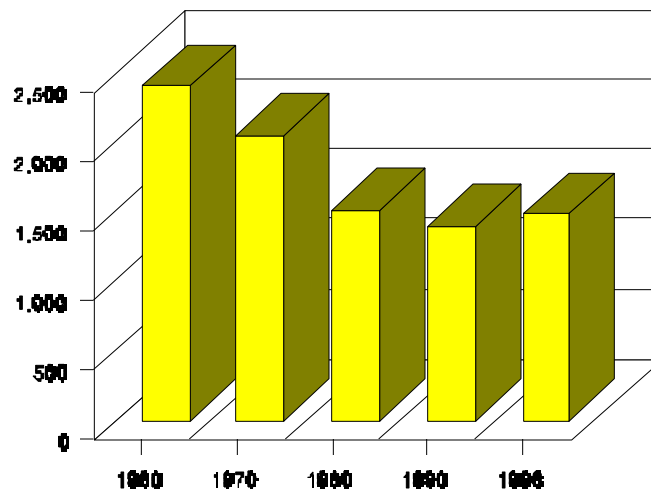
POPULATION CHARACTERISTICS

The population of Cape Charles has shown a substantial decline over the past 34 years. In 1960, the Town had a population of 2,400; by 1990, the Town's population had dropped to 1,398, a decrease of 42% (see Table 1). Recent population estimates indicate that the downward population trend is reversing and the Town's population is growing. Between 1990 and 1996, the population of Cape Charles increased by 6%.

**TABLE 1
POPULATION
CAPE CHARLES (1960 - 1996)**

<u>Year</u>	<u>Total Population</u>	<u>Change in Population</u>
1960	2,400	
1970	2,050	-15%
1980	1,512	-26%
1990	1,398	-8%
1996	1,485	6%

Sources: U.S. Census, 1960-1990; Weidon Cooper Center, 1998.



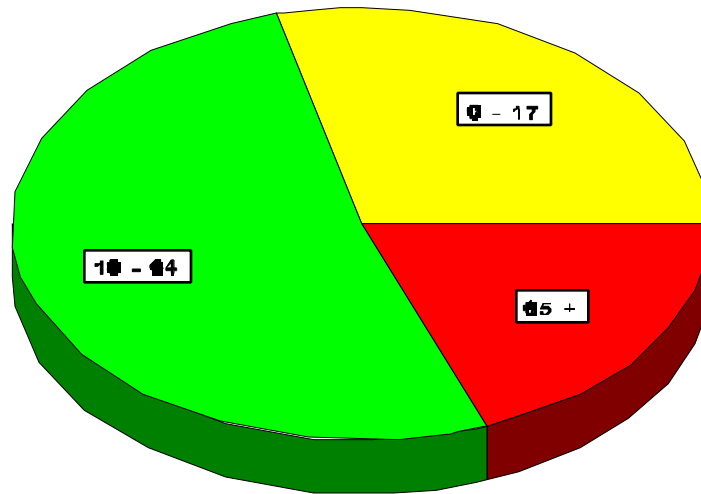
Age Distribution

The population of Cape Charles has changed not only in terms of raw numbers, but also in terms of its composition. As shown in Table 2, statistics from the U.S. Census revealed that working aged people decreased as a proportion of Cape Charles' population from 1980 to 1990, from 57% to 52%. The age cohort of 65 + years experienced a slight decrease during the same time period, from 21% to 19%, while the age cohort of 0-17 years showed a moderate increase, from 22% in 1980 to 29% in 1990.

**TABLE 2
POPULATION BY AGE
TOWN OF CAPE CHARLES**

Age	1980	%	1990	%
0-17	339	22%	406	29%
18-64	860	57%	726	52%
65 +	<u>313</u>	<u>21%</u>	<u>266</u>	<u>19%</u>
Total	1,512	100%	1,398	100%

**FIGURE 3
1990 POPULATION**



Sources: 1980 & 1990 U.S. Census

Racial Composition

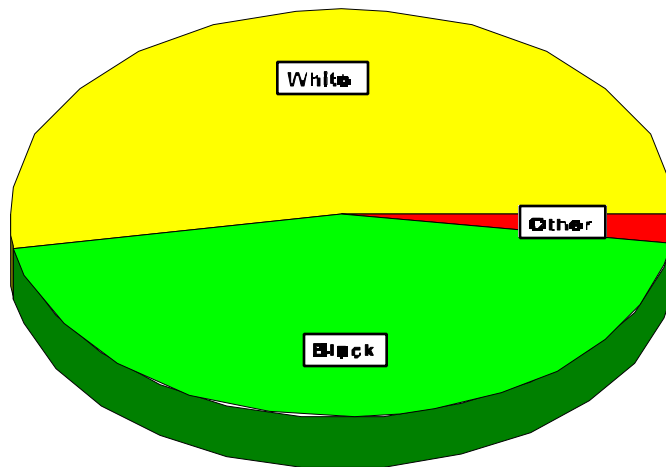
As shown in Table 3, Cape Charles has a racially diverse population. While the majority of the population is white, there is a sizable black population. The racial diversity of the Town increased from 1980 to 1990. Whereas the black population made up 32% of the population in 1980, it increased to 45% by 1990. Figure 4 illustrates the Town's racial composition in 1990.

**TABLE 3
POPULATION BY RACE
CAPE CHARLES**

Race	1980	%	1990	%
White	1,005	67%	736	53%
Black	486	32%	629	45%
Hispanic	21	1%	32	2%
Other	0	0%	1	--%
Total	1,512	100%	1,398	100%

FIGURE 4

RACIAL COMPOSITION, 1990



Sources: 1980 & 1990 U.S. Census

ECONOMY

EMPLOYMENT

The Town of Cape Charles had 565 people in its labor force in 1990, which is over half of the Town's 1,027 residents over 16 years of age. Approximately 28% of residents over 16 years of age were over age 65 and assumed to be retired. The remaining 17% included students, housewives, etc. In the under 65 age group not in the labor force, women outnumbered men by over two to one (316 to 146). This may indicate a deficit of job opportunities for women or a preference for traditional families in which the women are homemakers. The largest categories of employment types for Cape Charles residents, and the percentage of workers in each, are indicated in Table 4. The Town's 1990 unemployment rate was just around 6.5%. The current unemployment rate in Northampton County has been varying between 5% and 9%, with the December 1998 rate at 6.0%.

**TABLE 4
EMPLOYMENT - 1990
CAPE CHARLES RESIDENTS**

Category	Number	Percent
Agriculture/Fisheries	27	5%
Construction	39	8%
Manufacturing	61	12%
Trade	149	29%
Transportation	39	8%
Education Services	61	12%
Other Services	<u>130</u>	<u>26%</u>
Total	506	100%

Source: 1990 U.S. Census

Cape Charles commuters spend an average of 14.5 minutes traveling each way to and from their jobs. This is 40% less than the State average of 24 minutes. Census results reveal that almost 13% of the Town's work force either walks to work or works at home. The 1990 census indicates that over one-quarter (26%) of occupied housing units have no vehicle available. Additionally, those who work in the home may require or request upgrades to the pedestrian transportation network so that walking within Town is easier and safer.

The provision of services catering to the needs of the home office will likely be of greater importance in the coming years as the workplace continues to experience downsizing and decentralization. Information technology infrastructure, such as adequate and affordable computer access to the Internet, is taking on increased importance in determining where people choose to live. The emerging

use of Internet access may blur the importance of and reliance on physical location that underlies traditional economic theory.

INCOME

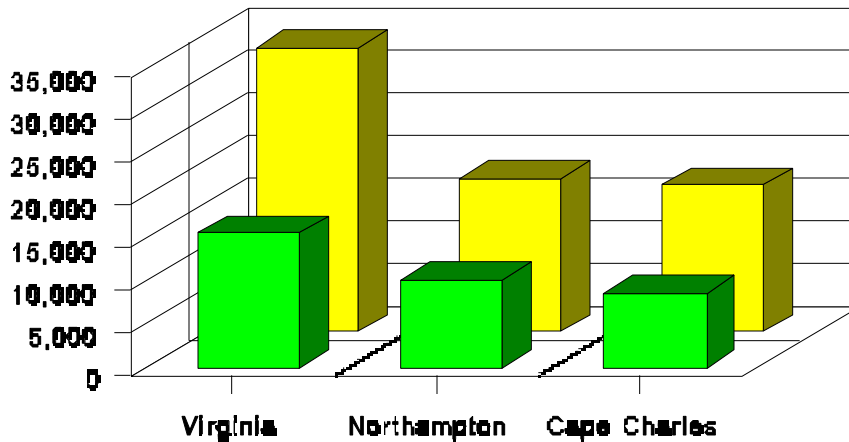
Median income is defined as the income value where 50% of a particular group has an income above a specific value, while 50% of the same group has an income below that value. As shown in Table 5, Cape Charles' median household income in 1990 was \$17,258. This was slightly lower than that of Northampton County, and over 48% lower than that of the State. Per capita income is defined as the total income received by all persons divided by the total population. Cape Charles' per capita income in 1990 was \$8,756, which was 4% lower than Northampton County's per capita income, and 44% lower than that of the State.

**TABLE 5
INCOME CHARACTERISTICS - 1990**

	Virginia	Northampton	Cape Charles
Median Household Income	\$33,328	\$18,117	\$17,258

FIGURE 5

INCOME CHARACTERISTICS, 1990



	Virginia	Northampton	Cape Charles
Per Capita Income	\$15,713	\$10,176	\$8,756

Source: 1990 U.S. Census, STF 3.

There is a relatively high proportion of resident households in Town with very low incomes. Household data reveal that more than 30% had incomes less than \$10,000 per year, which is about the same as that of Northampton County, but much higher than the State's percentage of 13%. Nor are there many households with high incomes in the Town when compared to the State. Just over 4% of Town households were in the \$75,000 and over income bracket in 1990. Northampton County also had 4% of incomes in this bracket. Over 12% of households in the State fell within this bracket.

COMMERCIAL ACTIVITY

The economy of Cape Charles has experienced a downturn over the past 50 years, due to several factors, including the decline of the railroad industry, the development of interstate highways, and the opening of the Chesapeake Bay Bridge Tunnel. Almost 40% of the commercial buildings in the Town's commercial core are vacant. Approximately 26 businesses currently exist in the downtown area, which for the most part serve local residents. These businesses include a grocery store, retail establishments, personal services, and several restaurants. Approximately six of the existing businesses are small retailers oriented toward the tourist trade. While the downtown area maintains a certain character as a result of the quality of many of the structures and their historical nature, the vacancy rate is very high and suffers from visible disinvestment. This follows the pattern that many downtown areas are experiencing, with traditional retail establishments closing and relocating to

newer suburban shopping centers.

Retailing has changed significantly over the past several decades, as seen by the proliferation of large retail stores, supermarkets, national chains and others which have opened at shopping centers along major transportation corridors. Their buying power is significant, resulting in prices that cannot be matched by independent operations. Uncontrolled commercial development along Route 13 will continue to draw businesses, jobs, and investment from the traditional downtowns in the County, where it is desperately needed, to regional shopping centers located along the highway, resulting in the continued deterioration of the County's towns. The shopping center constructed adjacent to Exmore is a case in point.

Northampton County's Comprehensive Plan states, "because much of the retail commerce in the County is directed at tourists, the commercial category includes development along highways. It is the principal policy of the County to encourage commercial development to be concentrated in areas where it can best be served by transportation routes and presents the least interference with residential and other land uses." The problem with this policy statement is that the commercial uses that are aggregating along the highway are not uses related to tourists. These uses are targeted toward the local, regional resident population. Furthermore, the County should be seeking to attract tourists into towns, not to segregate them out at the highway. The County's Comprehensive Plan identifies the vicinity of the Route 13/Route 184 intersection as an area to which commercial development should be concentrated. This could result in drawing businesses away from Cape Charles' downtown commercial area. Commercial investment should be concentrated where it is needed, not in developing valuable agricultural land, but in revitalizing the County's deteriorating towns.

Cape Charles' downtown commercial area has many assets which it can draw upon to enhance its character and appeal. The high vacancy rate of downtown buildings is actually an asset to the Town, serving as available building stock for future business establishments. The Town has begun code enforcement of buildings in the commercial district, for the continued protection of commercial building stock. The general appearance of the downtown area is a key element in economic vitality for the Town. Improvements have been made to this area in the past several decades, including the removal of overhead wires and poles, the addition of street lamps and sidewalks, and various improvements to facades. Facade improvements have not always followed a coordinated pattern, which has resulted in a lack of continuity between some buildings, with no uniform design theme. It is important to ensure that the aesthetics of the downtown area are maintained and improved for continued economic revival, and that the buildings are protected from demolition or renovation which would damage their historical integrity.

Cape Charles' primary assets relative to tourism are location and character. Location is important in terms of the natural beauty of the Eastern Shore, the available access to the ocean and the Chesapeake Bay, and the quiet "hide-away" sense of the Town. The Town's waterfront location, small town atmosphere and historic character are important resources which enhance its desirability

as a destination for residents, visitors and tourists. Over the past 10 years, the Town has undergone a rebirth, with real estate sales increasing, population increasing and new businesses opening up. Several Bed and Breakfast establishments have opened up in Town which offer overnight accommodations. Historical character and environmental protection are attributes which need to be protected in order to expand tourism in Cape Charles.

ECONOMIC DEVELOPMENT

Economic development efforts for the Town involve simultaneous activity on a number of different paths. Cape Charles has a local business organization, the Chamber of Commerce, which is very active, and organizes several special events for the Town each year. The newly created STAR Transit offers weekday bus service from Chincoteague to Cape Charles, as well as a connector route across the Chesapeake Bay Bridge Tunnel, and is a valuable transportation resource for citizens without access to cars, and for employers. The most recognized economic development initiatives in Cape Charles include Bayshore Concrete Products Corporation, Baymark Construction and the Sustainable Technology Park.

Bayshore Concrete Products Corporation is the largest employer in the Town, with approximately 360 employees. The company, which was originally established in 1961 to produce concrete components for the Chesapeake Bay Bridge Tunnel, now manufactures and supplies precast concrete structures for a wide range of utility and construction projects.

Baymark Construction, the developer of Bay Creek residential and golf community, is becoming a major employer in the Town. The new residential and golf development will generate jobs through the construction of two golf courses, a marina facility, and up to 3,000 residential housing units. The economic impact of the new development will benefit the Town by providing job opportunities for local citizens, and by providing additional revenue from both real estate taxes from improved property, and other tax categories across the community. An increased residential population will have a positive impact on Cape Charles' downtown area, with more shoppers creating a demand for more shops, filling up empty storefronts on Mason Avenue. The new development will also enhance the attractiveness of the Sustainable Technology Park to prospective businesses.

The Cape Charles Sustainable Technology Park is one of the country's first eco-industrial parks, and has been chosen by the President's Council on Sustainable Development as the site of a prototype industrial facility. The Park conveys sustainability by promoting lasting economic development which capitalizes on the region's natural and cultural resources, while preserving and enhancing these resources for the benefit of future generations. Many of the components of the Park are already in place. Building One, a 30,400 square foot multi-tenant facility, has just been completed and is leased to a manufacturer of water desalinization components. The building was designed to be compatible with the historic character of the Town, and meets "green building" standards, which are more energy efficient, sensitive to the environment and cost effective than those of traditional

structures. The Industrial Development Authority, which owns and operates the Park, is actively recruiting environmentally responsible businesses. The Park is expected to create many diverse and long-standing job opportunities for residents of both the Town and region, while at the same time protecting valuable resources for future generations. Economic revitalization of the Town has been greatly enhanced through the Sustainable Technology Park concept, which has strong marketing and tourism potential. The Park has been instrumental in gaining national and regional recognition for Cape Charles. As a result, the Park has attracted new businesses and considerable investment in the Town.

The Town has harbor and railroad infrastructure which is already established to support industrial activity. This infrastructure allows convenient accessibility to rail and highway networks, as well as ocean and inland waterways. The harbor and railroad are valuable assets in terms of economic development for Cape Charles.

Harbor

The Town's harbor area supports both industrial and recreational activity, and is conveniently accessible to the Sustainable Technology Park. Industrial activities at the harbor include Bayshore Concrete Products Corporation and the Eastern Shore Railroad. The harbor is dredged to a depth of approximately 18-19 feet, providing clearance for large commercial vessels. Recreational use of the harbor is heavy, especially during summer months. The harbor's 13 boat slips are leased by both commercial and recreational boaters, with demand for the slips often exceeding supply. The harbor's two public boat ramps are also heavily used, and the parking lot is usually filled to capacity on weekends. The harbor is economically beneficial to the Town, both in terms of current commercial and recreational use, and for its strong potential to attract future industrial activity and tourists. The harbor is located adjacent to the historic downtown area, although pedestrian access is currently limited and not well marked. Bulkhead improvements are currently underway on the south side of the inner harbor, and the two public boat ramps are scheduled to be rebuilt by the Department of Game and Inland Fisheries.

Railroad

Cape Charles came into existence because of the railroad, which continues to play an important and visible role in the Town. The Eastern Shore Railroad, owned by the Accomack-Northampton Transportation District Commission, is headquartered in Cape Charles, which serves as the facility and equipment maintenance center for the Railroad. Commodities transported by the Railroad include coal, stone, chemicals, grain, concrete, brick and lumber, with over 50% of these commodities originating or terminating on the Eastern Shore. The Railroad operates a ferry barge for transporting railroad cars to Norfolk. The ferry barge runs on a daily basis and has the capacity for 25 railroad cars.

**Goals, Objectives and Strategies
for the
ECONOMICS ELEMENT**

GOAL: *Increase the economic vitality of the Town and its citizens.*

OBJECTIVE: Improve job opportunities in Cape Charles.

STRATEGIES:

Quality jobs, entrepreneurial activity, expanding markets, and capturing new trade are the essential elements that will increase the viability of economic opportunities in Cape Charles. The employment base in the area has declined in general. As a result of long periods of economic distress and a host of other issues and circumstances, a certain segment of the population, particularly the more youthful population, may feel disenfranchised from the economic future. Enhanced job and economic opportunities and markets is part of the Town's overall goal to promote economic vitality. This will only come from calculated and consistent movement in several different directions simultaneously, through the pursuit of industrial expansion, retaining and expanding businesses in the commercial center, expansion of the visitor base, efficient use of resources and physical enhancement.

- Â Support development of the Sustainable Technology Park. The creation of the Sustainable Technology Park places the Town in a unique market position not duplicated elsewhere in the region. The Town can support the Industrial Development Authority in the development of the Park by providing access road and sewage system improvements, and pedestrian access connections.
- Â Continue cooperative efforts and seek new opportunities with the Industrial Development Authority, the Eastern Shore Economic Development Commission, Northampton County and its incorporated Towns, and other local, state and federal agencies to further the economic development of Cape Charles.
- Â Facilitate job training programs and adult education for citizens needing new or upgraded skills to qualify for employment or advancement.

OBJECTIVE: Encourage the location and expansion of compatible businesses in Cape Charles.

STRATEGIES:

- Â Develop an organized program to attract, target and recruit retail and other appropriate

businesses to Cape Charles.

- Â Promote adaptive reuse of existing downtown buildings. The large proportion of vacant commercial buildings available in the downtown area provide the Town with additional economic opportunity, while at the same time providing an opportunity for the Town to protect and preserve its historic character.
- Â Facilitate development of limited neighborhood businesses where historically appropriate by providing appropriate zoning for compatible commercial uses.
- Â Provide a competitive tax structure.
- Â Foster and facilitate retention and expansion of existing businesses and industries.

OBJECTIVE: Promote the harbor as a valuable resource for economic development.

STRATEGY:

- Â Promoting the harbor as a resource for industrial, commercial transportation and recreational uses is critical to the economic vitality of Cape Charles. The Town should ensure that harbor facilities are maintained and upgraded to support economic development initiatives already in place, as well as to ensure a competitive environment for future users. The Town should coordinate the establishment of a pedestrian accessway to link the harbor to the downtown area. The Town should also develop additional boat slips in the public harbor to promote commercial and recreational fishing activities in the Town.

OBJECTIVE: Promote tourism as an economic resource for the Town.

STRATEGIES:

The long-term economic health of Cape Charles will be dependent on attracting dollars from outside of the community. Commercial activity cannot flourish without expansion of the market from visitors. These “visitors” are only likely to spend their dollars if there is something which they value that they can purchase. Furthermore, there must be sufficient activity to attract them on the first occasion and quality with variety to cause them to return. Cape Charles’ waterfront location, public beach, historic character and natural beauty are its primary attractions to visitors. Two signature golf courses, which are currently under development, are also expected to attract many visitors to the Town. Visibility is another area of importance. Cape Charles could be one of the Eastern Shore’s best kept secrets. The number of people who know about Cape Charles is likely to be very small compared to the size of the potential market. Cape Charles is fortunate to have the opportunity to serve a potentially large market of visitors. For example, nearby Eastern Shore National Wildlife

Refuge and Kiptopeke State Park each attract about 100,000 visitors per year. Cherrystone Campground has about 3,000 campers a day during the summer months. The economic and lifestyle character of the intended tourist market for Cape Charles is likely to overlap with those associated with the Wildlife Refuge, State Park and its campground, and Cherrystone Campground.

- Â Protect the historic character and significance of the Town. The Town's historic character is one of its biggest assets. The Town should ensure the protection of its historic structures through enacting appropriate zoning regulations.
- Â Improve the Town's waterfront resources to attract tourists. The Town's waterfront location, beach, boat ramps and harbor resources are primary features for attracting visitors. Public access to waterfront amenities is a key issue.
- Â Promote the expansion and improvement of marina facilities on public land at the harbor.
- Â Pursue public acquisition of additional land in the vicinity of the harbor whenever feasible.
- Â Promote marketing and enhancement of harbor resources for recreational and scenic enjoyment of visitors and residents.

HOUSING

Housing in Cape Charles consists of 689 dwelling units, the majority of which are single-family houses built between 1885 and 1920. The houses range from small bungalow type buildings to larger, more substantial homes, grouped into neighborhoods which blend together but maintain distinctive character. The Town was originally laid out in a grid of 40 foot wide lots, with houses spaced close together. A limited number of vacant 40 foot lots exist in Town.

As shown in Table 6, single family houses account for 73% of the housing stock, while multi-family homes account for 23%. The vacancy rate probably allows for a reasonable degree of choice in the single family market. Most multi-family housing is located at Seabreeze Apartments in the northwest part of Town, and Heritage Acres on the east end of Town, which together make up 126 of the 161 multi-family dwelling units. The multi-family rental market supply is mostly restricted to elderly and low-to-moderate income residents. However, an increasing number of rental units is becoming available as a result of increased rehabilitation efforts to multi-family rowhouses throughout the Town, which may provide housing for new workers as the demand for services increases beyond the current labor force. Approximately 43% of the housing stock in Town is owner-occupied, while 39% is renter-occupied and 18% is vacant.

**TABLE 6
HOUSING OCCUPANCY & TYPES
CAPE CHARLES - 1990**

<u>Housing Types</u>	<u>Units</u>	<u>Percent</u>
Single family	502	73%
Multi-family	161	23%
Mobile Home	13	2%
Other	<u>13</u>	<u>2%</u>
Total Units	689	100%

<u>Housing Occupancy</u>	<u>Units</u>	<u>Percent</u>
Owner-occupied	299	43%
Renter-occupied	268	39%
Vacant*	<u>122</u>	<u>18%</u>
Total Units	689	100%

* Note: of Vacant housing units, 31 are for rent; 11 are for sale; 7 are rented or sold but not occupied; and 7 are for seasonal, recreational or occasional use.

Source: 1990 U.S. Census

A residential development is currently underway for a large tract of approximately 1,750 acres within the annexed area of the Town. Although the developer has not specified the actual number

of new homes to be constructed, the annexation agreement allows up to 3,000 additional dwelling units to be built on the annexed land. The new development is discussed in more detail in the Land Use chapter of this Comprehensive Plan.

The need to improve housing conditions in parts of Cape Charles has been a major issue in past decades, and continues today. Dilapidated, abandoned and seriously substandard housing is of concern to all citizens of the Town. Many rental properties are in substandard condition, and some housing in all parts of Town appear to be in very poor condition. A large percentage of certain areas in the Town are seriously substandard with isolated problems interspersed throughout the Town. Problems include sagging roofs, missing siding, hazardous entryways, missing windows, deteriorating appearance, and cluttered, unkept yards and outbuildings. The Town has adopted and currently enforces an ordinance to enforce the repair or clearance of dilapidated structures, and requires that all existing buildings and structures be properly maintained to protect the occupants from health and safety hazards that might arise from improper maintenance or use of a building.

The majority of substandard housing is in the northeast section of Town. In 1995 the Town was awarded Community Block Grant funding for the rehabilitation of 30 substandard houses located in the northeast area. The rehabilitation project, known as the Northeast Neighborhood Comprehensive Community Development Project, is currently underway.

**Goals, Objectives and Strategies
for the
HOUSING ELEMENT**

GOAL: *Ensure that housing in Cape Charles is safe, decent and sufficiently affordable to meet the varying needs of the residents, while retaining compatibility with the historic character of the Town.*

OBJECTIVE: Eliminate substandard housing in Cape Charles.

STRATEGIES:

- Â The northeast area faces some of the most serious housing concerns found in Cape Charles. The Town’s strategy is to continue to work with these neighbors to provide them with encouragement, assistance and partnership in eliminating substandard housing conditions.
- Â Continue efforts to attract funds from federal and state sources for housing rehabilitation and development of affordable housing. Several federal and state funding sources are potentially available to assist low-to-moderate income residents with housing rehabilitation. Identify rehabilitation focus areas and develop strategies and programs to rehabilitate or replace substandard housing and eliminate vacant dilapidated structures which can’t be rehabilitated. Priority in these efforts should be targeted to the northeast area, where the largest group of houses in poor condition exists.
- Â Promote energy conservation measures in rehabilitation projects.
- Â Provide information to Town citizens about programs that provide emergency home repair, preventive maintenance, and counseling in home finance, budgeting, maintenance and sanitary health conditions.
- Â Seek both public and private assistance from nonprofit groups such as Habitat for Humanity, for home improvements for low-to-moderate income residents.
- Â Advocate the use of “sweat equity” concepts to improve the quality of the housing stock. Labor constitutes a large part of the cost of repairing a house; if this labor is donated, the out-of-pocket “cash” needed is substantially reduced.

OBJECTIVE: Encourage maintenance of all housing structures, and emphasize measures to prevent housing decline or destruction.

STRATEGIES:

- Â Ensure adequate enforcement of building maintenance codes of the Town and State. It is important to preserve and protect the existing housing stock in Town, to ensure that adequate housing is available to meet the needs of the residents, and to preserve neighborhood character. The Town should encourage maintenance of all existing housing structures so that substandard conditions are reduced or eliminated, and continue to enforce local ordinances for governing the maintenance of existing structures.

- Â If a property owner is unable to repair the structure, the Town should encourage or work with the property owner to seek assistance from public and/or nonprofit groups and churches to assist the tenants of the properties in need of repair, to help them to purchase and/or repair the house.

- Â When a property owner is unwilling to repair the structure, the Town should encourage another owner for the property who is capable of maintaining the unit in good repair. The Town could work with local realtors to establish a potential pool of buyers. When an owner is unwilling or unable to maintain the property, these buyers could be notified to contact the owner with a purchase offer. Priority should be given to residents of the Town.

OBJECTIVE: Encourage construction of compatible and affordable infill housing on existing vacant lots throughout the Town's historic grid.

STRATEGY:

- Â Infill development promotes housing affordability by using existing infrastructure and services rather than requiring expensive extensions of roads, water and sewer lines, and other facilities. In addition, infill development avoids unnecessary sprawl and the consumption of open space in outlying areas. It is the Town's strategy to promote infill development to minimize site development costs and maximize the development potential of land convenient to public facilities and services, by ensuring that the zoning ordinance allows for infill residential development.

OBJECTIVE: Ensure that new residential development is compatible with, and does not detract from, the Town's existing residential development.

STRATEGY:

- Â Encourage that future residential development adjacent to the Town's historic grid be compatible with the Town's existing neighborhoods. Large scale residential development is currently underway for the large vacant tracts of land surrounding the Town's residential neighborhoods, with the possibility of up to 3,000 additional dwelling units. It is important

that the Town promote future residential development patterns which maintain and reinforce the visual separation of the Town's historic grid from surrounding development, to protect the historic character and identity of the Town, while also ensuring that new development maintains a connection with the Town's original historic area.

COMMUNITY FACILITIES

The Community Facilities section provides a summary of all the public facilities and services provided by the Town, including such services as public safety, water and sewer utilities, recreation and solid waste management.

MUNICIPAL BUILDING

Built in the 1930s, the Municipal Building is a two-story brick building which houses the Town Manager, Treasurer, Code Enforcement, Fire Department, Police Department, administrative offices and a municipal meeting room. All administrative activities, as well as the meeting room, are housed on the second floor of the building. The building is in fair to poor condition, and is not handicapped accessible. Space for administrative activities, public hearings and other public uses is limited; the present facility is undersized for the Town's needs and leaves little to no room for expansion.

PUBLIC SAFETY

Police protection for the Town is provided by the Cape Charles Police Department. The Department owns three police cars and currently has six police officers on staff, and one police dog. Fire protection and emergency medical services for the Town and surrounding area are provided by the Cape Charles Fire Department and Rescue Squad, made up of approximately 30 volunteers. The Rescue Squad has recently relocated to a new building in Bayview.

WATER SUPPLY

The Town's water supply comes from a ground water source public water system, obtained from two wells which withdraw approximately 130,000 gallons of water per day. Both wells are screened in the upper and middle Yorktown aquifer at depths of 230 feet and 210 feet. The water supply is stored in a water tower with a tank capacity of 300,000 gallons. The water tower, painted in the image of the Cape Charles Lighthouse, also serves as a prominent landmark for the Town and has won an award for design. Included in the public water system is a treatment plant with an onsite laboratory and treatment facilities for iron and manganese removal, water softening, ph adjustment, fluoridation and disinfection. The treatment plant and wells are located on Route 184 at the outskirts of Town. Extensive improvements to the public water system were done in 1992 and one of the wells was drilled in 1996 as a replacement for an older well which was subsequently abandoned.

A ground water withdrawal permit has recently been approved by DEQ which allows an increased withdrawal capacity for accommodating anticipated future growth needs in the Town. Under the new permit, at full capacity, approximately 20% of the water withdrawal will be allocated to the Town, approximately 13% will be allocated to the Sustainable Technology Park and approximately

67% will be allocated to the residential and golf development. The current monthly permit amount of 5.8 million gallons per month (187,100 gallons per day) would be increased to a maximum monthly withdrawal of 25.3 million gallons per month (816,129 gallons per day) and an annual withdrawal of 252.2 million gallons (690,959 gallons per day). Permit specifications include the drilling of two new production wells: one will be screened in the upper and middle Yorktown aquifer at 210 feet; the second will be screened in the lower Yorktown aquifer at 280 feet.

A ground water impact assessment which was conducted for the Town found that over the 10-year permit period, no measurable saltwater intrusion or other water quality changes are expected to occur. The permit contains many restrictions specifically designed to minimize any adverse impacts, including saltwater intrusion, from the withdrawal. It is possible that some salt water intrusion may occur in the lower Yorktown aquifer in the long term (100 years), in which case reverse osmosis can be used as a contingency.

WASTEWATER TREATMENT

The Town owns and operates the only municipal wastewater treatment facility in Northampton County. The facility serves all residents and businesses in Cape Charles, and has the capacity to treat 250,000 gallons of wastewater per day. Average daily flows are approximately 125,000 gallons per day. Treatment at the facility presently consists of secondary biologic decomposition of waste matter and includes ultraviolet light disinfection, with treated water discharging into the harbor. Sludge from the facility is disposed of at the County landfill. The entire collection system for the facility was upgraded in 1985, when old pipes were replaced by eight inch pipes. In addition, four pump stations were built or renovated. The lift station, located at the intersection of Mason Avenue and Bay Avenue, is in the vicinity of the public beach and is considered a nuisance by residents due to unsightliness and smell associated with the grit collector; part of the smell can be attributed to a storm drain located near the lift station. The Town's wastewater treatment plant has undergone inspections by the Department of Environmental Quality in Spring of 1999, and received a satisfactory rating.

Due to the anticipated increase in demand from a new residential/golf community, the wastewater treatment facility is expected to eventually increase in capacity; planned future capacity is 750,000 gallons per day. Funding associated with the expansion has been committed by the developer. The sewage needs of the Sustainable Technology Park's first building is provided by the existing capacity of the wastewater treatment facility. The Industrial Development Authority will be entering an agreement with the Town to provide financing for future capacity needs of the Park. Planned wastewater treatment facility upgrades also include a surge tank. Adequate ammonia treatment has sometimes been a problem at the facility, and the Town is currently in the process of pursuing funding for a surge tank which will enable the facility to sufficiently treat excess ammonia. No time frame has been established for wastewater treatment facility upgrades.

An increased capacity of the wastewater treatment facility will lead to a higher volume of treated discharge, resulting in an increased amount of nitrogen entering the Chesapeake Bay. Excessive nitrogen loads adversely impact the water quality of the Bay, and one of the goals of the Eastern Shore Coastal Basins Tributary Nutrient Reduction Strategy is to ensure no net increase in nitrogen. It is important to take this into consideration when planning for upgrades. The installation of denitrification equipment at the wastewater treatment facility when it is upgraded for increased capacity is one way to reduce the nitrogen load from the facility's discharge.

STORMWATER SEWER SYSTEM

The Town's wastewater treatment facility is categorized as a sanitary sewer system, which means it is separate from the Town's stormwater sewer system. The sanitary sewer collection system experiences inflow and infiltration problems, most likely caused from stormwater entering the sanitary sewer system at cross connections from the stormwater sewer system, and possibly from individual residential plumbing and illegal taps into the sanitary sewer system, such as basement sump pumps. An inflow and infiltration study has been done in what are considered the worst culprit areas, and is now being assessed. The Town's stormwater sewer system discharges from several pipes located in the vicinity of the public beach. Because the stormwater discharge pipes are located at or below sea level, drainage is a problem during storms which accompany high tides.

SOLID WASTE

The Town provides solid waste collection to residents and commercial users. Collection vehicles owned by the Town include a trash compactor, dump truck and flatbed lift truck. A work force is employed to carry out solid waste collection twice a week for homes and three times a week for commercial users. Solid waste is deposited in the County landfill. The Town does not currently have a recycling program. Northampton County's recycling program is very limited, mainly consisting of glass recycling collection bins at the County's greenbox trash sites. The County has no recycling program for plastics or newspaper.

SCHOOL

The former Cape Charles School, a large brick structure which operated as a public school from 1912 until 1992, now houses municipal offices, including the Department of Motor Vehicles and The Sustainable Technology Park Authority. The property is owned by the Town, which is in the process of retaining a consultant to perform an adaptive re-use study to determine possible future uses and alternatives for the building.

LIBRARY

Northampton Memorial Library was the first memorial library to be established in Virginia, dedicated

in 1927 to the memory of local men who died in WWI. The library is housed in a small building which was originally the First Presbyterian Church, built in 1910. The library is completely owned and operated by the Town, through the appointment of a Library Board. Financial support for the library is provided by the Town through fundraising activities of the Library Board, and from private donations. Support is also provided by the Cape Charles Women's Club, which contributes volunteer time and books.

**Goals, Objectives and Strategies
for the
COMMUNITY FACILITIES ELEMENT**

GOAL: *Maintain an appropriate level of community services by providing needed public facilities.*

OBJECTIVE: Ensure that adequate water and wastewater treatment facilities exist for the Town's residential and commercial users.

STRATEGIES:

- Â Prepare and annually update a Capital Improvement Program that consists of a rolling five-year financial plan and budget.
- Â Continue to maintain and improve water and sewer facilities to meet present demands and future needs, including residential growth and commercial capacity.
- Â Maintain a fair and adequate system of taxation and user charges to provide quality services and facilities to residents. If new facilities are required then negotiations with the developer should take place so that undue burdens are not placed on the existing tax base.
- Â Investigate potential funding from state and federal sources to add denitrification capability to the wastewater treatment plant when it is upgraded.

OBJECTIVE: Eventually eliminate all stormwater from sanitary sewage collection system.

STRATEGY:

- Â Identify connection points where stormwater enters system and correct faulty connections.

OBJECTIVE: Promote efficient and cost effective solid waste collection and removal.

STRATEGY:

- Â Disseminate information about Northampton County's recycling program and drop-off sites for recyclables. The Town should play a role in advocating an expanded recycling program within the County which is both environmentally and economically beneficial. Recycling has proven to be an effective method to manage and collect solid waste, and the Virginia General Assembly has mandated that 25% of all solid waste in the State must be recycled.

OBJECTIVE: Ensure that adequate facilities exist to carry out administrative functions and governmental activities of the Town.

STRATEGIES:

- Â Consider possible alternative uses for the Cape Charles School property. Evaluate the adequacy of the school facility space and needed services for Town needs, and develop alternative uses for the facility.
- Â Evaluate the adequacy of the Municipal Building in relation to its use as the Town Hall and administrative offices.
- Â Identify funding sources and options for renovation and/or replacement of community facilities, Cape Charles School and Municipal Building.

PARKS, RECREATION AND CULTURAL FACILITIES

The Town contains a number of recreational facilities, many of them water-oriented. These recreational resources benefit not only the citizens of Cape Charles, but also serve as an attraction to visitors, tourists and sportsmen. Existing public recreational facilities include the following:

HARBOR

Within the Cape Charles Harbor is a small marina owned by the Town, with 13 boat slips, a harbor master's office, and two public boat launching ramps. Cape Charles Harbor is used by residents of the Town as well as regional and out-of-state visitors. The harbor is in need of expansion due to current traffic and demand for both long-term and transient boat slips. The harbor has the capacity for approximately 20 additional boat slips. Pump-out facilities are adequate to serve the demand; however, permanent restroom facilities and showers are needed. Currently, only a port-a-john exists. The Virginia Department of Game and Inland Fisheries maintains two public boat ramps located at the harbor, and plans to rebuild the ramps, as well as construct handicapped accessible walkways. The harbor's public parking lot provides parking for approximately 75 vehicles and is often filled to capacity, especially during summer months when use of the boat ramps increases.

PUBLIC BEACH

The Town owns one of two public beaches on the Eastern Shore of Virginia, and the only public beach on the bayside of the Eastern Shore. The beach extends one-half mile along Bay Avenue with a paved walkway bordering the length of the beachfront. Residents and visitors of the Town use the beach for swimming, sunbathing and similar recreational pursuits. Public access onto the beachfront is provided by two wooden walkovers located near the end of Tazewell and Randolph Avenues, as well as the Town's Fun Pier which also has a wooden walkover. The Pavilion and several park benches are constructed on the paved walkway; the Pavilion is one of the Town's prominent landmarks, serving as a visual symbol for the Town and featured on the Town's seal. Restroom facilities do not exist at the public beach.

The beach is stabilized with buried groins and a bulkhead. In 1987 the Army Corps of Engineers dredged the harbor and channel and deposited the sand along the beach area, which greatly expanded the width of the beach and improved the quality of sand along the beachfront. Beach erosion is an ongoing problem and will require sand replenishment on a periodic basis in order to maintain a sandy beachfront. Shoreline erosion is discussed in more detail in the Natural Resources chapter.

RECREATIONAL BOATING AND FISHING

Recreational boating and fishing is a very popular sport in Cape Charles as well as the entire Eastern

Shore. Cape Charles is home to one of six public boat ramp sites in Northampton County, and one of only three sites on the County's Bayside. Given the popularity of recreational boating and fishing in the region, the Town serves as an important water access site for the County. Recreational finfish in this area include striped bass, spot, croaker, gray and speckled trout, channel bass, black drum, flounder, bluefish and channel catfish. King's Creek Marina, a commercial facility, provides additional boating and fishing opportunities including 100 boat slips and a launch ramp. Proposed renovations at the marina include up to 224 boat slips, as well as a restaurant, pool and tennis courts. Recreational fishing opportunities are limited, however, for people without access to boats. There is a need to meet current and future needs for fishing access by providing fishing opportunities for residents and visitors who would like to fish in the Chesapeake Bay but lack boat access to do so.

TOWN PIER

Adjacent to the public beach is a municipal pier which extends across the stone jetty at the entrance of the harbor. The wooden pier, which is known as the Fun Pier, has a railed siding and several built-in benches, and is frequently utilized by Town residents and visitors for sightseeing. Fishing opportunities are limited at the Fun Pier, due to the stone jetty. The Fun Pier needs to be extended beyond the stone jetty, to provide public access to recreational fishing.

CENTRAL PARK

A central park is located in the center of the Town, laid out as part of the Town's historic street grid. The role of the park has changed over the years and no longer plays a central role as part of Town life. Several buildings have been constructed in the park, including a former school which now serves as a municipal center, two temporary buildings which are in poor condition, playing fields, which are used occasionally but not on a regular basis, and a public tennis court, built for the Town by Brown and Root.

WILDLIFE PRESERVE

The Coastal Dune Natural Area Preserve encompasses a 29-acre habitat protection area located next to the Sustainable Technology Park. The Preserve features an ecologically significant secondary dune system which is one of the last remaining in Virginia. A wooden plank boardwalk runs through the Preserve, beginning at the Sustainable Technology Park and terminating at the Chesapeake Bay, offering a scenic view of the Bay's shoreline.

OTHER RECREATIONAL RESOURCES

Public recreational facilities are supplemented by a number of public programs and private facilities, including numerous special events and festivals, Arts Enter Cape Charles (a nonprofit cultural arts organization), a little league baseball park, a commercial marina, and a private golf course and country

club. Construction of an upscale golf course is currently underway, as part of a residential and golf community.

The Cape Charles Museum and Welcome Center is housed in a building which was formally a power plant, built in 1947. Delmarva Power donated the building, a local landmark constructed of brick and glass, to the Cape Charles Historical Society. The Museum serves as a cultural center dedicated to preserving and presenting the history of Cape Charles and the surrounding area.

Youth-oriented recreational facilities are lacking in Cape Charles, and the need for a community center has been identified by Town residents. At a public forum conducted in Cape Charles by the Accomack-Northampton Planning District Commission in 1997, a youth center was rated as one of the Town's highest priority needs.

**Goals, Objectives and Strategies
for the
PARKS, RECREATION AND CULTURAL FACILITIES ELEMENT**

GOAL: *Provide sufficient recreational and cultural facilities.*

OBJECTIVE: Ensure that recreational and cultural facilities and activities are appropriate and adequate in number, size and location to accommodate the needs of Town residents.

STRATEGIES:

- Â Expand and improve public harbor and marina facilities. Long term development and improvements should include bulkhead replacement, additional boat slips, upgraded lighting, permanent restroom facilities, showers, laundry facilities and improved parking.
- Â Public acquisition of underdeveloped waterfront lands should be pursued. The Town has few public access sites, even though the vast majority of waterfront land is undeveloped.
- Â Establish pedestrian accessway from the harbor to downtown Mason Avenue. Access has not been fully developed on public lands to take advantage of the recreational potential.
- Â Re-establish the Town's central park as a community park facility. The park should be utilized for both passive and active recreational pursuits. Improvements to the Park should include landscaping, footpaths, a multi-purpose lawn area, and designated areas for specific uses such as playgrounds, ballfields and special events held by the Town.
- Â Support cultural activities and the arts in Cape Charles. The Town is fortunate to have several cultural amenities already in place, such as Arts Enter Cape Charles and the Cape Charles Museum. The Town should continue to support facilities and activities which enhance the cultural awareness of both local residents and visitors.
- Â Continue to maintain and improve conditions of the public beach through beach restoration activities.
- Â Expand recreational fishing opportunities for people without access to boats. Consider extending the Fun Pier beyond the stone jetty.
- Â Provide leadership and facilities for recreation and other activities for youth and adults.
- Â Establish a Town Community Center. The Community Center should serve as a focal point for activities involving people throughout the community, including existing residents and

anticipated population growth.

NATURAL RESOURCES

The natural attributes of the landscape continue to influence how and where a community grows. To a great extent topography, drainage, soil characteristics and other natural features define areas suitable for development. A brief review of relevant characteristics will serve to highlight those features which exert an influence on growth patterns and identify potential problem areas.

TOPOGRAPHY

Cape Charles lies on a peninsula and is surrounded by water on three sides. The Town is situated directly on the Chesapeake Bay, bordered by King's Creek to the north and Old Plantation Creek to the south. The land in Town is low lying and relatively flat, with the highest point of elevation at 15 feet, and a slope of less than 1%. Most of the developed land in Town is between 5 and 10 feet in elevation. Due to its low-lying topography, Cape Charles is extremely vulnerable to flooding. Hurricanes and northeast storms, which are characterized by high winds, heavy rainfall, higher than normal tides and higher than normal wave action, cause the most damaging flooding potential.

Portions of Town are located within the 100-year floodplain, shown in Figure 6, as delineated by the Federal Emergency Management Agency (FEMA). Land within the 100-year floodplain statistically averages one flood in a 100-year time period, which equates to a 1% chance of flooding in any given year. However, such flooding may occur as many times as conditions cause. Development within a floodplain can pose a threat to the safety and welfare of the individual property owner because of periodic flooding and wetness. The floodplain and associated wetland areas provide valuable wildlife habitat areas as well as protect upland areas from erosion and flooding. The Town participates in the FEMA National Flood Insurance Program, a federal program enabling property owners to purchase flood insurance.

SOILS

As shown in Figure 7, Bojac and Munden soils are the predominant soils in Cape Charles. Bojac soils are considered very suitable for development, while Munden soils are considered fair. Poor soils, which are generally unsuitable for development, are found along the edges of the Town's shorelines and in isolated areas inland. All of the soils in Town are either hydric or highly permeable, with a shallow depth-to-ground water. Highly permeable soils are extremely susceptible to pollutant leaching and have a high potential for ground water pollution. Hydric soils are primarily wet and poorly drained. Residents and businesses in the Town are served by public sewer, so ground water contamination due to septic filter fields is not a major issue in the Town; however, approximately 12 septic systems still exist. Individual soil types within Cape Charles are discussed below:

Assateague Sand (AsE):

Gently sloping to very steep, very deep and excessively drained. On and between dunes along the Bay. Very rapid permeability and low water capacity. Used mainly for wildlife habitat and recreation area. Permeability,

Figure 6
100-Year Floodplain

Figure 7
Soils

slope, sandy texture and the hazards of seepage and instability limit this soil for community development.

Beaches (BeB):

Sandy marine sediments deposited by wave action; used mainly for wildlife habitat and recreation area. Tidal flooding, severe erosion and accretion of sediments limit most other uses.

Bojac Fine Sandy Loam (BoA):

Nearly level, very deep and well-drained farmland. Moderately rapid permeability and instability of the soil are limitations to community development.

Bojac Loamy Sand (BhB):

Gently sloping, very deep and well drained. Moderately rapid permeability and instability of the soil are limitations to community development.

Camocca Fine Sand (CaA):

Nearly level, very deep and poorly drained. Very rapid permeability. Used for wildlife habitat and recreation. Seasonal high water table, flooding, sandy texture and instability hazard limit soil for community development.

Chincoteague Silt Loam (ChA):

Nearly level, very deep and very poorly drained soil located primarily in tidal marches. Tidal flooding, the seasonal high water table, ponding, low strength, and salt are major limitations for community development.

Dragston Fine Sandy Loam (DrA):

Nearly level, very deep and somewhat poorly drained. Used mainly for cultivated crops and woodland. Seasonal high water table, rapid permeability, poor filtering capacity, seepage limit community development.

Fisherman Fine Sand (FhB):

Nearly level, gently sloping, very deep and moderately well drained.

Molena Loamy Sand (MoD):

Moderately sloping to steep, very deep and somewhat excessively drained. Rapid permeability. Slope, high permeability and droughtiness limit soil for community development. Used mainly for woodland and wildlife.

Munden Sandy Loam (MuA):

Level, deep and moderately well drained. Seasonal high water table and rapid permeability limit development.

Nimmo Sandy Loam (NmA):

Nearly level, deep and poorly drained. Used for farmland when drained. Seasonal high water table, seepage, and rapid permeability are limitations for community development. Limited for roads and streets.

Polawana Loamy Sand (PoA):

Nearly level, very deep and very poorly drained. Used mainly for woodland. Seasonal high water table, rapid permeability, flooding and wetness are major limitations for community development.

Udorthents & Udipsammments (UPD):

Mainly fill and spoil materials and sandy materials in excavated areas. Characteristics are so variable that on-site investigation is necessary to determine suitability for most uses.

SURFACE WATER

Surface water in Cape Charles includes the Chesapeake Bay to the east, King's Creek to the north, and Old Plantation Creek to the south and east. All surface water has a high saline content, except for several small ponds located within the Town, which are fresh or brackish water. Cape Charles is characterized by extensive shorelines, ranging from sandy beaches on the Chesapeake Bay to marsh fringes on King's Creek and Old Plantation Creek. Approximately 19,200 feet (3.6 miles) of shoreline front directly onto the Chesapeake Bay.

Cape Charles Beach, which begins at the Cape Charles harbor and extends north approximately 2,800 feet (½ mile), consists of a narrow sandy beach, bordered by a boardwalk and public street. North of Cape Charles Beach is approximately 4,400 feet (¾ mile) of natural shoreline bordering the Bay, extending to the mouth of King's Creek. This shoreline consists of a sandy beachfront which becomes grassy towards King's Creek Inlet. At the mouth of King's Creek, the shoreline extends for 9,500 feet (1.8 miles), forming the eastern boundary of the Town. The shoreline of King's Creek is characterized by wetlands, consisting of fringe and embayed marsh. A large berm was recently constructed along the shoreline, extending from the Coast Guard housing area to the mouth of King's Creek. The berm constitutes part of the dredge spoil site for the dredging of King's Creek Marina, a 100-slip commercial marina located on the creek.

South of Cape Charles Beach and harbor is a 12,000 foot (2.2 mile) stretch of natural shoreline fronting the Bay, characterized by a sandy beach. The northern half of this beach is wide and sandy, with sand dunes. Dredge spoil materials have been added to the shoreline in this area. The southern half of the beach is sandy and narrow, with tree stumps and woody debris, and an elongated pond running behind and parallel to the south end of the beach. The beach extends to the mouth of Old Plantation Creek, where the shoreline turns inland, extending approximately 14,500 feet (2 ¾ miles) and forming the southeastern boundary of the Town. The shoreline of Old Plantation Creek is characterized by wetlands consisting of fringe and embayed marsh.

The entire Town lies within the Chesapeake Bay watershed, draining either directly into the Bay, or into Old Plantation Creek and King's Creek, and then into the Bay. The Chesapeake Bay has played an important role in the history and identity of Cape Charles and the Eastern Shore, providing valuable economic, environmental and recreational resources, and serving as the nation's largest and most productive estuary. However, pollution is causing the Bay's water quality to decline. Pollution can be classified as either point source or nonpoint source. Point source pollution results from discharge at a specific point or pipe, such as a wastewater treatment plant. Nonpoint source pollution is not attributable to distinct, identifiable source, but enters water indirectly.

NONPOINT SOURCE POLLUTION

Nonpoint source pollution includes stormwater runoff from developed land and impervious surfaces, runoff from agricultural land, and erosion of soil and shorelines. Under natural conditions, water running off the land soaks into the ground and is filtered by soils and vegetation root systems. Disturbing sensitive areas can increase the speed and volume of surface runoff, resulting in erosion, sedimentation and siltation — a particularly devastating process to a Town with an economically vital harbor. Pollution of the water column and a reduction in the amount of light reaching submerged aquatic plants choke important parts of the aquatic food chain. Ultimately, spawning grounds and benthic habitats are destroyed, resulting in serious problems for commercial fishermen. In settled areas, where much of the land is paved or “impervious,” stormwater cannot soak into the ground and runs off very rapidly, carrying with it pollutants such as oil, sediment, chemicals, pesticides and excess nutrients from fertilizer, which eventually reach the waters of the Chesapeake Bay unless filtered or retained by some structural or nonstructural technique.

Land use and development in the Town can affect the water quality of the Bay through nonpoint source pollution, which can be reduced by land management techniques that minimize the amount of impervious surfaces, thereby increasing the filtering capacity of the land. The Town has enacted a Chesapeake Bay Preservation Act Program, which enables the Town to protect water quality through local land use regulations. The Bay Act is a Virginia Law, administered by the Chesapeake Bay Local Assistance Department, which provides a legislatively mandated approach to protect and improve the waters of the Chesapeake Bay and its tributaries by reducing nonpoint source pollution through wise resource management practices. The Town has designated Chesapeake Bay Preservation Areas, and has applied certain development standards to these areas. The Town’s CBPAs consist of Resource Protection Areas (RPAs), Resource Management Areas (RMAs) and Intensely Developed Areas (IDAs), as shown in Figure 8. Future development activities in these preservation areas are guided by the Town’s zoning ordinance, which establishes standards to mitigate development impacts on water quality.

RPAs consist of sensitive lands at or near the shoreline which have important water quality value to the Bay, such as tidal shorelines and wetlands. RPAs also include a 100-foot vegetated buffer area landward of these features, where development activities are restricted. RMAs consist of sensitive land types which have the potential for causing significant water quality degradation if they are improperly developed. RMAs in Cape Charles include the 100-year floodplain and nontidal wetlands. Development within RMAs should be planned in a manner which reduces the impact of nonpoint source pollution. IDAs consist of densely developed areas that are largely devoid of natural vegetation. The Town’s IDAs are located adjacent to the Cape Charles harbor and at the King’s Creek Marina. IDAs are designated to focus development in areas where it is already concentrated and supported by existing infrastructure; the intent of IDAs is to serve as areas where future redevelopment activity is focused, while improving water quality. New development and redevelopment in IDAs must achieve a 10% reduction in nonpoint source pollution from storm water runoff. Opportunities for water quality improvement through redevelopment of IDAs includes re-

establishing natural vegetation and establishing a vegetated buffer over time to promote the water quality benefits of natural vegetation.

BOATING ACTIVITY

Another element of nonpoint source pollution includes boating activity. Due to its location on the

Figure 8
Chesapeake Bay Preservation Areas

Chesapeake Bay, Cape Charles is popular with recreational boating and fishing enthusiasts. In addition, commercial fishing is a small yet visible activity in Cape Charles. While boating-related activity has a positive impact on the local economy, it can adversely impact Bay water quality if not handled properly. Several boat-related facilities are located in the Town, including a public marina and harbor as well as a commercial marina. Boating activity can potentially degrade water quality from inappropriate discharge of human waste and trash, fuel spills, oil spills and toxic bottom paints. In order to lessen the impact of water pollution through proper waste disposal, the Virginia Department of Health requires marinas to have restroom facilities, pump-out facilities and sewage dumping stations for portable toilets. Yearly inspections are made by the Health Department to ensure that regulations are met.

Numerous shellfish grounds are located in waters near Cape Charles. According to the Virginia Marine Resources Commission (VMRC), over 100 leasing beds occur in the Town's vicinity, including approximately 50 in Old Plantation Creek, 18 in King's Creek and 45 in Cherrystone Inlet. Almost all creek bottom of the three creeks consists of leased grounds. The majority of these shellfish grounds is comprised of clam aquaculture, with the most intensive harvesting taking place in Old Plantation Creek, followed by Cherrystone Inlet. In addition to shellfish grounds, a substantial amount of submerged aquatic vegetation is located in the waters surrounding Town. Boating activity can impact fisheries in the area by causing increased water turbidity which can choke shellfish grounds and decrease the amount of sunlight reaching submerged aquatic vegetation.

Plans for the renovation of King's Creek Marina could also impact the area's fisheries by associated dredging which could damage shellfish grounds through increased siltation. However, at least one aquaculture operator supports the dredging because of increased flushing. It is also important to note that the marina has been in place since 1916, before aquaculture operations began in the area. King's Creek Marina currently has approximately 100 boat slips. Planned renovations to the marina include taking out the current marina and dredging the marina footprint to a depth of seven feet, along with dredging of the channel. A dredge spoil site, including large berms and a pond, has been constructed near the marina. Dredging will take place within the State's regulatory time period of November 1, 2000 to January 15, 2001. Approximately 100 boat slips are expected to be constructed by 2001, with more added as demand requires. The majority of these slips will be floating docks, with one section of fixed timber dock for commercial watermen. The developer has secured a VMRC Joint Permit which will allow up to 224 boat slips at the marina. Future plans also include the addition of a restaurant, pool and tennis courts by the year 2003. Future redevelopment at the marina, which is designated as an IDA, is required to achieve a 10% reduction in nonpoint source pollution load.

GROUND WATER

Cape Charles, along with the entire Eastern Shore of Virginia, depends entirely upon ground water for its water supply needs. The Town's water supply is obtained from a ground water source public water system, derived from two wells located within the Town on Route 184. Ground water on the

Eastern Shore is made up of a series of aquifers — bodies of sediments capable of yielding water. The uppermost aquifer is called the Columbia aquifer, also known as the water table. In the Cape Charles area, the Columbia aquifer is approximately 40 to 70 feet thick. Below the Columbia aquifer lies the Yorktown aquifer system, consisting of upper, middle and lower units. The Town's water supply is withdrawn from the upper and middle Yorktown aquifer units. The Yorktown aquifer system is separated from the Columbia aquifer by confining layers of clay, which help protect it from contamination, but also impede the amount and rate of recharge.

Fresh water is supplied into the aquifer system by rainfall, which penetrates the soil and recharges ground water aquifers. The Eastern Shore ground water flow system is characterized by brackish water of the Bay to the west and salt water of the Atlantic Ocean to the east, with limited occurrence of freshwater. Most water in the Columbia aquifer flows laterally from the center of the Eastern Shore peninsula, discharging into the Atlantic Ocean and Chesapeake Bay. A much smaller portion of water flows down through the clays and silts that separate the Columbia aquifer from the underlying Yorktown aquifers. Ground water recharge occurs near the center spine of the peninsula, forming an island type freshwater lens. Ground water flows horizontally from the recharge area, discharging to the bay, ocean and associated wetland areas. The Town is not located within the spine recharge area.

The Eastern Shore of Virginia is divided into four wellhead protection areas, based on ground water divides created by pumping patterns of the major ground water withdrawers on the Eastern Shore. Cape Charles is located in Wellhead Protection Area E - Cape Charles Area. This wellhead protection area is the southern-most wellhead protection area on the peninsula. The Northampton County Landfill is located within this area. Major ground water withdrawals in the area include the Towns of Eastville and Cape Charles. Because ground water is a limited resource, water conservation is critical in protecting and managing this valuable resource. Overpumping of ground water is a concern for the Eastern Shore, and could lead to well interference, saltwater intrusion, and a deterioration of water quality. In Cape Charles, water conservation measures are crucial for maximizing the available water supply and meeting future demands.

The Town has recently been approved for a Ground Water Withdrawal Permit from DEQ allowing an increased withdrawal capacity of 25.3 million gallons per month, up from the previous maximum allowable withdrawal of 5.8 million gallons per month. A ground water impact assessment was conducted for the Town to study possible effects of the increased withdrawal, and found that over the 10-year permit period, no measurable saltwater intrusion or other water quality changes are expected to occur; however, it is possible that some salt water intrusion may occur in the lower Yorktown aquifer in the long term (100 years), in which case reverse osmosis can be used as a contingency. The Ground Water Withdrawal Permit specifies conditions and restrictions, including monthly withdrawal limits, which are designed to minimize any adverse impacts from the increased withdrawal capacity, such as salt water intrusion. The Permit also requires routine well monitoring for water quality and ground water level changes, to protect against water quality degradation. The

routine well monitoring helps to ensure that saltwater intrusion will not occur. If monitoring information indicates the potential for adverse impacts on ground water levels or water quality that are due to withdrawal, the Permit may be reopened to address those impacts.

Permit requirements include the drilling of two additional production wells in Town, to accommodate the increased withdrawal. The new wells will be drilled near Route 184, just inside the Town's corporate limits. The wells will be located in a low density rural area where agriculture is the predominant land use. The Town's wellhead protection measures consist of well lot restrictions mandated by the State. Because the wells make up the Town's only potential water supply source, the Town may wish to consider additional wellhead protection measures for its public wells in the future.

GROUND WATER CONTAMINATION THREATS

Leaking underground storage tanks may pose a potential threat to ground water quality. On the Eastern Shore, most underground storage tanks (USTs) contain petroleum products stored in tanks constructed of steel. The average life of a steel tank is approximately 15 years, although many are much older. The threat that USTs pose is primarily because the tanks are not visible. Leaks of USTs may not be detected until a substantial amount of pollutants have seeped into the surrounding soil. Corrosion of the tanks over time produces pin-hole type leaks resulting in discharge of many gallons over a short period. Gasoline contains benzene, toluene and xylene, all of which are detrimental to health. It has been estimated that one gallon of gasoline is sufficient to contaminate one million gallons of ground water. Older tanks are being replaced by new tanks made of material resistant to corrosion to eliminate leakage. The State Water Control Board indicates that there have been approximately 91 USTs in or near Cape Charles, from 33 registered users. Of these, 38 are still in operation, 15 are closed in ground, and 38 are closed and removed from the ground. None were reported leaking. Gasoline, diesel and kerosene are the materials stored in the tanks. The average age of the USTs in use in the Town is 20 years. **Appendix 1** presents information about USTs in the vicinity of Cape Charles, and shows the general location of USTs within the Town.

HABITAT

Cape Charles encompasses diverse and significant ecosystems which support a variety of wildlife and plant species. Forested upland areas are located in the southern portion of Town along the edges of Bay shoreline, and in several large tracts further inland. These forested areas, particularly near the Bay shoreline, provide important habitat for a variety of wildlife. The Town's beaches, shorelines and waterways also support a variety of species. The Virginia Department of Game and Inland Fisheries lists several species of animals as threatened in the Town and its vicinity. These species include, but may not be limited to, the Northeastern Beach Tiger Beetle and the Bald Eagle.

Cape Charles is located along one of the most significant flyways on the eastern seaboard for

migratory birds, including waterfowl, shorebirds and migratory songbirds, which are declining worldwide. Eastern coastline of the Bay is one of the most vulnerable to forest fragmentation and other disturbances. Habitats required for transient, breeding and resident bird species, and particularly the vegetation upon which they depend, has been greatly reduced. Protection of these areas is critical to insure the healthy continuance of local and regional ecosystems. Future development could potentially threaten to place further stress on migratory and other land bird

species, as well as the large variety of wildlife and plant species found in the area.

Located adjacent to the Sustainable Technology Park is the Coastal Dune Natural Area Preserve, a 29-acre habitat protection area. The Preserve encompasses an ecologically significant secondary dune system which is one of the last remaining natural communities of its kind in Virginia. Volunteers planted over 600 species of native plants, grasses, shrubs and trees to provide critical habitat for migratory birds which utilize the Preserve as a feeding, resting and recovery area. Coastal sands dunes located outside of the Coastal Dune Natural Area Preserve are protected by the Town's Coastal Primary Sand Dune Zoning Ordinance.

WATERFRONT ACCESS

By providing public waterfront access, the Town encourages the public to experience firsthand the importance of water quality in Cape Charles through recreational pursuits such as sightseeing, fishing and swimming. Numerous public waterfront access areas exist in Cape Charles, including the harbor, Cape Charles beach, the municipal pier and the Coastal Dune Natural Area Preserve. King's Creek Marina also provides waterfront access. Preserving the quality of the Bay and its tributaries is a high priority in Cape Charles. Development pressure of waterfront areas threatens environmentally sensitive habitat which is critical to Bay wildlife and water quality. The high demand for waterfront property has driven up the price, making public acquisition of these lands difficult or impossible. For this reason alone, it is critical that the Town maintain, improve and preserve all public lands which provide waterfront access.

SHORELINE EROSION

The Town has approximately 19,200 feet of shoreline which fronts directly on the Chesapeake Bay. Portions of this shoreline are eroding. According to the *Shoreline Situation Report of Northampton County, Virginia*, prepared by the Virginia Institute of Marine Science (VIMS) in 1974, Cape Charles is experiencing slight to moderate erosion, which is categorized as up to three feet per year. Current documentation of erosion rates in Cape Charles do not exist; however, it is possible that the Town's erosion rate could be even higher, as there is belief in the scientific community that erosion rates in the Chesapeake Bay area have accelerated in the past several years due to increased frequency and severity of storms. Significant shoreline erosion has occurred at the public beach, especially following the severe storms which occurred in the fall of 1985 and the spring of 1998. The Town is currently pursuing funding through various State and Federal agencies for emergency sand replenishment.

The most significant cause of shoreline erosion in the Chesapeake Bay system is the combined action of wind and waves on the shoreline. Storm winds generate large waves which cause the most damage. During storms and hurricanes, strong winds push additional water against the ocean coast and into the Chesapeake Bay, resulting in higher water levels of tides, which generally range between one and

three feet, but may reach several feet in magnitude. Aside from the obvious hazard of flooding low-lying areas, these higher tides permit the erosive action of the waves to directly attack the fastland, above the usual buffer provided by the beach.

According to the *Public Beach Assessment Report for Cape Charles Beach*, prepared by VIMS in 1993, the shoreline in Cape Charles is typically affected by northwest winds which occur from late fall to early spring, as well as southwest and westerly winds that are most frequent from early spring to late fall. Waves created by northeast storms do not impact the Cape Charles shoreline directly, but usually produce significant storm surge. As the post-storm winds often shift to the northwest, the water level is elevated for a short period of time. This scenario can produce high waves acting on the Cape Charles shoreline.

Erosion activity is further influenced by short term fluctuation of lunar and storm tides, and long term sea level rise. The average sea level rise in the Bay is about .01 foot per year, or one foot per century. Although this rate seems small, its effect is dramatic considering that the fringes of the Bay have very gentle slopes, where a small increase vertically covers appreciable horizontal distance. Thus, each decade brings constant encroachment against the fastland.

Several shoreline protective structures exist in Cape Charles. The public beach contains a seawall, consisting of a walkway and bulkheading which extends 2,300 feet along the back of the beach from the stone jetty. In 1982, groins were constructed at the public beach, which were 150 feet long and 300 feet apart. A severe storm in November, 1985 resulted in extensive damage to the beach. The beach was significantly widened in 1987 as a result of beach nourishment with sand dredged from the harbor channel by the Army Corps of Engineers. The beach fill project was of major beneficial impact to the public beach. Artificial nourishment is needed periodically on the beach, due to lack of sufficient natural sand supply for replenishment.

In 1988, the Town initiated a project to install sand fencing and dune grasses, to help stabilize the public beach and control blowing sand. Fences were installed by the Department of Transportation and the Youth Conservation Corps, and dune grasses were planted by volunteers. Extensive dunes have developed as a result of these efforts. By 1992, the dune system had reached elevations between four and five feet above the initial beach fill.

In 1993, VIMS prepared the *Public Beach Assessment Report for Cape Charles Beach*, which assessed the rates and patterns of beach change on Cape Charles' public beach. According to the Report, the public beach has been reduced in volume approximately 19% since the beach nourishment project of 1988. Added fill at the north end of the beach is needed to maintain a wide recreational beach. A sand retaining device is also needed to keep the sand from eroding. Additional projects consisting simply of beach fill will only serve to increase the beach and nearshore along the southern half of the public beach.

Several other shoreline protective structures exist in Cape Charles, located at the harbor and the

public beach. A stone jetty is located at the northside of the harbor entrance, extending 1,200 feet into the Bay. The jetty protects the harbor somewhat from waves and limits sedimentation in the harbor from longshore drift. The jetty also helps protect the public beach by serving as a significant barrier to littoral transport of nourished beach sand. At the southside of the harbor entrance is a 200 foot earthen jetty, or mole, which anchors the end of the beach and helps keep the harbor mouth open. Approximately 4,500 feet of bulkheads line the periphery of the harbor and eliminates most shoreline erosion in the harbor.

The storm drain outfall has also had a local impact on the very north end of the beach. The public beach is bordered on the north by a large storm water outfall pipe that extends about 300 feet from the bulkhead into the Bay. The pipe was installed as part of the 1988 beach nourishment project and subsequently has been reinforced with gabions including gabion spurs on either side. Presently, the outfall has a local effect on the public beach by partially blocking sand moving south along the shoreline from King's Creek. The outfall and associated spur are also causing an alteration in the beach platform to the immediate south.

**Goals, Objectives and Strategies
for the
NATURAL RESOURCES ELEMENT**

GOAL: *Protect the ground water and surface water resources of the Commonwealth from an increase in pollution.*

OBJECTIVE: Ensure adequate implementation and enforcement of the Town's Chesapeake Bay Preservation Act Program.

STRATEGIES:

The citizens of Virginia are dependent upon the economic benefits derived from the Chesapeake Bay, and the Town recognizes the importance of the Bay Act in maintaining the integrity of state waters and the Chesapeake Bay. This is reflected in the goal of the natural resources plan, to protect the ground water and surface water resources of the Commonwealth from an increase in pollution. One objective of this goal is to ensure adequate implementation and enforcement of the Chesapeake Bay Preservation Act (Bay Act).

Â The Town should continue to enforce its Chesapeake Bay Preservation Area Overlay District to ensure the protection of Bay water quality. The Town should seek additional training from Northampton County or other appropriate agencies, such as the Chesapeake Bay Local Assistance Department, for administrative and review procedures on stormwater management plans, enforcement of the ordinance, wetland delineation and other related procedures. The Town should begin training staff in ordinance administration and enforcement by Summer of 1999.

Â The Town should keep Bay Act-related educational materials at the Town Office so that residents can be informed of the purpose and intent of the Bay Act. Adequate implementation of the Town's Bay Act program requires public awareness and education. The Chesapeake Bay Local Assistance Department has published *A Guide to the Bay Act*, which provides a general overview of the Bay Act, and is available to the Town for distribution.

OBJECTIVE: Improve the Town's ability to manage stormwater runoff.

STRATEGY:

Â Implement the use of Best Management Practices (BMPs) for development within the Town's Chesapeake Bay Preservation Overlay District. BMPS, which are nutrient

reduction techniques for nonpoint source pollution, are required for development within the Overlay District in order to meet the requirement of no-net increase in nonpoint source pollution. BMPs can be structures such as stormwater settling ponds and infiltration trenches, or they can be nonstructural such as vegetated buffers and filter strips, site design to minimize land disturbance and impervious cover, and the preservation of existing vegetation on site. Natural controls are extremely effective in reducing the amount of pollutants which reach waterways; woodlands and wetlands release fewer nutrients into the Bay than any other land use.

OBJECTIVE: Protect the quality and quantity of the Town's potable water supply.

STRATEGIES:

Cape Charles, along with the entire Eastern Shore of Virginia, depends upon ground water as its sole source of drinking water. It is the Town's strategy to continue to provide a safe, reliable and adequate water supply for its current and future needs, through the following initiatives:

- The Town should continue to monitor ground water sources for saltwater intrusion and other adverse impacts on ground water quality. If monitoring information indicates the potential for adverse impacts, the Town should reopen its Ground Water Withdrawal Permit, and work with DEQ to address those impacts.
- Ground water is a limited resource, and water conservation should be promoted by the Town. The Town will undertake several initiatives to manage and conserve its potable water supply. These initiatives, which will be authorized by the Town Code through the implementation of the DEQ Ground Water Withdrawal Permit, will be operational by the end of 1999 and include the following:
 - Require low-flow plumbing fixtures for new or renovated buildings.
 - Require water recycling systems for car wash facilities.
 - Require the installation of a recycling system or approval from the Town Manager for construction or renovation of continuous flow devices using five gallons per minute or more.
 - Develop a public education program, utilizing brochures, bill inserts, video tapes, news releases or other appropriate formats.
- The two existing and two planned production wells constitute the only potential water supply source for Cape Charles. Accordingly, the Town should consider additional wellhead protection measures, such as a local wellhead protection ordinance, which sets forth additional standards to prevent the wells from becoming a source or channel for the entry of contaminants and pollutants.

OBJECTIVE: Achieve a reduction in existing pollution sources.

STRATEGIES:

The Town has identified the reduction of existing pollution sources as one of its objectives. Strategies to achieve this objective include the following:

- Â Continue enforcement of existing regulations to ensure the protection of all water resources.
- Â Cooperate with the State Water Control Board (SWCB) in the regulation of underground storage tanks (USTs). When USTs leak, it is up to the owner/operator of the tank to detect leaks, report them to the SWCB and correct problems created by the leaks. Based on the owner's report, the SWCB decides if further action must be taken. The Town should establish communication with the SWCB to be informed of leaking tanks within the Town's vicinity, as well as any Corrective Action Plans required by the SWCB.
- Â Implement the Town's septic tank pump-out program. This program has been recently developed, and includes cataloging all land parcels with on-site septic systems, as well as policies and procedures for notifying residents of pump-out requirements, monitoring and noncompliance.
- Â Ensure that docks, marinas and other water related activities do not contribute to water pollution and have adequate sanitation facilities by working cooperatively with state and federal agencies in providing required facilities, enforcement and boater education.

GOAL: *Ensure the protection of sensitive environmental features in Cape Charles.*

OBJECTIVE: Locate development away from sensitive environmental features, including wetlands, shorelines and critical habitat areas.

STRATEGIES:

Given its location on the Bay and its abundance of natural resources, the Town is committed to protecting its scenic and environmental resources through complementary and compatible development. The Town will protect environmentally sensitive areas from inappropriate development, and ensure that new development will not negatively impact environmentally sensitive features, through the following strategies:

- Â Continue to develop and enforce the Town's Chesapeake Bay Program, Coastal Primary

Sand Dune Ordinance, Wetlands Ordinance, Site Plan Ordinance and other regulations which protect sensitive environmental features such as floodplains, shorelines, wetlands, sand dunes, critical wildlife habitats, and rare and threatened species. Continue to develop these ordinances as necessary to be more protective.

- Â Ensure that sensitive environmental features within the context of the Planned Unit Development (PUD) are protected by utilizing the site plan review process to work with the developer in setting aside open space for the protection of sensitive natural features, such as forested upland areas which provide critical wildlife habitats.
- Â Develop programs and partnerships which voluntarily protect resources as part of land development.
- Â Maintain, preserve and improve public lands providing waterfront access. By providing access points, the Town encourages residents and visitors to experience firsthand the importance of water quality in Cape Charles through fishing, swimming and other water related activities.
- Â Support continued public and private acquisition of environmentally sensitive lands, and explore means to acquire conservation easements or clear title when other protection measures are not effective.
- Â Support the continued identification of natural resources, such as locally sensitive species, critical habitat areas and unique ecosystems.
- Â Continue to support efforts to restore and enhance critical habitat through the reintroduction of native plants.

OBJECTIVE: Ensure that future development strictly adheres to all environmental regulations.

STRATEGY:

- Â Provide training for Town officials, legislative bodies and boards who will be administering these ordinances and regulations.

OBJECTIVE: Reduce and control shoreline erosion.

STRATEGIES:

In order to reduce and control shoreline erosion in the Town and provide a more usable public beach, the Town should pursue the following strategies. These strategies are based upon recommendations published in VIMS' *Public Beach Assessment Report for Cape Charles Beach*.

- Â Place an offshore breakwater or parallel breakwaters at the north end of the public beach so that it works in conjunction with the existing storm water outfall. Breakwater specifications and position are subject to further analysis. A grant from the Virginia Department of Conservation and Recreation will be used to fund the development of a small breakwater in this vicinity.
- Â Place approximately 15,000 cubic yards of select beach sand along the mid- to northern half of the public beach in the area of severe erosion. The placement and position of the breakwater(s) will be designed to accommodate the fill. The bulkhead will be protected as well. The Virginia Department of Conservation and Recreation has recently approved a grant request from the Town for sand replenishment of the public beach. In addition, 50,000 cubic yards of sand has been added to the northern tract to build sand dunes. This sand, which comes in part from dredge spoils, has been provided by the developer.
- Â Raise the level of the channel jetty to above mean high water at the shoreward end and place a small spur on the north side to prevent sand losses to the south around and through the jetty.
- Â The Town should continue to pursue funding from federal and state sources, such as the Army Corps of Engineers and the Virginia Department of Conservation and Recreation, to carry out its shoreline erosion strategies.

LAND USE AND COMMUNITY CHARACTER

INTRODUCTION

The Town of Cape Charles consists of 2,817 acres of land. The Town annexed 2,191 acres of land from Northampton County in 1992, thereby increasing in size from 626 acres to 2,817 acres, an increase of 350%. The original 626 acres of the Town is mostly developed, while the annexed land is largely undeveloped and currently consists of agricultural land uses or open space. Cape Charles started out as a planned town which was originally developed as a grid pattern of land use in 1884. The Town was originally laid out with 644 lots of equal sizes, laid out on an orthogonal grid consisting of seven streets running east to west and six streets running north to south, with alleyways located behind houses, and a central park located in the center of the Town. The original layout is very visible in the Town today, with the grid pattern still intact. In 1911, the Sea Cottage Addition was created, resulting in the addition of 145 new lots between Pine Street and Bay Avenue, with slanted blocks aligning with the Bay rather than the rectangular grid. The Town has grown in area considerably since then, due to annexation, although most of the developed land in Town remains in the general grid area.

Two large tracts of land, consisting of approximately 1,750 acres which surround the original Town settlement, are currently being developed. The developer plans to build an upscale golf and residential community, including two golf courses and a marina; construction of the first golf course has already begun. As Cape Charles grows, Town residents face numerous issues relating to community character. These issues range from infill development in the historic residential area to the character of large-scale new development on the Town's periphery. In the historic residential area, one issue is whether proposed infill development fits into the existing neighborhood's character or whether it will alter or adversely impact it. This issue should be very familiar; it is frequently raised at zoning hearings. On Cape Charles' periphery, the major land use decisions concern the relationship of the character of new development to Cape Charles' historic, small town character.

The Town is distinguished by historic small town neighborhoods, a historic port, a healthy sense of community, abundant natural resources and a great deal of natural beauty and shoreline scenery. The most desirable future development will respond conscientiously to the Town's cultural character and natural setting. Future development in Cape Charles should be based on fairly simple principles. Physical, cultural and aesthetic features that most define the local character of the Town are of critical value to the community and should be identified and preserved. Ultimately, however, an integral part of realizing community aspirations lies in the willingness of private developers and landowners to pursue desired projects. Accordingly, successful future land use plans will rely to a significant extent on cooperation between the public and private sectors.

HISTORIC RESOURCES

Cape Charles has a strong and attractive historic character which has been remarkably well preserved. The Town has experienced little physical change since the 1920s, mainly due to its physical isolation and the low level of economic activity over the last several decades. An interesting stock of architectural styles in both the residential area and the downtown commercial area contribute an historic style and authenticity. The street patterns, lot configurations and boundaries, which were laid out in an historic grid pattern, have remained largely unaltered, adding to the Town's historical integrity. Cape Charles' late nineteenth and early twentieth century character is a key element in the Town's interest and attractiveness to tourists. The traditional downtown commercial area on Mason Avenue still serves as the commercial center for the Town. It is important that the Town's historic character be protected, not only for its intrinsic value, but also to continue to attract and expand tourism in Cape Charles.

Cape Charles has a wealth of historic resources. The Town was surveyed by the Virginia Department of Historic Resources in 1989, and a National Register Historic District was created and listed on the National Register of Historic Places (see Figure 9). The Historic District designation is honorary and means that the listed properties have historical significance and integrity. Although listed properties can donate easements and are eligible for tax credits, the Historic District listing does not insure protection. In order for a building to be protected, the building can either have an easement, or the Town government can develop a local historic district preservation ordinance. Cape Charles currently has no local historic district preservation ordinance and consequently no zoning controls to protect its historic buildings from demolition, or any renovation or repairs which may be detrimental to the building's historical integrity. Moreover, a number of historic buildings have been razed as a result of enforcing the Town's Building Code, which was recently adopted. Possible effects of this ordinance should be studied, as it is possible that the building code ordinance may be contributing to the demolition of abandoned, but historically significant buildings at an increased pace.

The Town adopted an historic preservation plan in 1996, entitled *Preservation Plan for the Town of Cape Charles*. The Preservation Plan contains an inventory and analysis of the Town's historic resources, including architectural descriptions and exterior photographs of residential and commercial structures. The Preservation Plan also provides recommendations and policies for protecting and enhancing the historic resources of Cape Charles, including downtown and residential revitalization. The *Preservation Plan for the Town of Cape Charles* is a parallel document to the Town's Comprehensive Plan, and as such, should be reviewed at least every five years.

Archeological Resources

Also present in Cape Charles are archeological resources documenting the Town's long history. The James River Institute for Archeology, among other groups, conducted a comprehensive survey for

portions of Cape Charles, and gathered a substantial amount of information which identified significant resources associated with the both the inhabitants of the Town since its founding, and Native American settlements.

Figure 9
Cape Charles Historic District

ENTRANCE INTO TOWN

Views along entrance roadways have a significant impact on how the community is perceived. Attractive entryways help entice tourists into the community and leave a positive impression to encourage future visits. Route 184, which serves as the entry road into Cape Charles, has a rural identity characterized by open farm fields and a narrow road width. Several entry features along the roadway serve as symbols of community character, reflecting qualities which make the area special.

The water tower, painted in the image of a lighthouse, is a prominent landmark for travelers approaching the Town. The Cape Charles Museum and Welcome Center, housed in an historic industrial building, also serves as a distinguished landmark which reinforces the Town's historic image. Crepe Myrtle trees line both sides of the road, providing a distinctive character and creating a gateway into Town.

The Route 184 entryway is a positive asset to the Town, and the character and identity of this roadway should be preserved and protected. The Town has enacted a Corridor Overlay District as part of its zoning ordinance, which establishes special landscaping and signage guidelines along Route 184. Railroad tracks located on the south side of Route 184 serve as a boundary and act as a visual buffer of open space which will serve as a transitional area in the event of future development along the road's south side. The north side of Route 184 is characterized by agricultural land use and includes a limited number of single family residences. New land development along the roadway needs to be carefully reviewed to insure that changes enhance, and do not detract from, the positive image and character that exists in this area.

Approximately two miles of Route 184 are within the corporate limits of Northampton County. An additional land use factor that should be considered is the Northampton County Comprehensive Plan, which identifies the Cape Charles/Cheriton Urban Development Area as one of four areas in the County to which future growth will be directed, including the land area along Route 184. It is important that the Town be an active participant in land use decisions that affect land adjacent to Cape Charles, because County planning policies will have a significant effect upon the Town's long term character and economic prosperity. Expansion of the Town boundaries to include land adjacent to Route 184, from Route 13 to the corporate limits of the Town, is an option that the Town may want to pursue to ensure compatible development.

EXISTING LAND USES

Existing land uses in the Town of Cape Charles, as shown in Figure 10, were classified using the categories discussed below.

Residential Land Use

Residential land use comprises the largest use of developed land within the Town. The Town was

originally laid out in a grid pattern of 40 foot wide lots, platted in the late 1800s. The majority of residential land use in Cape Charles is located in this historic grid area, consisting mostly of single

Figure 10
Existing Land Use

family houses spaced close together, as well as a significant number of multi-family houses. The residential structures are primarily two-story frame houses built in the late 1800s and early 1900s. A number of larger ranch style houses were built in the 1950s on 100 foot wide lots located between Harbor and Bay Avenue, and along Fig Street. Approximately four residential structures also serve as bed and breakfast establishments.

Most of the multi-family housing in Town is located in Seabreeze Apartments and Heritage Acres, accounting for 126 of the 163 multi-family housing units. Other multi-family housing includes row houses containing two to four dwelling units per structure, and single-family houses which have been converted into two-family or multi-family dwelling units. Approximately 13 manufactured homes exist in Town, most of which are located in a mobile home park.

A number of vacant 40 foot lots exist in the historic grid area of Town. Many vacant parcels in this area are owned by the same owners of the adjacent property and used as expanded side yards. A small number developable lots exist within the historic residential area, but are not expected to accommodate any significant amount of future residential development. A great deal of concern has been expressed regarding detrimental effect of inappropriate redevelopment and infill development. Newer dwellings have not always complemented the historic structures. General deterioration of a significant number of historic structures is also a critical concern in the community.

The residential area is characterized by large canopy and flowering trees located along streets, in private yards and in public rights-of-way. These trees contribute to the Town's visually pleasing character by providing structure and formal patterns along streets, unifying diverse architectural elements and providing shade, color and spatial variety. In addition to scenic value, trees also provide environmental and economic benefits to the Town, such as increasing real estate value, improving air quality, reducing noise pollution, reducing stormwater runoff and erosion. Many of the Town's existing trees have been poorly maintained, and many areas are now lacking canopy trees. In addition, pruning by local utility companies has resulted in stunted and amputated trees. Introduction of new canopy trees and proper care and pruning of existing trees are the single most effective way to build a strong visual character in Cape Charles.

Another element contributing to the character of the residential area is the prevalence of wooden picket fences, which fit in with the Town's historical character. Cast iron fencing that is in character with the Town also exists. Chain link fencing is noticeable throughout the Town, although in a negative aspect because it detracts from the visual appeal of the Town. This type of fencing is institutional in appearance, and is inappropriate to the Town's character. A significant example of this is the school property, located at the Town's central park, which appears forbidding and unappealing.

Public and Semi-public Land Use

Public and semi-public land uses, such as churches and parks, constitute a significant part of a community's character. A unique identity for the Town is important because it establishes general guidelines for the physical appearance of all types of development. The Town's public beach is one of its major amenities and identification features. Unlike any other town on the Eastern Shore, Cape Charles has over a mile of sandy community beachfront. The beachfront Pavilion is a visual symbol for the Town and is featured on the Town's seal. The beachfront offers a panoramic view of the Chesapeake Bay, and serves as a terminus vista for each of the Town's seven streets running east to west. The historic harbor is another unique identifying feature of the Town which has the potential to be greatly enhanced as an asset Town if properly developed. Other public and semi-public land uses in Cape Charles include the Town facilities, Town harbor, fire station, Coast Guard station, post office, museum, nonprofit arts center, Little League ball park, central park, approximately 10 churches, and the former school building which is now used for governmental offices as well as meeting and classroom space.

Commercial Land Use

Cape Charles has a downtown area where most of its commercial land uses are concentrated. In addition to the downtown area, commercial land uses exist at the entrance to Town, where Randolph Avenue and Fig Street connect with Route 184. Commercial uses are also scattered throughout Town, including several neighborhood retail and service establishments, and four bed and breakfast establishments. A commercial marina is located in the northeast portion of Town at King's Creek, with approximately 100 boat slips.

The two block area of Mason Avenue between Fig Street and Plum Street serves as the entry to the downtown commercial core, and includes some of Cape Charles' earliest, simplest and most historically significant residential structures which were constructed soon after the Town was created. The majority of commercial land uses in Town are in the downtown area, located along four blocks of Mason Avenue between Peach Street and Harbor Avenue, and along the first blocks of Strawberry Street and Peach Street where they intersect with Mason Avenue.

The downtown commercial core accounts for the primary commercial center in the community, and is characterized by the historic character of the buildings. Commercial activity in this area consists mostly of retail and service establishments and specialty shops catering to local and regional customers, as well as tourists and visitors. Historic buildings make up the north side of Mason Avenue, while across the street is the railroad area and two retail stores. Customer parking consists of on-street parking and two large retail store parking lots. Sidewalks line the north side of Mason Avenue, providing pedestrian access to the commercial establishments. While the downtown area maintains a certain character as a result of the quality and historical nature of the structures, the vacancy rate is very high and suffers from visible disinvestment. Approximately 39% of the commercial buildings in the downtown area are vacant. This follows the pattern that many downtown areas are experiencing, with traditional retail establishments closing and relocating to

newer suburban shopping centers.

An established character or identity is extremely important in commercial areas. Cape Charles' downtown commercial area has historically developed with brick facades and a development pattern consistent with a pedestrian orientation. Older brick buildings located at the sidewalk line suggest a definite small town urban commercial character and pedestrian orientation, as does the provision of on-street parking. Cape Charles' early history as a railroad town and transportation hub is also reflected in the layout of the downtown area, which is characterized with commercial buildings along one side of the street, with the harbor and railroad facilities on the other side.

Over the years, some of the existing business owners have covered the original building facades, resulting in a variety of exposed materials, as well as a lack of community character. A mixture of facades, however, can leave an area looking confused and disjointed. Over the past several decades, substantial improvements have been made to the downtown commercial area, including the removal of overhead wires and poles, the addition of street lamps, sidewalks and brick pedestrian crosswalks. It is important to maintain and improve the aesthetics of the downtown area for continued economic revival, and to protect historic buildings from demolition or renovation which would damage their historical integrity. Types of commercial land uses in the downtown area are listed below:

TABLE 7
DOWNTOWN COMMERCIAL AREA

<u>Type</u>	<u>Number</u>	<u>Percent</u>
Retail	15	35%
Service	8	19%
Restaurant	3	7%
Vacant	<u>17</u>	<u>39%</u>
Total:	43	100%

Source: Land Use Survey, A-NPDC, 1998

An important land use factor that should be considered is the Northampton County Comprehensive Plan, in which Cape Charles has been identified as one of four areas in the County to which future growth will be directed. The County's zoning ordinance allows for commercial development to be concentrated at the intersection of Route 13 and Route 184. If this were to happen, it is possible that businesses would be drawn away from the traditional downtown to highway strip development along Route 13, resulting in the deterioration of Cape Charles' downtown commercial area. It is important that the Town be an active participant in land use decisions that affect land adjacent to Cape Charles, because County planning policies will have a significant effect upon the Town's long term economic prosperity. The County's Comprehensive Plan is scheduled to be updated next year, and the Town should be active in advocating appropriate planning policy changes within the County to effect positive and constructive long term planning that is economically beneficial for both the

County and Cape Charles.

Industrial Land Use

Industrial land use in the Town is concentrated at the Cape Charles Harbor area, and includes the Eastern Shore Railroad, Bayshore Concrete, the commercial dock and the Sustainable Technology Park. Port Unity, located on the south side of the harbor, is also planned for industrial use. A major consideration for industrial land use is accessibility. Raw and finished products need to be shipped in and out of every industrial operation. The railroad, of course, was an integral part of Cape Charles' history. It was an efficient way of shipping large amounts of goods long and short distances. Today, while many railroad lines are closed and being converted to bike trails or other such reuses, the railroad line in Cape Charles remains active and available to potential industrial users. The most popular form of shipping industrial goods today is the road system. Immediate road access for existing industrial users is provided by Route 642 and Route 184. While limited by a two-lane capacity, these roads do provide access to Route 13, located just two miles east of Town. Route 13 provides highway access to local and regional markets, as well as to other cities and connecting highways.

The establishment of the industrial park is an important inducement to quality industrial development in Cape Charles. Many light industries favor location in an industrial park, where supporting infrastructure and the physical character are established. The Sustainable Technology Park, located on the south side of the harbor, is built in a campus like setting with structures arranged in a dispersed fashion separated by attractive landscaping, and includes an industrial access road. The Park was chosen by the President's Council on Sustainable Development as a national prototype of an eco-industrial park, designed to encourage efficient use of resources and to attract businesses which are committed to meeting environmentally and socially responsible standards. The Park consists of approximately 160 acres, including 25 acres which are leased from the Town. The Park and land are owned and managed by the Joint Industrial Development Authority (IDA) of Northampton County and Its Incorporated Towns. Adjacent to the Park is 25 acres of beachfront land under a conservation easement — the Coastal Dune Natural Area Preserve — restored with indigenous plants for migratory birds. A wooden plank boardwalk runs through the Preserve, connecting the Sustainable Technology Park with the Chesapeake Bay. Construction of the Park's first building, a 30,400 square foot multi-tenant facility, was recently completed. The IDA has developed a marketing plan and, in conjunction with the region and state, is actively recruiting appropriate industries, with one company already committed to locate in the building.

Vacant Land

The developed area of Cape Charles is surrounded by a large expanse of vacant, undeveloped land, consisting of agricultural land use and vegetated open space. In 1992, Cape Charles annexed 2,191 acres of land from Northampton County. The annexed land was part of the original Scott Estate, and

has remained under a single ownership. The annexation greatly increased the size of the Town, from 626 acres to 2,817 acres. Annexation of the remaining estate holdings provided the Town with expansion potential and authority over the majority of the physically contiguous land natural to the location between King's Creek and Old Plantation Creek. The vast majority of the annexed land is undeveloped and is characterized by a rural landscape including fields, woodlands, marsh grasses and long stretches of tributary creeks and Chesapeake Bay shoreline. The rural landscape surrounding Cape Charles enhances the Town's sense of place and identity, creating distinct boundaries of visual separation between the traditional Town and the surrounding countryside.

Miles of undeveloped shoreline, combined with the natural beauty of the area and its strategic location, result in increased pressure for future development. Public water and sewer, an established industrial rail port, extensive waterfront resources, historic character, and an established local government provide the base for future expansion. The annexation was significant for several reasons: property of the annexed land is adjacent and surrounds all future growth directions; property is essentially unoccupied and therefore without resident resistance; and revenue to the Town would be proportionate to the size of the property, which is five times the area of developed land within the Town.

Large scale residential development on the annexed land is currently planned and will very likely take place in the next several years. Future development on this land will have a significant impact on the identity and character of the Town, especially since the Town has been associated with its surrounding rural landscape since its establishment.

PLANNED UNIT DEVELOPMENT

The development of a residential and golf development is currently underway on the annexed land, involving two large tracts consisting of approximately 1,750 acres which surround the original community. The north tract, located north of the Town's historic grid, is planned for residential development. The south tract, located south of the harbor, is planned for residential development and two golf courses. Although the developer has not specified the number of housing units to be built, which will most likely be determined by market demand, the annexation agreement allows up to 3,000 units. Development of the first golf course is currently underway. Relative to the size of Cape Charles, a development of the magnitude proposed will have impacts.

The impact of new development on property within the Town is favorable in that it provides additional revenue from both real estate taxes from improved property, and other tax categories across the community. New development will generate new jobs requiring new talents. Local citizens will have the opportunity to choose among a wider category of jobs. An increased residential population will have a positive impact on downtown stores. More shoppers could create the demand for more shops, filling up empty storefronts on Mason Avenue. The new development will also enhance the attractiveness of the Sustainable Technology Park to prospective businesses.

Local government services may require additional staff to administer the growth, but tax revenues are gained by the growth necessary to support these new services. Some services have costs related to their existence, such as water and sewer systems. Although additional lines and some capacity will be added to support new growth, the basic system is the major expense being carried by a smaller population. As the system grows, the per unit cost of a larger base system is reduced over a smaller, less efficient system.

New development could be detrimental to the character of the Town if not planned carefully. Cape Charles began its history as a freestanding town, isolated from its nearest neighbors by a substantial area of rural character. The basic rural character of the area is well established and has not changed much over time. As the farmland converts to housing development, Cape Charles could lose its identity as a freestanding community. Residents talk about small town atmosphere. Clearly, if the farmland surrounding Town is developed, the character will change. Open space preservation limits the amount of development and reduces the possible future development range. The issue will be how to retain the identity of the Town as a unique community with some sense of its small town character while it grows into a large community. The original, developed part of Town already has logical borders of the Chesapeake Bay to the west, and the railroad and harbor area to the south. The transition that occurs at the north and east edges of the original community will have a larger impact on the issue of the Town retaining its identity.

Another important issue to be considered is the effect of new development on sensitive environmental features and resources. A substantial amount of the area is comprised of shorelines, tributary creeks, marsh grasses and critical wildlife habitat. These natural features are discussed in more detail in the Natural Resources chapter. It is sound planning policy to protect these valuable resources against inappropriate activities by orienting development away from these sensitive resources.

Land located within the new development is zoned as a Planned Unit Development (PUD) in the Town's zoning ordinance. This zoning classification provides flexibility for both the Town and the developer in organizing and approving projects which are significant to the community, either because of the project's complexity, impact on surrounding neighborhoods, or potential to spur further development activity. The flexibility of the PUD comes from the review process, which considers the project as a whole. Approval is based on actual site and use concepts that the community is able to review prior to project approval, allowing for community input on the merits of the design, use and expected impact on the surrounding community.

The Town's ability to review PUD applications is critical to the success of the PUD concept. The review requires knowledge of site design and layout, architectural standards, and the ability to negotiate with developers over design and real estate issues. PUD provisions allow the developer to provide a mixture of uses that would not meet zoning setback and bulk requirements of a

traditional zoning district. Certain aspects of the design may require more strenuous standards than would be the case with a traditional zoning district, while other elements may merit a certain loosening of standards. Bulk regulations for development are expressed in terms of the overall density of the project rather than on a lot by lot basis.

The PUD may contain a mix of dwelling types. The developer provides an increased amount of open space when compared to the single family development or cluster development. In return, the developer can build a variety of types of single family detached or attached units. The increased amount of open space will help to maintain the character of the area, regardless of the type of development.

**Goals, Objectives and Strategies
for the
LAND USE ELEMENT**

Goal: *Promote a pattern of land use and development which meets the Town’s physical and economic needs, protects the Town’s existing character and improves the quality of life for citizens of Cape Charles.*

OBJECTIVE: Preserve and enhance the Town’s historic resources.

STRATEGIES:

- Â Ensure the preservation and restoration of historically significant structures.

- Â Encourage the implementation of recommendations in the *Preservation Plan for the Town of Cape Charles*.

- Â Establish a regulated historic overlay district as part of the Town’s zoning ordinance.

- Â Apply for designation as a Certified Local Government under the Virginia Department of Historic Resources.

- Â Provide information to residents regarding historic tax credits and other benefits available through the rehabilitation and restoration of historic properties.

- Â Protect the Town’s archeological resources. Advise developers during site plan review to contact the State Archaeologist, Virginia Department of Historic Resources, to determine if the project may affect a known archaeological site.

- Â Consider the development of a local archaeological ordinance to protect the Town’s archeological resources. The Town should contact the regional office of the Virginia Department of Historic Resources for information and technical assistance concerning the development of an archaeological ordinance.

OBJECTIVE: Preserve the established character of the Town’s historic residential area.

STRATEGIES:

The Town’s historic residential area contains one of the largest and most concentrated collection of historic residential structures in Northampton County. The general layout of the Town, in terms

of scale, grid design, central park, and amenities such as sidewalks, alleys and large canopy trees, is considered ideal by neotraditionalist town planners and is replicated in many new communities across the country. A great deal of concern has been expressed by Town residents regarding the preservation of this neighborhood. The following strategies were developed to protect and preserve the established scenic and historic character of the Town's historic residential area:

- Â Infill development should enhance the character of the Town's historic area. Encourage architectural and site design that complements, rather than detracts from existing development on neighboring parcels. New construction proximate to existing historic structures should be designed consistent with the character of the historic structures.
- Â Expand and protect the Town's tree cover through the development of an ordinance that would establish standards for tree preservation and planting.
- Â Encourage fencing which is compatible with the Town's historic character.
- Â Review and refine the Town's Building Code to protect significant historic structures from demolition.
- Â Review and refine the zoning ordinance to acknowledge that dwelling units originally designed as multi-family are an acceptable land use in the historic residential area. These dwelling units, including row houses, duplexes and quadplexes, were an original intended use when the Town was created, and are architecturally compatible with the historic residential area. It is important to note that these structures should not be confused with single-family dwelling units which have been converted into two or more apartments.

OBJECTIVE: Protect and preserve the visual character and identity of the Route 184 entrance roadway into Town.

STRATEGIES:

- Â Protect and improve the visual character of the entrance roadway by continuing to implement landscaping requirements and design standards of the Corridor Overlay District
- Â Review land use regulations, setback requirements, design standards and landscaping requirements for land located along the Route 184 entrance road and consider possible revisions if necessary to protect the rural nature and enhance the character of this entryway, where aesthetic concerns necessitate additional sensitivity.
- Â Create a landscaped identification sign for Cape Charles at the intersection of Route 184 and Route 13.

- Â Participate in Northampton County land use decisions that affect land adjacent to Cape Charles. The Town needs to be active in planning policy formulation and implementation at the County level, and should play a role in advocating appropriate planning policy changes in the County to effect positive and constructive change that is compatible with the Town's long range goals.
- Â The Town should consider the possibility of expanding the Town boundaries, from its current corporate limits to Route 13, to protect the character of the Town's entryway.

OBJECTIVE: Improve the physical appearance, quality and identity of Cape Charles' downtown commercial area.

STRATEGIES:

The physical appearance of a commercial area is a major factor in whether or not people like to do business there. While location is still the major reason people shop where they do, a pleasant environment can be a main determinant. In addition to business success, an attractive commercial area creates a positive image for the community and instills community pride. Small towns should be places where pedestrians feel comfortable walking and shopping. The physical area surrounding businesses is more noticeable to pedestrians than to motorists, so smaller details do matter when planning for a pedestrian shopping area. The Town should pursue the following strategies to improve its downtown commercial area:

- Â Improve the physical image of the downtown commercial area for pedestrians through the development of a downtown streetscape improvement program. The program should focus on facades and streetscape amenities, including:
 - ÿ Well maintained sidewalks
 - ÿ Signs oriented towards pedestrians rather than motorists
 - ÿ Decorative planter boxes
 - ÿ Attractive trash receptacles
 - ÿ Benches
 - ÿ Additional street trees
- Â Promote sign improvements and consistent use of signage to create a common theme among the downtown businesses.
- Â Evaluate the feasibility of developing incentive programs in the downtown area, such as sign grants, facade renovation grants, low interest loans, and professional design services.
- Â Work with existing downtown property owners to make them aware of the Town's plans and encourage them to make improvements consistent with the plans.

- Â Preserve and protect historic commercial buildings through the establishment of a regulated historic overlay district.
- Â Discourage the demolition of historically significant buildings. Consider the adoption of a demolition ordinance to protect buildings in the commercial area.
- Â Review and revise zoning ordinance to further delineate standards for downtown development.
- Â Continue to maintain on-street parking downtown to meet parking demand and buffer pedestrians from moving traffic.

OBJECTIVE: Promote the Cape Charles Harbor Area as a valuable resource for economic development, while protecting and enhancing the recreation potential and natural aesthetic values of the harbor for the enjoyment of area citizens and tourists.

STRATEGIES:

- Â Promote harbor-related land uses in the Cape Charles harbor area. Certain types of commercial and recreational activities either require waterfront location, or are enhanced by such a location. Uses which do not require waterfront locations should be discouraged in the harbor area.
- Â Develop and improve public waterfront harbor properties to enhance their recreation and economic potential, and to magnify the attraction of Cape Charles as a tourist destination.
- Â Establish pedestrian accessway from the harbor to downtown Mason Avenue.
- Â Consider promoting the railroad as a visitor attraction. The railroad stands as a symbol of the area's railroad history and is unique in that it contains one of the few remaining working railroad ferry barges. Specific features to attract visitors could include a railroad museum, passenger service excursion trains with dining cars, and restored steam trains.
- Â Expand and upgrade marina facilities.
- Â Maximize public access, both physically and visually, by public acquisition of lands in the vicinity of the harbor whenever feasible.
- Â Limit the height and intensity of new development along waterfront areas to preserve visual access and the natural beauty of the waterfront for the broader public. Acquire scenic easements wherever public values dictate the maintenance of visual access to the waterfront and the property is not available for purchase.

- Â Develop a long-range master plan for the harbor area that builds upon the strategies listed above.
- Â Consider amending the zoning ordinance to create a zoning district specifically for harbor-related land uses.

OBJECTIVE: Promote the use of land in a manner which is harmonious with environmental resources and features, particularly given natural constraints, and preserve and protect unique natural features found throughout Town.

STRATEGIES:

- Â Protect special environments and open spaces, including but not limited to sand dunes, wetlands, and critical wildlife habitat, from the harmful effects of incompatible development activity by limiting the type and intensity of land development in those areas.
- Â Encourage acquisition of special environments of significant public value by public agencies or nonprofit conservancy organizations for the purposes of preservation.
- Â Utilize the PUD zoning designation as a means of preserving open space and sensitive environmental features.
- Â Preserve open space through the use of deed restrictions, easements, acquisition, gifts, protective easements, transfer to a stewardship agency (foundations or conservation groups), and other appropriate means.
- Â Consider the idea of a greenway plan which emphasizes shoreline buffers, scenic waterfront areas, open space preservation, recreational areas and linear parks or trails linking areas of the Town with one another.
- Â Public acquisition of waterfront lands should be pursued, especially in the vicinity of the beach and the northern Chesapeake Bay shoreline.

OBJECTIVE: Guide future large scale development in a manner which strives to preserve the scenic beauty, foster the wise use of natural resources, protect environmentally sensitive areas, and protect the historic, small town character of the community.

STRATEGIES:

- Â Promote PUD zoning designations to ensure compatibility of land use by providing for the integration of new residential development that is compatible with and has minimal adverse impact on the character of the Town.
- Â Site planning should be responsive to natural features and ecological considerations, such as topography, woodlands, wetlands, stream buffers and storm drainage.
- Â Encourage approaches to site design which take natural features of the property into account and which use the land most effectively and efficiently by maximizing open space, preserving scenic vistas, protecting environmentally sensitive areas and pursuing any other public policies identified in this plan.
- Â Promote a development pattern that embodies open space as an integral component of the landscape.
- Â Encourage future large scale development patterns which maintain and reinforce the visual transition of the Town's historic area from surrounding development.
- Â New development directly impacting the historic Town grid should not turn its back on the existing plan but should be sensitive to it and recognize its circulation patterns, vistas, density and scale. This recognition should be both visual and physical and promote interaction and communication between the new and historic sections.
- Â Encourage a combination of open space and compatible land uses around the northern and eastern boundaries of the historic residential area to protect the community's distinct identity.
- Â Consider the use of landscaped buffers, greenbelts, trails, parks and other features to define the Town's historic area, provide open spaces and elevate the overall quality of the historic residential area's physical environment.
- Â Review and refine regulations of the PUD zoning designation.
- Â Provide training for the Town officials and legislative bodies who will utilize site reviews of the PUD zoning ordinance. Training should focus on the site plan review process, as well as planning and clustering concepts.

OBJECTIVE: Ensure that new development does not place an undue financial burden on the Town.

STRATEGY:

- Â Developers should be required to pay for water, sewer, road improvement and stormwater management costs associated with the new development. If new facilities are required,

negotiations with the developer should take place so that undue burdens are not placed on the existing tax base.

OBJECTIVE: Continue to rely on the Planning Commission as the primary implementation mechanism for the Comprehensive Plan and for guidance in matters concerning land use controls.

STRATEGIES:

Â Review appropriate codes and ordinances and revise as necessary to ensure consistency with the Comprehensive Plan.

Â Review all development proposals for consistency with the Comprehensive Plan.

FUTURE LAND USE PLAN

The plan for future development is illustrated on the Land Use Plan (see Figure 11), which reflects the goals, objectives and strategies outlined above. The Land Use Plan is intended as a policy guide for future development and redevelopment activities. The Plan suggests suitable land use activities based on environmental characteristics, community facilities, current land uses and other factors. The land use area designations are general and may not follow exact property lines.

The Future Land Use Plan differs from the Zoning District Map in several significant ways: the Land Use Plan is purely advisory in nature and serves as a general policy guide, whereas the Zoning Map is a parcel-specific implementation tool enforced by Town ordinance. The Land Use Plan may be executed by various means including zoning, site planning and conservation techniques. The following paragraphs discuss land use categories that appear in the Land Use Plan.

Residential

This area constitutes the majority of existing residential land use in Town, characterized by historic residential structures where single family residential land use predominates. A significant number of multi-family structures, such as duplexes and row houses, are dispersed throughout the area as well. This area is already established; key to development of the area is infill development that is compatible with existing residential structures, promoting historic preservation and improving dilapidated properties. Future consideration for multi-family dwellings should be based upon architectural compatibility; all development should be sympathetic with the existing character of the area. A number of commercial buildings were initially constructed in this residential area and consideration should be given to future commercial use of these structures.

Commercial

This area encompasses Cape Charles' traditional downtown district, and extends east along Mason Avenue and Route 184 to the Town's corporate limits. It is the intent of this designation to provide a strong sense of downtown and to promote the continuing concentration of retail businesses and services in this predominantly commercial area. A diverse mix of compatible commercial, entertainment, governmental and residential uses would be promoted, as well as special provisions for signage, landscaping and design. Demolition of historically significant buildings should be discouraged and adaptive re-use of residential buildings in the commercial area should be encouraged.

Harbor-Related

The Harbor-Related land use designation is concentrated along the Cape Charles Harbor area. The majority of this area is already developed with water-dependent uses. It is the intent of this designation to provide a multi-use area allowing compatible and complementary harbor-related activities, both commercial and recreational. By focusing on harbor-related activities, the Town's tidal water resources and waterfront setting will be enhanced, and existing and future downtown

Figure 11
Future Land Use

development improvements will be supported and strengthened.

Sustainable Technology

This category is designated for industrial land uses in locations served by the major transportation facilities of the harbor and railroad. It is the intent of this designation to encourage the revitalization of the local industrial economy and historic port, and to provide job opportunities for local residents. The purpose of this land use is to provide for a planned mixed industrial and employment park. It is the intent of this land use designation to (1) encourage cost effective approaches to resource conservation, wise use of renewable resources and ecologically based industrial development, (2) serve as a model and national prototype of an integrated approach to land development and industrial operations, embodying sustainable approaches to local economy, environment and culture; and (3) serve as a model for advancing the traditional settlement patterns of the Eastern Shore’s towns and employment centers.

Planned Unit Development

The Planned Unit Development (PUD) designation is provided for large scale developments to encourage creative master planning which incorporates mixed residential densities, open space, commercial and recreational facilities in overall design. The intent of this designation is to maintain the rural character of the Town’s periphery while providing for sensitive development of residential uses and other uses compatible with a rural environment. Figure 12 illustrates the PUD, and includes a residential unit summary.

Conservation/Open Space

This designation includes open space and conservation areas to meet the physical and environmental needs of the Town and to enhance its aesthetic appeal. Conservation areas include locations with critical natural resources that present the highest level of concern for proper conservation practice, such as shorelines and wetlands.

Figure 12 - Planned Unit Development

TRANSPORTATION

Transportation is a major factor affecting the growth and development of a community because residents depend upon the transportation network for the movement of vehicles, goods and people. The Town's transportation plans and policies encourage and can to a large extent guide the quality and direction of development. While road systems offer an effective way to move people and goods among various geographical areas, they also have some side effects. Roadways have a significant impact on land development, economic conditions and the overall quality of life in a community. The course of a roadway often determines the paths for public utility lines, including water, sanitary sewer, storm sewer, electrical power, and communications. Public services such as police, fire and emergency rescue rely on the safe and adequate provision of roadways.

Roads can also determine which areas are not comfortable for pedestrians. The 1990 Census indicates that over one-quarter (26%) of occupied housing units have no vehicle available. The Census also reveals that almost 13% of the Town's work force either walks to work or works at home. Accordingly, those who work in the home or have no automobile may require or request upgrades to the pedestrian transportation network so that walking within Town is easier and safer. Plans and policies for transportation and land use should encourage the use of other modes of transportation and related strategies for land development. Public transportation is provided by STAR Transit which provides daily bus service along Route 13, as well as a connector route across the Chesapeake Bay Bridge Tunnel.

VDOT has prepared a general transportation plan for the Town, and a consultant is preparing a transportation plan to study the effects and provide for transportation needs of the Baymark development. Once these transportation plans are adopted by the Town Council, they will become integrated as the transportation component of the Town's Comprehensive Plan, and establish general transportation policies, providing recommendations for the physical characteristics and functional aspects of a transportation system designed to meet future travel needs. Included below is a discussion on the existing conditions of transportation elements in the Town of Cape Charles.

STREETS, SIDEWALKS AND MULTIPLE USE PATHS

The predominant form of transportation in Cape Charles is the street system which consists of arterials, collector roads and local roads. Route 184 provides access into and out of Cape Charles from Route 13, and serves as the main arterial road of the Town, connecting with the Town's historic street grid at Fig Street. Collector roads are intended to collect vehicles from local streets or rural areas and distribute them to either local destinations or to an arterial. The most active collector roads in Town are Fig Street, Mason Avenue, Bay Avenue and Randolph Avenue. These roads conduct traffic from the local roads in the historic grid to Route 184, the Town's main access road. Route 642 conducts traffic from Route 184 and Mason Avenue to the harbor and industrial area. This road

includes an overpass, referred to as “the hump,” which intersects Mason Avenue at a sharp angle. The sharp intersection results in difficult turns for large commercial vehicles. Local neighborhood streets serve to collect and distribute traffic between parcels of land and the collector or arterial roads. It is the intent of the local roads to provide access to collector roads in such a manner that through traffic is not encouraged to use these minor roads as a shortcut route.

Most of the roads and streets within the Town are in fair condition and adequate for daily traffic use. Repaving of the Town’s grid streets is currently underway, provided by VDOT. Extensive road upgrades have been made in the northeast section of Town, including the installation of sidewalks, curbs and gutters, with funding provided through a Community Development Block Grant.

Mason Avenue is the Town’s primary commercial street, and is connected to Fig Street, which causes the entrance into the Town’s commercial area to be somewhat disjointed. Mason Avenue, which serves as the Town’s “Main Street,” provides access to the downtown commercial area. Parking for commercial establishments consists of on-street parking along Mason Avenue. Customers also park in the large parking lot of the grocery store on Mason Avenue. Sidewalks exist in the downtown area for pedestrian traffic, with some areas in need of maintenance and repair.

The downtown area is separated from the harbor by the railroad yard, and pedestrian access between the harbor area and downtown Mason Avenue is currently limited. The Eastern Shore Railroad allows pedestrian access to the harbor area by means of a road running through the railroad yard; however, the access route is not well marked. Moreover, railroad activities could pose a potential safety hazard to pedestrians. There is a need for a clearly defined trail connecting Mason Avenue to the harbor, so that access from downtown to the harbor is convenient and safe.

The Town lacks bike paths and other multi-use paths. With the expected increase in visitors and residential population from the new residential and golf development, it is important to consider alternative means of transportation, including walking, golf carts and bicycling. A Town-wide, integrated system of bike routes and multi-use paths is needed to accommodate the Town’s current and future transportation needs.

A substantial amount of alleyways exist in the Town’s residential area. Approximately half of these alleys are used by the Town for garbage collection. A substantial portion of the alleyways are in various states of disrepair. Confusion exists as to the maintenance responsibility of the alleys, and the existence of right of ways. There is a need to determine ownership and the responsibility of maintenance and improvements for all alleys in Town.

HARBOR

The Cape Charles Harbor serves local industry and commerce operations as well as tourists and recreational users. The harbor was originally developed to load and unload railroad cars on barges,

a use which continues today. In addition to the Eastern Shore Railroad, industrial uses at the harbor include Bayshore Concrete, the Sustainable Technology Park. The harbor includes extensive bulkheading, as well as commercial docking facilities for industrial uses. The Town owns a portion of the harbor and leases 13 boat slips to recreational boaters and commercial watermen. Two public boat launching ramps are also located at the harbor. Current traffic and demand for both long term and transient boat slips indicate that there is a shortage of slips in the harbor, which has the capacity for approximately 20 additional slips. The harbor is dredged to 18-19 feet, except for a portion at the northeast end, which is dredged to seven feet. The main channel into the harbor is approximately 18 feet deep and 500 feet wide, extending 2.7 miles from the harbor entrance. The channel is well-marked and provides good access to the harbor. Dredging of the harbor is performed periodically by the Corps of Engineers, with spoils deposited at a nearby spoils site.

RAILROAD

The Eastern Shore Railroad is headquartered in Cape Charles, which serves as the facility and equipment maintenance center for the Railroad. The Railroad runs approximately 8,000 cars per year, and has the capacity for approximately 25,000 cars per year. The Railroad is linked to Norfolk by way of daily ferry operations, with barge capacity for 25 railroad cars. From the Norfolk terminal, the Railroad connects with CSX Transportation and Norfolk Southern rail service. From its terminus in Maryland, the Railroad also connects with Norfolk Southern rail service (previously Conrail). Rail and shipping connections from Cape Charles could potentially offer links to more than 250 ports and 60 shipping lines around the world.

**Goals, Objectives and Strategies
for the
TRANSPORTATION ELEMENT**

GOAL: *Promote a transportation system which provides for safe and efficient vehicular and pedestrian traffic throughout the Town, while protecting the historic character and integrity of the Town.*

OBJECTIVE: Promote a street system that provides for the safe and efficient movement of people and goods within, to and from the Town.

STRATEGIES:

- Â Support implementation of the Town's Transportation Plans, when completed and adopted.
- Â Encourage VDOT to undertake a study of all sidewalks and roads in the Town to determine, unequivocally, the responsibility for improvements and maintenance.
- Â Protect and preserve the Town's alley infrastructure; research the existence of alleys in Town and determine maintenance responsibilities.
- Â Study the impact of a new entrance into Town which will provide access to the BayCreek Development and the Sustainable Technology Park.

OBJECTIVE: Provide for a transportation system that is designed to safely accommodate pedestrians, bicyclists and other alternative modes of transportation as appropriate.

STRATEGIES:

- Â Promote pedestrian, bicycle and golf cart access, whenever feasible, as a feature of transportation planning and in new development and redevelopment projects.
- Â Provide safe and attractive pedestrian access from Mason Avenue to the harbor area.
- Â Enforce the use of sidewalks instead of streets for pedestrian traffic.
- Â Expand sidewalk system to areas or lots where it does not exist, as financial resources permit.
- Â Create a bike path along Route 184, connecting to Route 13.

Â Take into account the needs of pedestrians, bicyclists and golf carts in the development of future streets and access paths, especially for access to the Sustainable Technology Park and the public beach.

Â Provide adequate bicycle parking at shopping areas and public facilities.

OBJECTIVE: Promote an efficient transportation system for industrial users.

STRATEGIES:

Â Maintain and improve harbor infrastructure.

Â Provide for commercial docking facilities where appropriate.

Â Continue to support Eastern Shore Railroad operations.

Â Consider the needs of commercial and industrial users when constructing future roadways in the vicinity of the harbor area and Sustainable Technology Park.

Appendix 1. Underground Storage Tanks In Cape Charles and Vicinity

Name of User	Status of Tanks	Capacity	Substance
Shore Stop #7 22177 Lankford Hwy	4 tanks currently in use 5 tanks removed from ground 1993 3 tanks removed from ground 1986	34,000 gallons	gas, diesel, kerosene
Cape Charles Meatland - Rt. 184	4 tanks currently in use	17,375 gallons	gas
Chesapeake Bay Bridge/Tunnel District Rt. 13	4 tanks currently in use 2 tanks removed from ground 1990 1 tank closed in ground 1978	17,000 gallons	gas
John's Union 76 Mason Ave. & Peach St.	3 tanks currently in use 3 tanks removed from ground 1993	16,550 gallons	gas, kerosene
Bagwell Oil Co. 650 Madison Ave.	2 tanks currently in use 1 tank removed from ground 1988	5,000 gallons	diesel, gas
Peninsula Motors - Mason & Nectarine	4 tanks currently in use	4,000 gallons	gas
Kiptopeke State Park	2 tanks currently in use	3,500 gallons	gas, diesel
Smiths Grocery	4 tanks currently in use	1,930 gallons	gas, kerosene
Eastern Shore of VA National Wildlife Refuge	1 tank currently in use 4 tanks closed in ground 1960, 1980	1,500 gallons	gas
Cape Charles Oil Co. - 1030 Marine Rd.	3 tanks currently in use	1,375 gallons	unknown
Mason Ave. Lift Station	1 tank currently in use	1,000 gallons	diesel
Pine St. Pump Station	1 tank currently in use	1,000 gallons	diesel
Washington Ave Lift Station - Mason & Plum	1 tank currently in use	1,000 gallons	diesel
Wastewater Treatment Plant - Cape Charles	1 tank currently in use	1,000 gallons	diesel
Bayshore Concrete Products	1 tank currently in use	600 gallons	gas
Cape Charles T&D Substation - Rt.13 & Rt. 642	1 tank currently in use	250 gallons	diesel
Plum St. Pump Station	1 tank currently in use	unknown	diesel
Richardsons Chevron Rt. 13	4 tanks removed from ground in 1998 1 tank removed from ground 1989		
ABC Liquor Store - Mason Ave.	1 tank removed from ground 1992		
Bell Atlantic - 266 Kiptopeke St.	1 tank removed from ground 1992		
Bell Atlantic - Rt. 641	1 tank removed from ground 1992		
Cape Charles BP - Main St.	3 tanks removed from ground 1987		
Cape Charles Peaking Plant - Rt. 184	1 tank permanently out of use		
F&M Plant Parsons Siding - Rt. 641	1 tank removed from ground 1989		
Fitzhugh Auto Co. - Randolph Ave.	2 tanks closed in ground 1989		
Francis A. Lewis - 726 Randolph Ave.	2 tanks closed in ground 1980		
HA Baileys Drive In - Rt. 13	3 tanks closed in ground 1988		
John D Green - Cape Charles	4 tanks removed from ground 1986		
Kings Creek Marina	2 tanks removed from ground 1988		
Mary Crocketts Dock - Rt. 642	2 tanks removed from ground 1988		
Palace Theater - 303 Mosa Ave.	1 tank closed in ground 1986		
Plantation Farm & Garden - Rt. 13	4 tanks removed from ground 1983-86		

Smith WM - 6 Peach St.

1 tank closed in ground 1940

Source: State Water Control Board, 1998, 1999.

Insert illustration of UST locations

REFERENCES

- Accomack-Northampton Planning District Commission. *Eastern Shore of Virginia Regional Community Development Plan*. 1997.
- Athearn, W.D., et al. *Shoreline Situation Report, Northampton County, Virginia*. Virginia Institute of Marine Science, College of William and Mary, Gloucester Point, Virginia. 1974.
- Byrne, R.J. and G.L. Anderson. *Shoreline Erosion in Tidewater Virginia*. Virginia Institute of Marine Science, College of William and Mary, Gloucester Point, Virginia. 1978.
- Commonwealth of Virginia, Chesapeake Bay Local Assistance Department. *Local Assistance Manual*. 1989.
- Commonwealth of Virginia, Council on the Environment. *Constraints and Considerations Applicable to Future Development of Brown and Root Property at Cape Charles, Virginia*. 1988.
- Commonwealth of Virginia, State Water Control Board. *Database of Facilities with Underground Storage Tanks*. 1998.
- Horsley Witten Hegemann, Inc. *Ground Water Supply Protection and Management Plan for the Eastern Shore of Virginia*. Horsley Witten Hegemann, Inc. 1992.
- John Milner Associates, Inc. *Preservation Plan for the Town of Cape Charles*. John Milner Associates, Inc., West Chester, Pennsylvania. 1996.
- Malcom Pirnie. *Groundwater Withdrawal Impact Analysis for the Town of Cape Charles, Virginia*. 1997.
- Richardson, Donna. *Water-Resources Notes: Ground-Water Concerns for the Eastern Shore, Virginia*. U.S. Department of the Interior, U.S. Geological Survey. 1992.
- U.S. Department of Agriculture, Soil Conservation Service. *Soil Survey of Northampton County, Virginia*. Virginia Polytechnic Institute and State University. 1994.
- U.S. Department of Commerce, Bureau of the Census. *U.S. Census*. 1960-1990.
- Weigmann, Diana and Carolyn Kroehler. *Threats to Virginia's Groundwater*. Virginia Water Resources Research Center, Virginia Polytechnic Institute and State University.

Figure 7 Soils

AsE	Assateague Sand
BeB	Beaches
BoA	Bojac Fine Sandy Loam
BhB	Bojac Loamy Sand
CaA	Camocca Fine Sand
ChA	Chincoteague Silt Loam
DrA	Dragston Fine Sandy Loam
FhB	Fisherman Fine Sand
MoD	Molena Loamy Sand
MuA	Munden Sandy Loam
NmA	Nimmo Sandy Loam
PoA	Polawana Loamy Sand
UPD	Udorthents & Udipsamments