

City of Poquoson Comprehensive Plan 2008-2028

(Revised June 27, 2011)



**“BUILDING A SUSTAINABLE
COMMUNITY”**

CITY OF POQUOSON, VIRGINIA

2008-2028 Comprehensive Plan

July 2008



Prepared by the City of Poquoson with technical assistance from the Staff of
the Hampton Roads Planning District Commission

FOREWORD



The Comprehensive Plan serves as a planning tool to address the myriad of social, economic, regulatory and environmental issues the City of Poquoson must face as a local government agency. The Comprehensive Plan is categorical analysis of these issues and a series of goals, objectives and strategies adopted to address them. The strategies were developed with consideration of the past, an evaluation of the present, and most importantly a vision for the future as offered by its citizens and their elected officials.

The challenge found in Poquoson, as with most localities, is to balance the divergent convictions on how to address the critical issues prevalent in our community and concluding the most advantageous option. Issues that garnered considerable attention in the last Comp Plan and that are carried over with this plan are:

- Preserving private property rights and developing needed community land use policies
- Providing excellent government services and facilities while maintaining low taxes
- Encouraging economic development that is attractively designed and will provide the products and services desired by our community
- Extending sewer service throughout the city and making it affordable and equitable
- Continuing to improve connectivity by providing a network of safe and efficient roadways, pedestrian travelways and bikeways while minimizing disruption in neighborhoods
- Promoting smart-growth practices for our community in order to maintain its small community atmosphere and appropriately manage change

The comp plan represents the collaborative efforts of this community and its leaders to build “a livable and sustainable community”. The Comprehensive Plan embodies the community’s “vision” to manage and overcome the obstacles presented to achieve the desired goals. The community expects to achieve this vision by utilizing the strategies prepared in this document to accomplish the established goals. The Comprehensive Plan should be viewed as a “strategy guide” to help ensure Poquoson remains and progresses as a sustainable community. As with the past Comp plan; unforeseeable circumstances and issues will arise. This document has been revised in an attempt to address the current issues, as well as potential foreseen issues. Hopefully, the level of preparation outlined in this document provides guidance for alternative outcomes.

Thank you to the dozens of city staff members, elected and appointed officials, and most of all the citizens who volunteered their time and effort toward this considerable planning challenge. Together **WE** are “building a livable and sustainable community.”

Planning & Community Development Staff

*Please note that all figures, tables, and maps reflect U.S. census information for the years 1970 – 2000 as well as data from Hampton Roads Planning District Commission (HRPDC).

ACKNOWLEDGEMENTS



City Council

2008-2009 City Council

Gordon C. Helsel, Mayor
Frank A. Kreiger
Carey L. Freeman
Traci-Dale Crawford

Arthur V. Holloway, Jr., Vice Mayor
W. Eugene Hunt, Jr.
E. Tom Meree

2007-2008 City Council

Gordon C. Helsel, Mayor
Frank A. Kreiger
W. Eugene Hunt, Jr.
E. Tom Meree

Arthur V. Holloway, Jr., Vice Mayor
Herbert R. Green, Jr.
Carey L. Freeman

2005-2006 City Council

Gordon C. Helsel, Mayor
Frank A. Kreiger
Debra D. Bunting
W. Eugene Hunt, Jr.

Arthur V. Holloway, Jr., Vice Mayor
Herbert R. Green, Jr.
Carey L. Freeman

2003-2004 City Council

Gordon C. Helsel, Mayor
Frank A. Kreiger
Debra D. Bunting
W. Eugene Hunt, Jr.

Arthur V. Holloway, Jr., Vice Mayor
Herbert R. Green, Jr.
Carey L. Freeman

City Administration

J. Randall Wheeler, City Manager
Charles W. Burgess, Jr., (former City Manager)
Judy F. Wiggins, Assistant City Manager & City Clerk
Wayne Moore, City Attorney

Planning Commission (Current and Former Members)

Bonnie W. Shriver, Chairwoman
Gregory N. Gardy
Herman L. Howard
Richard D. Clifton
Fae F. Mungo

William J. Travis, Vice Chairman
Benjamin M. Hahn
Shawn M. Avery
E. Earl Shores
Kevin Brennan

Community Participation Team

Bonnie W. Shriver
Kevin Brennan
William J. Travis
Jerry T. Buchanan
Kathy Powell
Tommy Vande-Mortel

Fae F. Mungo
Herman L. Howard
Catherine E. McBride
Dwight E. Johnson
Eugene D. Seiter, Jr.

Comprehensive Plan Development Steering Committee

Bonnie Shriver
Kevin Brennan
E. Earl Shores
Carl S. Ferreira

Fae F. Mungo
James Horney
Eugene D. Seiter, Jr.

Facilitators & Note takers at the Public Input Sessions

Kevin Brennan
Joe Kovac
Jerry T. Buchanan
Kathy Powell
Tommy Vande-Mortel

Herman L. Howard
Catherine E. McBride
Dwight E. Johnson
Eugene D. Seiter, Jr.

Comprehensive Plan Development Staff

Joseph W. Hollingsworth, (former Director of Planning & Community Development)
Deborah L. Vest, Coordinator of Community Development
Andrea Ambrose, (former Principal Planner)
Joseph N. Carter, Jr., Principal Planner
Karen Brauer, Environmental Compliance Officer
Victoria Diggs, Executive Secretary - City Manager's Office
Evie Insley, Administrative Secretary - City Manager's Office
Sherry Coffey, Administrative Secretary - Planning Dept.
Kristen Moore, Administrative Secretary - Building Inspections Dept.
Glenda Berg, (former Administrative Secretary - Building Inspections Dept.)
Anne Saunders, Administrative Support Supervisor - Police Dept.
John Carlock, Deputy Executive Director - Hampton Roads Planning District Commission
Eric Walberg, Principal Planner - Hampton Roads Planning District Commission

Comprehensive Plan Development Staff (continued)

Theresa Owens, Director of Finance

Lisa Dessoffy, (former Director of Finance)

Pamela Moon, (former Director of Finance)

Robin Bellamy, Finance Accountant

Jeffrey J. Bliemel, City Engineer

Jonathan Montgomery, Director of Public Works

John Gill, (former Director of Parks and Recreation)

Dr. Jennifer Parrish, Superintendent of Poquoson City Public Schools

Dr. Jonathan Lewis, (former Superintendent of Poquoson City Public Schools)

Graham P. Wilson, Commissioner of Revenue

Emily Ashley, Emergency Management Coordinator

Robert Faison, City Assessor

Ken Somerset, Building Official

All City Employees and Citizens who contributed to the Plan Development

CITY OF POQUOSON COMPREHENSIVE PLAN 2008-2028

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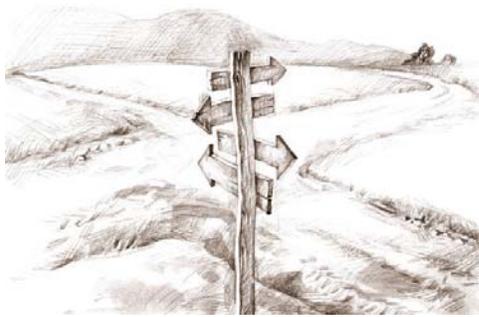
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PURPOSE OF THE COMPREHENSIVE PLAN

The purpose of the City of Poquoson's Comprehensive Plan is to guide decisions on land use and development for the physical development of the City to promote the health, safety, morals, order, convenience, prosperity and general welfare of the City of Poquoson. Important aspects of the Comprehensive Plan which need to be referenced are new development and redevelopment, density of residential areas, future road and utility improvements, and location of potential community facilities. The Comprehensive Plan intends to provide direction for the community the next 20 years and to set goals by which policies should follow to achieve these goals.

Since the plan is intended to guide decisions with land use and development, ALL interested parties should review this document when determining a property's potential use, from potential developers to the individual property owner. This document has been created to demonstrate the desired pattern of development and conservation throughout the city. The Comprehensive Plan is created from the collaboration of the community, the Hampton Roads Planning District Commission (HRPDC), City of Poquoson Council, boards, commissions, committees, and City staff.



THE AUTHORITY TO PLAN

The State of Virginia requires each locality to prepare and adopt a [comprehensive] plan for the physical development of their land and to review that plan at least once every five (5) years to determine whether or not amendments or revisions to the plan are necessary.¹ According to the Code of Virginia:

¹ The Code of Virginia Title 15.2, Chapter 22, §15.2-2223 and §15.2-2230.



“...[t]he 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 the present and probable future needs and resources, best promote the health, safety, morals, order, convenience, prosperity and general welfare of the inhabitants.

The comprehensive plan shall be general in nature, in that it shall designate the general or approximate location, character, and extent of each feature shown on the plan and shall indicate where existing lands or facilities are proposed to be extended, widened, removed, relocated, vacated, narrowed, abandoned, or changed in use.”

Section 15.2-2232 of the Code of Virginia references the legal status of the plan and specifies that once the plan is approved and adopted, it controls the location, character and extent of the features shown on the plan. Future development must be based upon proposals that are “substantially in accord with the adopted comprehensive plan or part thereof.”



“Building a Sustainable Community”

VISION

The vision for the City remains constant since the last comprehensive plan. Community leaders, citizens, elected officials, Planning Commission, committee members, City employees and planning professionals involved in the development of the Comprehensive Plan conceive the vision for the City of Poquoson as this statement - *“Building a Sustainable Community”*. This vision statement is not only a sound planning principle but it connects the many objectives and functions of the city government towards a central goal. Keeping this goal in mind, the City can continue to advance towards a sustainable community which provides: financial stability, retention of citizen disposable income, attraction of outside investment and spending, better circulation for mobility, improved transportation, enhanced recreation and amenities, increased quantity and quality in commercial goods and services, and low tax rates. Obtaining these characteristics translate to a better quality of life for the City’s residents; and, of course, this is the ultimate goal of the Comprehensive Plan.

Different studies, data collection and analyses conducted in the update of the Comprehensive Plan demonstrate that the City of Poquoson is a bedroom community to the larger Hampton Roads localities on the Peninsula, and due to its current state and location, is projected to remain



this way. This fact constrains the City’s ability to attract large businesses that offer a large number of employment opportunities and commercial businesses that offer goods and services to the citizens. The effect is the City has a disproportionate ratio of citizens to employment opportunities and a disparity in the percentage of revenue collected from its residents compared to the amount of disposable income. However, the advantage of being a bedroom community is that the City has a large market area to overcome these obstacles and a character unique to Poquoson. Addressing these issues will lead Poquoson to become a sustainable community.



COMPREHENSIVE PLAN RELATIONSHIP TO THE COMMUNITY

While the State of Virginia requires each locality to prepare a Comprehensive Plan, the State establishes the legal status of the Comprehensive Plan as an advisory document to serve as a guide and one of many factors to consider on zoning decisions. It is not a regulation like the zoning ordinance or other regulatory documents. The Plan guides decisions of the governing body, Planning Commission, Board of Zoning Appeals and the City government by providing the vision, goals, objectives and implementation strategies. However, the fact that the Comprehensive Plan is advisory does not mean the recommendations and findings can be cast aside. Again, Section 15.2-2232 of the Code of Virginia references the legal status of the Plan and specifies that once the Plan is approved and adopted, it controls the location, character and extent of the features shown on the Plan. Future development must be based upon proposals that are “substantially in accord with the adopted comprehensive plan or part thereof.” While the Comprehensive Plan is one of many factors to use in zoning decision making, it may be arguably the most important factor.

Once the Comprehensive Plan is adopted, the conclusion is that the Comprehensive Plan provides recommendations and findings that are in the best interests of the public and represents the intent of City government. The Comprehensive Plan becomes a reference to achieve the desired outcomes. There is an adage that states the Comprehensive Plan serves as a road map to the respective locality’s future. A road map details the routes that must be traveled in order to reach your destination. In the same fashion, the Comprehensive Plan guides the development of policies and regulations necessary to influence the direction and character of growth desired for the City of Poquoson.





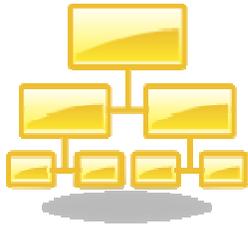
AMENDMENTS TO THE COMPREHENSIVE PLAN

In an ideal world, the Comprehensive Plan would consist of clairvoyant foresight and perfect projections to guide governing actions for a community that never experiences change. But reality is that the future cannot be predicted and that change is inevitable; therefore, occasionally circumstances arise that may differ from what is found in the Comprehensive Plan. When these occur, interpretations of case law pertaining to comprehensive plans recommend the Comprehensive Plan be amended in order to manage change and maintain the integrity of the Comprehensive Plan. Such circumstances that could require amending the Comprehensive Plan are unforeseen issues, new interests of the community, a development proposal that deviates from recommendations, implementation of additional or new regulations, or an intensification of existing issues or regulations.

Generally, there are two types of Comprehensive Plan amendments: those initiated by the City of Poquoson and those initiated by a private party. While the Comprehensive Plan is a thorough analysis of the city as a whole, it is not all inclusive. New state regulations imposed on the City, special topic reports, new studies and analyses, and plans adopted in the future are examples of Comprehensive Plan amendments initiated by the City. Typically, a Comprehensive Plan amendment initiated by a private party is requesting a change in a future land use designation for a property.

At adoption, future land use designations shown in the Comprehensive Plan are considered as the best interest for the community's health, safety, welfare and sometimes convenience. It is prudent for proposals and requests contrasting from the adopted future land use designations apply to amend the Comprehensive Plan for consideration by City Council. Applications to amend the Comprehensive Plan may require amending maps, text or both. A review of case law interpretations pertaining to comprehensive plans recommends decisions to amend the Comprehensive Plan occur before the rezoning decision. However, since the Comprehensive Plan serves only as a guide in the State of Virginia, it is not required that land only be rezoned or permitted in accordance with it. Applications to amend the Comprehensive Plan must present compelling arguments demonstrating the benefits the proposal will provide the City of Poquoson as compared to the current designation. Council will utilize State regulations, City ordinances, as well as the applicant's argument when considering the application.





ORGANIZATION OF THE COMPREHENSIVE PLAN

Each chapter of the Comprehensive Plan represents an essential element to community planning, and some chapters are large enough to be divided into sections which consist of sub-elements. Sub-elements are more specific and detailed areas of the respective element that allows a more in-depth study and plan of this topic. At the conclusion of each chapter and section, a list of goals, objectives and implementation strategies are listed for adoption. Each list represents a level of specification to achieve the vision; the Plan hierarchy is as follows:

- Vision- guiding principle for which the Plan is devised to achieve;
- Goals- broad benchmarks that must be met in order to attain the projected vision;
- Objectives- specific tasks or issues that progress the community towards meeting goals; and
- Implementation Strategies- courses of action giving direction to accomplish objectives.



PLANNING PROCESS

Poquoson's Comprehensive Plan update process involved two parallel work efforts:

- A **public participation** element comprised of public input meetings designed to inform City residents while soliciting their views for the future; and
- A **technical planning** element that included the collection and analysis of background data needed to form planning and development recommendations used to create goals, objectives and strategies for the final Comprehensive Plan document.

In January 2004, the Poquoson City Council approved a methodology for updating the Comprehensive Plan. This methodology called for the creation of two groups each responsible for accomplishing one of these work efforts. The first group, the Community Participation Team, was composed of five members of the Planning Commission and six members from the



community at large. It was responsible for encouraging, facilitating, and reporting citizen participation in the planning process. The second group, the Comprehensive Plan Development Steering Committee, was composed of five members of the Planning Commission, one member of the Community Participation Team, one member from the Industrial Development Authority, and one City Council representative. The Steering Committee was responsible for reviewing citizen input generated by the Community Participation Team. The Steering Committee also identified issues, reviewed technical data, offered strategies and policies for the future and made a final recommendation to the full Planning Commission on the Comprehensive Plan update.

Public Participation

Public participation is based on the premise that community planning begins with open communication and the exchange of information and ideas. With this exchange, a Comprehensive Plan could be created to develop effective actions for the future while having broad public support.

The Community Participation Team

City Council appointed a Community Participation Team responsible for encouraging citizen participation in the update process. The team met on a regular basis from April through August of 2004, and designed public involvement programs, monitored outreach efforts, and evaluated the results of public input meetings. It also led a highly publicized, community-wide effort to involve citizens in planning their future and the future of the City.

Citizen Outreach Efforts

Throughout the Comprehensive Plan update process, a variety of methods were used to maximize citizen participation in the planning process. Prior to the beginning of the public input sessions, flyers announcing the meetings was distributed widely to area school students, church organizations and civic groups. Volunteers also traveled throughout the City placing flyers in store windows and other highly visible locations. In February 2004, the Daily Press and the Poquoson Post printed advertisements for the Public Group Discussion Sessions to notify the public of the Plan update.

Volunteer Citizen Facilitators & Note Takers

On February 16, 2004 fourteen citizens participated in a training session in preparation for the public input sessions. These citizens were trained to facilitate and take notes during small group discussions at two public input sessions held later that month.



Public Group Discussion Sessions

On February 19, 2004 the first public group discussion was held at Poquoson High School. Forty-seven of Poquoson's citizens participated in the session. At this session, citizens were given an overview of the comprehensive planning process and a summary of expectations for that evening's meeting. Citizens were also asked to provide their vision for the ideal Poquoson of the future. During the meeting, citizen participants were divided into small groups (less than 15 members) and trained citizen facilitators led each group through a forty-five minute session. Citizens were encouraged to voice their opinions, likes, concerns, and their outlook for the future on each of the following topics:

- *Parks and Recreation*
- *Public Facilities/Services (Library, Fire, Police, Solid Waste, etc.)*
- *Infrastructure (Streets, Sidewalks, Bikeways, Sewer, Water, Drainage)*
- *Education/Schools*

On February 26, 2004, the second public group discussion session was held at the Poquoson High School with forty-one citizens in attendance. Citizens were encouraged to voice their opinions, likes, concerns, and their outlook for the future on each of the following topics:

- *Environment*
- *Land Use*
- *Taxation*
- *Comments On Other Issues*

Trained citizen notetakers recorded citizen comments during each small group session and forwarded their completed notes to staff for typing and, ultimately, review by the members of the Community Participation Team. The public group discussion sessions concluded with a sixty-minute summary. The summary, conducted by the small group facilitators, summarized the points of general consensus reached during the evening's small group sessions.

First Citizens Opinion Survey

On March 29, 2004 the Community Participation Team developed a "Citizen Opinion Survey" to gather additional citizen comments for the Comprehensive Plan Update Process. The self-administered four-page survey asked for citizen comments on a variety of key issues facing the City. Each Poquoson household (over 4,100) was provided a copy of the survey for their input. The City also utilized the survey as an opportunity to gauge citizen opinion of essential city services such as fire, rescue and police. The survey could be mailed in by the respondent and the City dispersed dropboxes throughout the City as a means for collection of surveys. In total, over 613 surveys were returned for a 15% response rate.

Distribution of Public Comments

All public comments and session notes, were subsequently typed, edited and bound. The citizen opinion survey results were also tallied, summarized and bound. Copies of all the citizen comments were made available for citizen review at the Poquoson Public Library and the City Manager's Office.



Consideration of Public Comment

City Staff compiled the citizen comments generated during the public group discussion sessions and the citizen opinion survey and distributed them to the Community Participation Team and the Steering Committee. Both teams met in a joint session on June 24, 2004 and considered the results from previous meetings, the public group discussion sessions and the results of the survey. After the committees reviewed the information and concluded their discussion, Staff capitalized on the opportunity to utilize this session as the initial goal setting session. The Goals, Objectives, and Strategies were compiled into a draft document by City Staff for consideration at the July 29th, 2004 meeting.

Comprehensive Plan Development Steering Committee Review

As the initial public input segment drew to a close, the Steering Committee geared up for its deliberations. Beginning on July 29th of 2004, the Steering Committee began meeting to develop the draft elements of the Comprehensive Plan using the Goals, Objectives, and Strategies compiled by City Staff from the June 24th, 2004 meeting. Each Committee meeting was advertised and open to the public. This provided additional opportunities for citizens to voice their opinions, suggestions, or visions for the future. All written material reviewed by the Committee was made available at the Poquoson Public Library and the City Manager's Office for citizen review.

Remembering Jody

The City of Poquoson lost a good friend and a dedicated City employee with the unexpected passing of Joseph W. "Jody" Hollingsworth on Wednesday, September 22, 2004.

During Jody's tenure as the Director of Planning and Community Development, Poquoson enjoyed a sustained period of productive residential and business growth. His commitment to and love for Poquoson was evident throughout his seven (7) years of service to the City. Jody worked tirelessly to assure that Poquoson's Comprehensive Plan reflected sensible, planned growth, which would benefit residents for generations to come.

The breadth of Jody's work on behalf of Poquoson is matched only by the numerous friends he cultivated along the way. Pleasant and engaging, he always had time for his co-workers and for Poquoson residents who frequently called on him for city information. Preferring the lost art of conversation over impersonal e-mails, Jody will be remembered as much for his insightful wit and personal concern for others as for his laudable professional accomplishments.

Those who were fortunate enough to know Jody will miss him dearly. The City of Poquoson celebrates his life, mourns his passing, and pays tribute to his commendable City service.²

² The City of Poquoson, VA; 2004 Annual Report.



Second Citizens Opinion Survey

In the fall of 2006 another survey was distributed to gather additional citizen comments for the Comprehensive Plan update process. A group of citizens assisted in the development of the 2006 survey. The survey was self-administered, only two pages, and asked for citizen comments on a variety of key issues facing the City. This time, every box holder within Poquoson (4,932) was provided a copy of the survey for their input. The survey included a postage paid return envelope, and this was the only way for the survey to be returned. As a quality control measure, surveys returned in any manner other than this envelope were discarded. A total of 2,008 surveys were returned for a 41% response rate. Considering that no follow-up mailings were administered, the Community Participation Team was pleased with the response rate, and felt the survey results would therefore be a good sampling of citizen opinion.

Assistance from the Hampton Roads Planning District Commission

The update to the Comprehensive Plan reconvened in 2006, where City Staff reviewed and accepted the final deliberations of the Community Participation Team and used the citizens' comments to develop the Plan's goals, objectives and strategies. The Comprehensive Plan was outsourced to the Hampton Roads Planning District Commission (HRPDC) for technical planning assistance and a draft was delivered in August of 2006. Technical planners of HRPDC prepared a Comprehensive Plan with the most recent data and trends, and provided projections and analysis for the City's consideration. The public was presented the draft and encouraged to comment on the document in Public Input Sessions.

Public Input Sessions

Public Input Sessions were held on each of the draft elements with a member of the Planning Commission assigned to each chapter. The public input sessions took place according to the following schedule:

2006

Oct. 12th

- Introduction
- Population
- Housing

Oct. 19th

- Education
- Economics

Oct. 26th & 30th

- Environment

Nov. 2nd

- Transportation
- Parks & Recreation

Nov. 9th

- Community Services
- Utilities

Nov. 16th

- Environment
- Land Use

Each element listed above contained background material, technical data, citizen input, and a statement of goals, objectives and strategies for each topic. The City Clerk recorded comments during each public input session which was displayed on a projection screen for visualization and prompt consensus. The completed notes were forwarded to Planning Department staff for revision of the Comprehensive Plan.





BRINGING IT ALL TOGETHER

The final draft plan text was written based on the Committee’s deliberations, comments from the public input sessions, and technical analysis of the information at hand. City Staff remained cognizant of the public comments during the Plan’s review, and analyzed the information provided in the Plan to determine the information’s accuracy, significance and applicableness. Where necessary, City Staff made revisions to the information with guidance from HRPDC. The City staff analysis of the draft Comprehensive Plan combined public participation comments with the vision of the City, and utilized the technical data and information to create realistic implementation strategies.

On July 7th, 2008; City Planning Staff delivered the Final Draft of the Comprehensive Plan to the Planning Commission. Before formally considering the final draft of the Comprehensive Plan, the Planning Commission held worksessions with members of the Comprehensive Plan Community Participation Team and the Comprehensive Plan Steering Committee to become familiar with the newly prepared document according to the following schedule:

2008

July 7th

- Presentation of Comprehensive Plan

Aug. 27th

- Introduction
- Chapter 1 - Background
- Chapter 2 - Population
- Chapter 3 -Housing
- Chapter 4 -Economics

Sept. 15th

- Chapter 5 – Natural Resources
- Chapter 6 - Community Services & Facilities

Oct. 15th

- Chapter 7 – Infrastructure
- Chapter 8 - Land Use



Public Informational Sessions

On December 1st and 3rd, 2008, the Planning Commission held public informational sessions to allow the public to comment on the final draft of the Comprehensive Plan before their formal consideration of the document. The Daily Press and the Poquoson Post printed advertisements for the Public Informational Sessions to notify the public of their opportunity to comment on the Plan update. Planning Staff also traveled throughout the City placing flyers in store windows and other highly visible locations to advertise the public meetings. The meeting was also advertised on the City's webpage and cable channel.

Links to the final draft version of the 2008-2028 Comprehensive Plan were posted on the City's website as well as an email account specifically dedicated to receive comments regarding the Comprehensive Plan. A copy of the Comprehensive Plan was kept at the circulation desk in the library for public viewing with a sign notifying patrons that the Comprehensive Plan is available for their review.

Final Worksessions

On February 19, 2009, the Planning Commission held a worksession on the Final Draft of the Comprehensive Plan discussing the comments from the Public Information Meetings and providing Staff direction for revisions. Staff made revisions to the Final Draft of the Comprehensive Plan and forwarded the finalized document to the Planning Commission for their consideration at a regularly scheduled Planning Commission meeting on April 20th, 2009 which included an advertised public hearing. Prior to the meeting, the Planning Commission held a worksession to review the changes made to the Plan, which Staff documented in an memorandum to the Planning Commission.

Recommendation and Adoption

On April 20, 2009, the Planning Commission held a public hearing on the Comprehensive Plan to gather public input before consideration of the plan. After doing so, Planning Commission recommended City Council adopt the Comprehensive Plan as the City of Poquoson's official Comprehensive Plan. Following the Planning Commission's recommendation, City Council held a public hearing on July 27, 2009 for the Comprehensive Plan and adopted the Comprehensive Plan as the City of Poquoson's official Comprehensive Plan on September 28, 2009.

In all, several opportunities were made for citizens to provide comments and thoughts with regards to the City's Comprehensive Plan.





PLAN IMPLEMENTATION

Plans are only as good as the desire to implement them. Without implementation the Plan is just that, a plan. Section 15.2-2224 of the Virginia Code identifies several methods and tools available to local governments for the implementation of the comprehensive plan, including a zoning ordinance, subdivision ordinance, capital improvements program, and zoning maps. It is important that regulatory documents reflect the purpose and intent of the Comprehensive Plan so that the Planning Commission and governing body may influence and shape growth of the community effectively.

The Comprehensive Plan is a “working” document and should remain current to specify what is desired by the City. Whenever new plans or studies are developed and approved by the City, the plans should be amended to the Comprehensive Plan. Concurrently new policies and ordinances should be developed to reach the desired results. Any deficiencies in the ordinances should be revised to prevent undesirable uses or poor site development within the City. New issues or topics that arise may require new ordinances or regulations to be developed; therefore, it is crucial for not only the policies and regulations to remain current, but also decision makers and staff should stay abreast of their practice through training and continued education regarding arising issues as well as their duties and responsibilities.



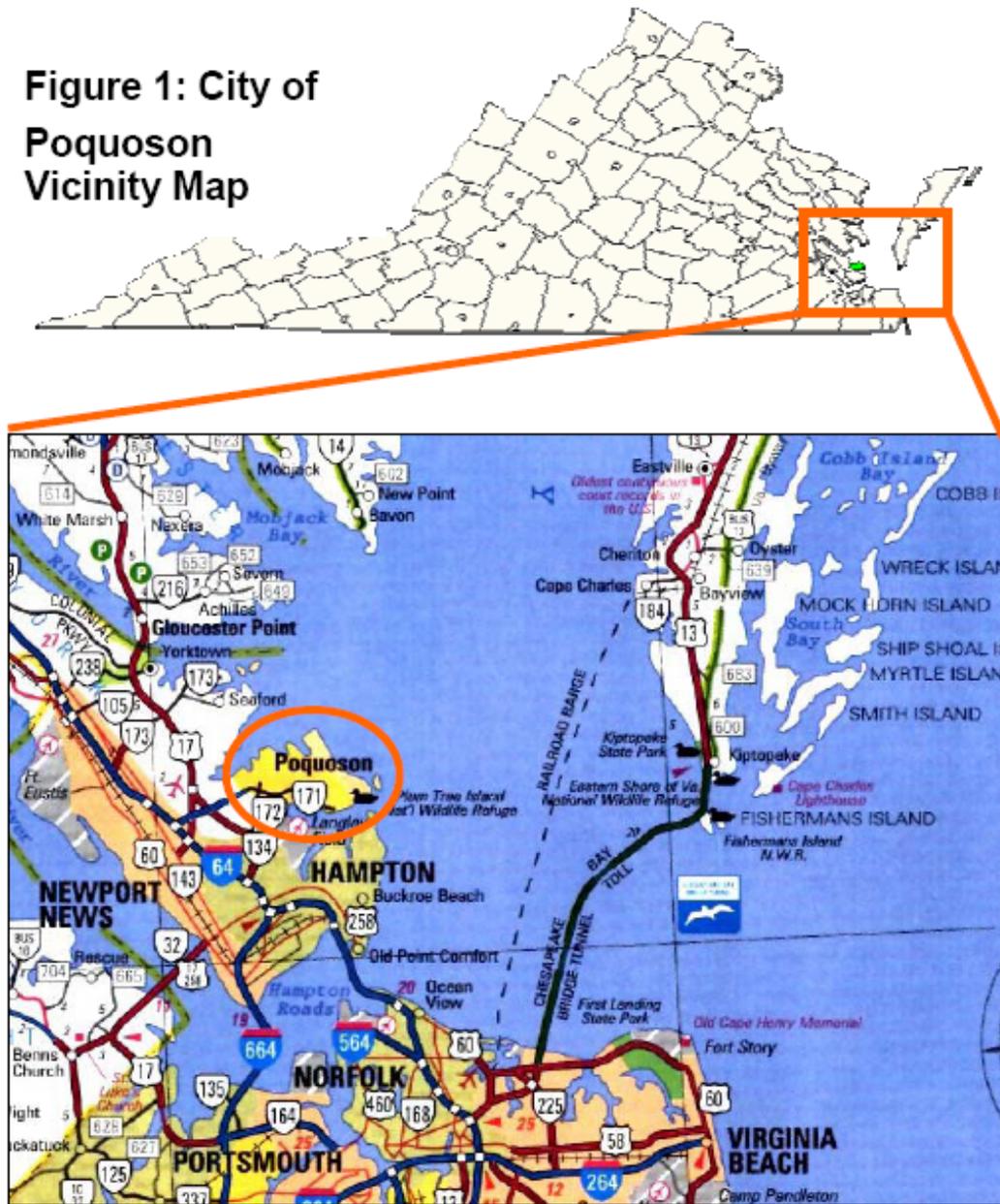
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POQUOSON, VIRGINIA

Figure 1: City of Poquoson Vicinity Map



OVERVIEW

The City of Poquoson, located in the Hampton Roads region of Virginia, is a small suburban city of approximately 16 square miles. Families dominate the population, and the City boasts the highest household income in Hampton Roads. Poquoson draws residents looking for a small town lifestyle - a friendly community with excellent schools and low crime rate. Formerly a fishing village, Poquoson has a rich maritime tradition and is well known for the Poquoson Seafood Festival, which is held every October and draws national performers. Most Poquoson residents commute to other localities to work, making the City a bedroom community for surrounding employment centers in Hampton Roads.

LOCATION

The City of Poquoson is located along the eastern seaboard, approximately halfway between New York and Florida, in the state of Virginia, please see Figure 1. Poquoson is situated just 80 miles southeast of the state capital, Richmond, and 150 miles south of the nation’s capital, Washington, D.C. Poquoson is in the Tidewater region of the state in the Norfolk--Virginia Beach--Newport News VA, NC Metropolitan Statistical Area (MSA) which has a population of approximately 1.6 million citizens.

Poquoson is found in the Hampton Roads Metropolitan area on the eastern side of the Lower Peninsula, also known as North Hampton Roads, between the York and James Rivers and the Chesapeake Bay. The City is bounded by the Poquoson River to the north, by the City of Hampton and the northwestern branch of the Back River to the south, by the Chesapeake Bay to the east, and by York County to the west. Poquoson is near the Cities of Newport News, Hampton and Williamsburg and the Counties of York and James City. Other cities located on the Southside of Hampton Roads (or South Hampton Roads) include Norfolk, Portsmouth, Suffolk, Chesapeake and Virginia Beach.

CLIMATE

Poquoson’s climate is influenced by proximity to the Atlantic Ocean, and the City typically enjoys mild winters and warm, humid summers. The average annual temperature in the Poquoson area is 59 degrees Fahrenheit. January is the coldest month on average, while July is the hottest. The average annual rainfall is about 44 inches and is well distributed throughout the year, with the wettest months typically coming in the summer.

TRANSPORTATION

The City of Poquoson is just 4 miles east of Interstate 64 which consists of eight travel lanes and connects the Lower Peninsula to Interstate 95 in the Richmond area. Roadway access into the City of Poquoson is available by Victory Boulevard from the west and Wythe Creek Road from



CHAPTER 1- BACKGROUND**Section I: Community Profile**

the south. Victory Boulevard runs through York County and crosses Route 17, connecting Poquoson to I-64 by Exit 256B. Victory Boulevard serves as the main thoroughfare of the City by connecting the western City boundary to Little Florida Road and Poquoson Avenue, which accesses the eastern boundary. Wythe Creek Road provides convenient access to NASA/Langley Air Force Base and Primary State Road 134 (Magruder Blvd). Magruder Boulevard serves as a main arterial roadway that connects the City of Hampton and York County and also connects to westbound traffic of Interstate 64 at Exit 262 in Hampton. Route 17 is a main arterial roadway that connects the City of Newport News and York County and has access to I-64 via Exit 258.

There are three points of access between the Peninsula and Southside. Interstate 64 interconnects the northern and southern portions of Hampton Roads by the Hampton Roads Bridge-Tunnel under the James River connecting Hampton to Norfolk. Interstate 664 branches off of I-64 in Hampton and traverses the James River with the Monitor/Merrimac Memorial Bridge-Tunnel connecting Newport News to Suffolk. Lastly, the James River Bridge is a draw bridge over the James River connecting Newport News to Isle of Wight County.

Hampton Roads is served by two International Airports; the closest being Newport News/Williamsburg International Airport approximately 8 miles west of Poquoson and Norfolk International Airport located on the Southside.

CITY GOVERNMENT

The City of Poquoson operates under the Council/Manager form of government. Poquoson City Council is composed of seven members who are elected to four-year terms. The City is divided into three precincts, each having two council representatives. One additional representative is elected at large and serves as Mayor.

The City Council is the policy making body of the City. Its responsibilities include adoption of the City budget, approval of all tax levies, adoption of ordinances, and approval of amendments, supplements or repeals to ordinances and the City Code. The City Council also appoints the City Manager, City Clerk, and City Attorney. The City Manager serves as the chief administrator of the City, and is responsible for implementation of the policies adopted by City Council, enforcement of ordinances, and the general management of the City's affairs.

Poquoson, which was part of York County for over three centuries, became an independent town in 1952 and was chartered as a city in 1975. Some services are still shared with York County; such as Court services, Commonwealth Attorney, Social Services and the Sheriff's Department.¹

¹ Poquoson Public Library, "Welcome to Poquoson!, History," Poquoson Public Library, http://www.ci.poquoson.va.us/library/poquoson_home.htm (accessed April 12, 2006).



PUBLIC SERVICES

Education

The City of Poquoson provides public education to residents through its own school system. School facilities include one primary, elementary, middle and high school centrally located within City limits. The Poquoson School Board manages administrative and fiscal duties for public education. The school system consistently ranks as one of the state's best.

Although the City of Poquoson has no higher education institutions of its own; there are a number of colleges, universities and technical learning centers located on the Lower Peninsula, as well as Hampton Roads. Most notable on the Peninsula are the College of William & Mary, Hampton University, Christopher Newport University and Thomas Nelson Community College.

The Poquoson Public Library contains over 50,000 volumes and offers area history materials, audio-visual aids and children's and summer programs. The Poquoson Library has the highest circulation rate in the Hampton Roads region and was rated the 3rd best library in the State.

Parks & Recreation

Many people choose Poquoson in part because of its recreational opportunities. The park system includes three parks and a municipal pool. The City also sponsors special community events such as the Poquoson Seafood Festival, Child Fest and various charity events. The 84 miles of shoreline make Poquoson a paradise for boaters, anglers and working watermen.

Public Safety & Emergency Services

The City of Poquoson has the lowest crime rate in Hampton Roads. The Poquoson Police Department provides 24-hour a day protection and is staffed by full time police officers. The City of Poquoson Fire and Rescue Department, which includes full-time personnel and volunteers, provides fire protection and emergency medical services. Together with Emergency Services staff and the City Manager, Poquoson's full-time Deputy Emergency Management Coordinator has developed and implemented hazard mitigation plans to assist the community during its greatest times of need.

Utilities

The City of Poquoson provides its citizens and businesses with public water owned and supplied by Newport News Waterworks. Citizens are directly billed by Newport News Waterworks.

The City of Poquoson outsources the pickup of residential solid waste which is disposed of at the Hampton/NASA Steam Plant. The City also has a very active curbside recycling program with almost 40% of the City's residential refuse being recycled.



Collection of wastewater generated in the City is provided through facilities owned and operated by the City of Poquoson. Sewage is treated by Hampton Roads Sanitation District (HRSD).

Electricity is supplied and distributed by Dominion Virginia Power and Virginia Natural Gas supplies and distributes gas fuels.

HEALTH SERVICES

Poquoson benefits greatly from its proximity to larger localities with different options for medical care. Two healthcare systems are both located approximately 10 minutes away with medical centers in the Cities of Hampton & Newport News, known as Sentara & Riverside, each with a general hospital. Other hospitals located in nearby Newport News include the Children's Hospital of the King's Daughters (CHKD) and Mary Immaculate Hospital.

The Virginia Department of Health, located in Newport News, is known as the Peninsula Health Center and serves Poquoson as well as several adjacent localities. Services for mental health, retardation and substance abuse are provided by the Colonial Services Board located in nearby James City and York Counties. The York/Poquoson Department of Social Services serves families and individuals who reside in York County and the City of Poquoson.

Poquoson has access to medical services with many medical professionals and dentists in the City as well as on the Peninsula.

MAJOR EMPLOYERS

Poquoson is a "bedroom community" to adjacent localities on the Peninsula and the region of Hampton Roads. Many Federal government and large industrial activities are located within the region. These activities include: 7 DOD (Department of Defense) bases, Fort Eustis, NASA Langley, Langley Air Force Base, Yorktown Naval Weapons Station, Fort Monroe, Norfolk Navy Base, Little Creek Amphibious Base, and Fort Story. Northrop Grumman Shipbuilding is located in nearby Newport News and is the largest shipbuilding facility in the U.S.A. Northrop-Grumman Newport News Shipbuilding employs more than 18,000 personnel and is best known for its unique capacity to build the next generation of ships in the "Ford Class".

As Poquoson's population grows, more opportunities for commercial development will present themselves in order to reach an untapped market, providing additional employment and business opportunities within the community.



CHAPTER 1- BACKGROUND**Section II: History Sub-element**

**THE HISTORY OF POQUOSON**

Poquoson -- Derived from the Native American term, “pocosin”, and used by the early settlers of the 17th century to describe a boundary line between two elevated tracts of land. It is thought this term means “low lands”, “flat land” or “great marsh”.

Long before Europeans began exploring the “New World” what is now the City of Poquoson was home to Native Americans. This area was a popular camping and fishing spot. The Native Americans would haul their catch in dugout canoes to the mouth of “Injun Creek”. An oyster shell pile that may date back to the 1500’s is still visible from what is now the Amory’s Wharf landing area. According to historians, Poquoson is the oldest, continuous, English-speaking settlement in the United States that still bears its original name - Pocosin (April 1631).

EARLY HISTORY

The first mention of Poquoson was in the Captain Christopher Calthorpe land grant issued by a court in Elizabeth City on April 26, 1631. Settlement of the Poquoson area was opened in 1628 by order of the Council of State at Jamestown. Many of the early settlers were plantation owners, who, with their tenants and apprentices, originally lived south of the Back River. People who received some of the first land patents include:

- Thomas Brice - 200 acres in 1633 on Blackwalnut Neck
- Augustine Warner - 450 acres in 1635 on Pasture Neck
- Samuel Bennett - 450 acres in 1636 on Bennetts’ Creek (part of this plantation was sold to Richard Brown after the Revolutionary War on land now known as Brown’s Neck)
- William Cloyse - 750 acres in 1638 on land eventually acquired by John Hunt (now known as Hunts’ Neck)

The Great Marsh was originally divided into many small plantations, but was later merged into a massive patent of 1,695 acres in 1663. The area was divided into smaller tracts in the early 1800’s. The Great Marsh along with Messick Point (originally called Boar Quarter Point) and Tinkersheires Neck were all very important shipping points as early as 1635 for tobacco and other products from the plantations.



CHAPTER 1- BACKGROUND

Section II: History Sub-element

After the Revolutionary War, and especially during the period of the War of 1812, the larger colonial plantations were sold into smaller farms because they were no longer financially viable. Many of the people buying the farms were Methodists from the Baltimore and Eastern Shore area. Until then shipping was the prime industry. However the settlers from the Eastern Shore brought a new industry with them - the seafood industry. Today, the Methodist denomination is still prevalent in the City.

For well over a hundred years Poquoson remained a “backwater” farming and fishing community. While there was extensive civil war action on the Peninsula, there is no known troop movement or other war activity in Poquoson itself; however, many citizens fought for the Confederacy.

FROM WATERMEN AND FARMERS

For more than one hundred and fifty years Poquoson residents made their living as farmers and watermen. In 1916, aeronautical activities began at Langley Air Force Base when the U.S. Government purchased the land upon which most of the present Air Force installation now stands. World War I and the construction of Langley Field changed the rural lifestyle of Poquoson.

In the years following World War II, more rapid change and population growth occurred. Farming and fishing gave way to sub-urbanization. This trend in population growth continues today. Between the years of 1970 and 1979, Poquoson incurred a net migration of 5,586 residents. At the same time the net migration for the total Peninsula was a loss of 7,219 residents, while all of Hampton Roads netted a loss of 5,184 residents. By the end of 1990 the Peninsula had a net increase of 6,500 residents while Poquoson netted an increase of 7,215 residents!

GEOGRAPHICAL BOUNDARIES

The Town of Poquoson was formed from the southern half of the former Poquoson Magisterial District of York County. The Poquoson District is bordered on the east by the Chesapeake Bay, on the north by the Poquoson River, by the City of Hampton and the Northwest Branch of the Back River on the south, and by York County on the west.

Roadway access to the City is provided by Victory Boulevard from the west and Wythe Creek Road from the south. Until November of 1896, persons driving from Poquoson to Hampton had to take Yorktown Road to the Tabb area and cross the Northwest Prong of Back River at the site of the present Bethel Reservoir. At this time in 1896, the “new road” -Wythe Creek Road- and the “new bridge” were opened making travel to Hampton more convenient.



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PRIDE IN POQUOSON SCHOOLS

The determination of the people in the Poquoson Magisterial District to keep their high school in Poquoson caused the present City of Poquoson to break from an association with York County. During the late 1800's and early 1900s there were many "grammar schools" in the Poquoson area. There was one near Trotter's Bridge on Hunt's Neck Road, another near the present Emmaus Baptist Church, and several others.

In 1834, the Poquoson Parish (which originally included the areas known today as Poquoson, Tabb, Grafton, Dare and Seaford) was named as a beneficiary in the will of Benjamin Symms. The will provided for "a free school to educate and teach the children of Elizabeth City and Poquoson."

The first high school was built in 1910 at a cost of \$6,000. The high school stood at the location presently occupied by the Poquoson Middle School. It housed the entire student body from Grade 1 through graduation and was the only high school in all of York County! Prior to 1910, Poquoson children attending high school stayed with relatives in surrounding areas, even as far as Norfolk.

In 1932, a brick high school was erected in the west yard of the original site. The core of the present Middle School is composed of this structure. The original building and the new brick building were each financed by a bond issue passed by the people of the Poquoson District. As it was still the only high school in York County, all students from as far away as the Naval Weapons Station were bussed to this school.

The student population continued to grow and eventually repairs were needed as well as an increase of space to accommodate all of the incoming students. The York County Board of Supervisors also considered moving the high school to a more centrally located part of the County. Poquoson residents eventually realized that the only way to keep their cherished and hard-earned high school was to incorporate as a town with a separate school district.

On July 1, 1952, the southern portion of the Poquoson District in York County was incorporated as a town in an effort to regain control over its schools. In the mid 1950's, the Poquoson Elementary School was built and the original two-story clapboard building was razed. Recently, this building has been demolished with the construction of a new LEED certified Elementary School which opened on the first day of classes on August 26, 2008. The Primary School was built in the late 1980's. The present High School was erected in the mid 1970's and subsequently in 1975; the Town of Poquoson was chartered as an independent city.

FIRST COUNCIL

The first elected mayor of Poquoson was Carroll Thomas Forrest who ran with no opposition. The Council also included William W. Joyner and John B. Graham, Sr. from the Trinity Precinct; from the Tabernacle Precinct were H. Frank Hunt and Joseph R. Moore, Sr., who was



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Section II: History Sub-element

also elected Vice Mayor. Robert J. Watkins was Town Manager and Attorney, Alvah E. Riggins was Town Clerk, Linwood I. Burcher was Town Treasurer and G.S. Forrest was Clerk of the School Board. Frances (Mrs. Joseph) Burlock was Office Manager.

FIRST NAMES & FAMILIES

Some of the early family surnames prior to the Revolutionary War that remain with descendants in the city include Freeman, Moore, Hunt, Holloway, Watkins, Fawlings and Smith. Many descendents (arriving after the war) include the Bradshaws, Evans, Firth, Firmans, Pauls, Hudgins, Rollins, Forrest, and Insley families.

In addition to the former post office names, such as Messick, Odd, Jeff's and Moore's, the Poquoson area has been known at various times as "New Pocosin", Charles River Parish, Hampton-York Parish and eventually as the Poquoson Magisterial District in southern York County. At some earlier point in time, Poquoson even took on the nickname of "Bull Island." Though the nickname was strongly resisted by some of the earliest residents, it has generally become widely accepted as an affectionate term. In fact the title of the Poquoson Historical Commission's monthly bulletin is Poquoson (Bull Island) Heritage.

ATTRACTION TO POQUOSON

It was the water that brought the first settlers to Poquoson. Though the water may still hold a spell over many a Poquosonite today, the City continues to attract new residents today for a variety of reasons:

- Proximity to major employment sites including military bases, NASA, the Newport News Shipyard and Ferguson Enterprises.
- Waterside recreation and the Chesapeake Bay. Poquoson is perhaps best defined by its kinship to the water.
- Low crime rate. The lack of serious crime is a testament to the sound values of Poquoson residents and the vigilance of the Poquoson Police Department.
- Excellent school system. The Poquoson School System has consistently ranked among the best in the State. As it was in the beginning, education is still the "pearl in the Poquoson Oyster."
- Small town atmosphere. Wonderful, compatible neighbors who have the common interest in the well being of the City of Poquoson and their families.
- Independence!!!



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- Map 2-2: Population Age 65 and Up
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“Today, two of every three Virginians live in the Northern Virginia, Richmond or Virginia Beach metropolitan areas.” - Weldon Cooper Center for Public Service, University of Virginia- May 2006

OVERVIEW

Population characteristics of a city have a profound effect upon its development. Traced over time, population statistics such as growth and composition provide a foundation for planning decisions including future land use and the community’s need for housing, schools, public facilities, infrastructure, and other services. This chapter describes trends, characteristics, composition and current estimates and projections of Poquoson’s population structure using data from the U.S. Census Bureau and from the City’s records.

Most Poquoson residents commute to other localities to work, making the City of Poquoson a “bedroom community” for surrounding employment centers. The majority of households in the City consist of two or more people with a median income of more than \$60,000 annually, which is the highest household income in Hampton Roads. These factors have a substantial impact on the type of housing and development built in the City.

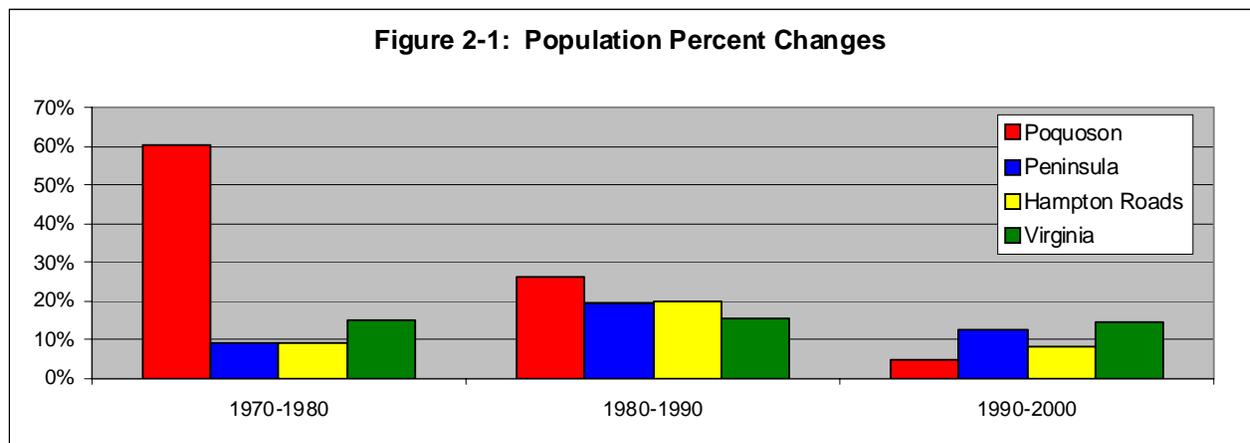
POPULATION AND TRENDS

Population counts for Poquoson are available from the U.S. Census Bureau from 1960 to 2000. Table 2-1 and Figure 2-1 provide a comparison of the City’s population trends in relation to surrounding localities, the region and the state. Poquoson’s population doubled over the last three decades, with most of that growth occurring between 1970 and 1990. During the 1970s, the population grew about 60 percent. Poquoson also incurred a 26 percent increase in population between the years of 1980 and 1990, second only to James City County (56%). Conversely, Poquoson’s 5 percent population growth during the 1990s was significantly lower than the Peninsula (12.6%) the Hampton Roads region (8.3%) and the state of Virginia (17.7%). (Map 2-1 illustrates Poquoson’s current population density compared by U.S. Census Block.)



	POPULATION				CHANGE, 1990-2000	
	1970	1980	1990	2000	Number	Percent
Poquoson	5,441	8,726	11,005	11,566	561	5.1%
Gloucester	14,059	20,107	30,131	34,780	4,649	15.4%
Hampton	120,779	122,617	133,811	146,437	12,626	9.4%
James City	17,853	22,339	34,859	48,102	13,243	38.0%
Newport News	138,177	144,903	171,439	180,697	9,258	5.4%
Williamsburg	9,069	10,294	11,530	11,998	468	4.1%
York County	27,762	35,463	42,422	56,297	13,875	32.7%
Peninsula	333,140	364,449	435,197	489,877	54,680	12.6%
Hampton Roads	1,108,393	1,213,999	1,454,183	1,575,348	121,165	8.3%
Virginia	4,651,448	5,346,797	6,015,100	7,078,515	1,063,415	17.7%

Source: U.S. Bureau of Census, Census 1970-2000.



POPULATION ESTIMATES AND PROJECTIONS

Although population estimates and population projections are both attempts to measure the size of a population or population subgroup, they are actually quite different. Population *projections* attempt to predict future numbers with models using known data. They aim to produce a quantity that represents the size of a population one, two, five, or ten years from now. As a result, projecting quantities like births, deaths, and net migration are an integral part of doing a projection. Population *estimates* look to the present or the recent past. They are usually much more accurate than projections because they can make use of current indicators—data series like births or licensed drivers that are direct measurements, usually derived from government agency records. The range of statistical methods that can be used to do estimates is consequently greater than the methods available to produce projections.¹

¹ Weldon Cooper Center for Public Service, University of Virginia; 2005 Virginia Population Estimates.



In general, no one forecasting model is better than another. All projection techniques require the user to accept a variety of assumptions concerning the population in a community and the forces that influence its growth. Usually population projections are based on trends of past activities; however, patterns change and require our best judgment when using the data.

The U.S. Census Bureau provides detailed estimates of a variety of population groups every 10 years and in some instances every five years. Using the decennial census, the U.S. Census Bureau is the only real undisputed population count compiled and therefore only the figures and tables using this data are utilized for this plan. Each source providing estimates and projections within this document have derived their estimates using the 2000 Census with their own methodology.

After the U.S. Census Bureau has compiled the data from the census; estimates are produced for future years for each locality. Those estimates provided by the U.S. Census Bureau are depicted in Table 2-2. For the purpose of this text, the Hampton Roads Metropolitan Statistical Area (MSA) is used synonymously with the official Norfolk--Virginia Beach--Newport News VA, NC Metropolitan Statistical Area (MSA). It is also important to note that this MSA contains localities not listed in the table including: Mathews County, VA (northern Hampton Roads) as well as Currituck County, NC and other localities on the Southside of Hampton Roads.

	2001	2002	2003	2004	2005	2006	2007
Poquoson	11,481	11,627	11,707	11,634	11,703	11,793	11,858
Gloucester County	35,174	35,658	36,301	36,744	37,274	37,731	38,336
Hampton	145,226	145,008	145,370	145,227	147,010	146,568	146,439
James City County	49,590	51,343	53,154	55,299	57,254	59,585	61,195
Newport News	179,939	180,397	182,019	182,726	180,825	180,259	179,153
Williamsburg	11,914	11,635	11,529	11,662	11,907	12,202	12,434
York County	57,637	58,835	59,435	60,021	60,785	60,991	61,271
Hampton Roads*	1,567,654	1,584,753	1,604,053	1,619,616	1,624,234	Not available	Not available
Virginia	7,190,468	7,281,659	7,370,557	7,464,033	7,557,588	7,640,249	7,712,091

Source: U.S. Bureau of Census, 2001-2007 Population Estimates.

*Hampton Roads MSA is used in this text synonymously with Norfolk--Virginia Beach--Newport News, VA,NC MSA

The population estimate for Poquoson shows only a slight increase of citizens, a total of 245, from the year 2000 to 2005. The increase is a minimal difference in change, especially when compared to the surrounding localities of North Hampton Roads. The difference in population estimated for 2005 reflects a similar population increase between the years 1990 and 2000 when the population increase was only 561 citizens. This data supports the fact that Poquoson is a bedroom community to other localities located on the Peninsula and population change is relatively static. The table reflects that the surrounding counties, especially James City and York, are experiencing a tremendous increase in population growth. The table also reflects the transient populations of the cities (Newport News, Hampton & Williamsburg) as their population numbers rise and fall through 2000-2005.



As previously stated, no one forecasting model is better than another. However, in an evaluation by the U.S. Census Bureau in 2004; the State of Virginia was one of four states (the other three being Alaska, California and Oregon) in the country to produce a better 2000 county-level estimate than the Census Bureau.² The Weldon Cooper Center for Public Service at the University of Virginia prepares annual population estimates in cooperation with the U.S. Census Bureau and serves as the state’s official estimates for Virginia localities.³ The Center’s information was used for the previous Comprehensive Plan and the practice is continued in this version.

Table 2-3 presents the Weldon Cooper Center’s population estimates for the years 2001-2005 using the official 2000 Census count from the U.S. Census Bureau.

	2001	2002	2003	2004	2005	2006	provisional 2007
Poquoson	11,500	11,500	11,700	11,700	11,764	11,865	11,948
Gloucester	34,900	35,000	35,200	35,400	35,587	36,153	36,489
Hampton	146,600	145,100	143,800	144,400	145,262	145,040	145,862
James City	50,200	51,800	53,100	55,200	57,542	59,635	61,739
Newport News	179,500	180,000	181,100	182,000	181,240	181,840	182,478
Williamsburg	12,400	12,600	13,200	13,400	13,242	13,289	13,245
York County	57,700	59,400	59,900	62,000	62,602	62,729	63,184
Hampton Roads*	1,567,300	1,574,500	1,583,900	1,605,900	1,615,415	1,619,600	1,630,621
Virginia	7,196,800	7,287,800	7,364,600	7,481,300	7,564,327	7,640,249	7,712,091

Source: 2007 Virginia Population Estimates, Weldon Cooper Center for Public Service-University of Virginia.

Weldon Cooper Center for Public Service, Demographics & Workforce Section, www.coopercenter.org/demographics/

*Hampton Roads is used synonymously with Norfolk--Virginia Beach--Newport News, VA,NC MSA

Table 2-3 compares similarly to Table 2-2 in that Poquoson’s population estimate only increased slightly from 2000 to 2005 with a total increase of 344 citizens. Although there is a slight increase in population, the table also shows the population increase as static with an estimated decrease in population in 2001 that holds steady into 2002. A slight increase is estimated for 2003 that holds steady into 2004. Another slight increase is estimated for 2005 bringing the net increase to 344 citizens or 2.9 percent. Not only do the Weldon Cooper Center’s estimates for Poquoson remain fairly consistent with the U.S. Census Bureau’s estimates, but for the surrounding localities as well. Population changes for the large cities of Hampton and Newport News are a subtle decrease and increase, respectively, and the rural counties of James City and York experience an increase in population of approximately 8,000.

Along with including U.S. Census Bureau 2000 population counts, the Weldon Cooper Center’s methodology also includes collecting pertinent data for the estimates and projections from many

² Weldon Cooper Center for Public Service, University of Virginia; 2005 Virginia Population Estimates, p.25.

³ Weldon Cooper Center for Public Service, University of Virginia; 2005 Virginia Population Estimates, p.2.



state organizations, agencies and entities. The information is collected from both the State and localities and includes:

- Population counts
- School enrollment totals
- Number of births
- Number of licensed drivers
- Housing stock
- Income tax exemptions

Through the collection of the aforementioned data, Table 2-4 was entered to demonstrate two indicators of population: natural increase and net migration. Natural increase is the number of births minus deaths and net migration is the number of new residents minus those moving away.

	numeric change			percent change		
	TOTAL	Due to natural increase	Due to net migration	TOTAL	Due to natural increase	Due to net migration
Poquoson	286	48	239	2.5%	0.4%	2.1%
Gloucester	1,151	667	484	3.3%	1.9%	1.4%
Hampton	-729	5,160	-5,888	-0.5%	3.5%	-4.0%
James City	11,081	784	10,297	23%	1.6%	21.4%
Newport News	719	11,169	-10,450	.4%	6.2%	-5.8%
Williamsburg	1,332	-353	1,685	11.1%	-2.9%	14.0%
York County	6,842	1,990	4,852	12.2%	3.5%	8.6%
Hampton Roads*	64,412	71,290	-6,878	4.1%	4.6%	-0.4%
Virginia	563,854	278,164	285,690	8.0%	3.9%	4.0%

Sources: Table 2 from 2005 Virginia Population Estimates, Weldon Cooper Center for Public Service-University of Virginia.

Weldon Cooper Center for Public Service, Demographics & Workforce Section, www.coopercenter.org/demographics/

*Hampton Roads MSA is used in this text synonymously with Norfolk--Virginia Beach--Newport News, VA,NC MSA

The two components of population change listed in table 2-4 reemphasize the notions of each locality's characteristics. Poquoson's minimal increase gives slight favor to net migration. The larger cities (Newport News and Hampton) demonstrate their transient population with the negative counts in net migration. The rural counties, York and James City, display a positive increase in population with a marked number contributed by migration. Williamsburg, a large tourist attraction, has a significant increase in population due to migration even with the negative impact to natural increase.



The aforementioned estimates provide trends and analysis for the estimated current population counts. With this information, we can determine which population projections accurately relate to the trends.

The population projections provided by the Hampton Roads Planning District Commission’s (HRPDC) 2034 Socio-Economic Regional Forecast closely follow the population estimates by both the Weldon Cooper Center of the University of Virginia and the U.S. Census Bureau. However, the Hampton Roads Planning District Commission’s (HRPDC) future population numbers is only for each locality within its jurisdiction which does not include all of the localities represented by the Norfolk--Virginia Beach--Newport News VA, NC MSA.

According to the HRPDC, Poquoson’s population is projected to grow by about 25 percent by 2030 (Table 2-5), and will grow at the third lowest rate on the Peninsula behind only the large cities of Hampton and Newport News. The predicted growth rate of 25.4% over the next 30 years, period from 2000 to 2030, is slightly less than the rate of Hampton Roads as a whole (27.21%). Poquoson will remain a small town residential community with a smaller population than all other localities in the Hampton Roads region.

	2000	2010	2020	2030	Projected Change	
					Number	Percent
Poquoson	11,566	12,258	13,333	14,504	2,938	25.40%
Gloucester	34,780	38,194	44,495	51,835	17,055	49.04%
Hampton	146,437	146,960	150,137	153,382	6,945	4.74%
James City County	48,102	64,671	80,722	100,757	52,655	109.46%
Newport News	180,697	185,760	197,082	209,093	28,396	15.71%
Williamsburg	11,998	14,033	15,956	18,143	6,145	51.22%
York County	56,297	66,259	74,752	84,332	28,035	49.80%
North Hampton Roads	489,877	528,135	576,476	632,047	142,170	29.02%
Hampton Roads*	1,575,348	1,691,423	1,834,410	2,003,931	428,583	27.21%
Virginia	7,078,515	7,892,900	8,601,900	9,275,101	2,196,586	31.03%

Source: U.S. Bureau of Census, Census 2000; Virginia Employment Commission, 2010-2030 Population Projection for State of Virginia; Hampton Roads Planning District Commission, 2034 Socio-Economic Regional Forecast - 2010-2030 Population Projections.

*Hampton Roads is used synonymously with Virginia Beach--Norfolk--Newport News, VA, NC MSA for years 2010-2030.

Again remaining consistent with the population estimates provided by the U.S. Census Bureau and the Weldon Cooper Center for Public Service; Table 2-5 shows the population for the cities of Newport News and Hampton increasing only slightly. This is primarily due to the transient nature of the population found on the military installations. Conversely, the population for the rural counties of Gloucester, James City and York increase dramatically over the next twenty years by more than 49 percent. James City County is projected to grow the fastest on the Peninsula (a 109% change) by more than doubling their population in this time period. Even the City of Williamsburg will experience a significant increase in population by 51 percent during the same time frame, while Poquoson is projected to grow at less than half the rate.



Although the projected number of 2,938 new citizens for year 2030 is an increase from 2000, the projections show a decline in population growth when compared to past decades population counts (Table 2-6). Poquoson is expected to have a marginal increase of growth for year 2010 when compared to year 2000; this may largely attributed to the real estate boom that occurred within this decade. However, the largest increase in population occurred in the 1970-1980 time period, a 60.37% increase, when many new subdivisions were developed during this time. This growth carried into the 80's but slowed significantly in the 90's. By combining the HRPDC's population projections with past trends recorded by the U.S. Census Bureau in Table 2-6; a positive rate of growth for the City of Poquoson is displayed with increased growth to come in future years. The next section, Geographic Distribution, will cover the areas of the city that have potential for new growth or redevelopment.

Year	Population	Change	
		Number	Percent
1970	5,441	---	---
1980	8,726	3,285	60.37%
1990	11,005	2,279	26.12%
2000	11,566	561	5.10%
2010	12,258	692	5.98%
2020	13,333	1,075	8.77%
2030	14,504	1,171	8.78%

Sources: U.S. Bureau of Census, Census 1970-2000.
 Hampton Roads Planning District Commission, 2034 Socio-Economic Regional Forecast - 2010-2030 Population Projections

GEOGRAPHIC POPULATION DISTRIBUTION

(For the purpose of this text, the eastern, central and western districts refer to the planning districts for the City. Please see Chapter 8-Land Use for descriptions and boundaries of each district.)

As noted in the History element of this Plan, Poquoson's population was concentrated in the eastern portion of the City during the 1800's and early 1900's. As more roadways and sewer lines were extended westward, and as the prime waterfront properties were developed, more and larger subdivisions sprang up. As the population of Poquoson grew, more businesses were attracted to the main corridors of Poquoson in the 70's and 80's. This development created a central business district for the City and attracted higher density uses.

Map 2-1 (end of Chapter 1) shows the geographic distribution of the population density for the City of Poquoson in 2000. The Eastern Planning District of Poquoson continues to be the most sparsely populated due to extensive marshlands and full build-out; while the Central Planning District of the city is more densely populated due to smaller lot sizes, multi-family housing units and commercial development. The Western Planning District of the City is predominantly



developed with low-density single-family homes and unless land regulations change, this area will continue to be very much suburban in design and land development due to the large minimum lot size requirements in the City’s Zoning Ordinance.

It is expected that the past development trends will be maintained in each district. The key to growth anywhere in the City, but particularly in the western sectors, is the extension of sewer and stormwater management systems. The Eastern Planning District of the City will experience only minor in-fill development and possible redevelopment. The Western Planning District of the city, where there are still tracts of undeveloped land, will continue to grow at a moderate rate; while the majority of the City’s population growth will occur in the central district of the City where the infrastructure is already in place and any multi-family and higher density uses are recommended by the Comprehensive Plan. These factors are consistent with trends and the recommended land uses of the Comprehensive Plan.

POPULATION CHARACTERISTICS

In 2000 Poquoson’s gender mix was nearly evenly divided, 50.1 percent male (5,789 persons) and 49.9 percent female (5,777 persons). This remains relatively unchanged from 1990 when the mix was 49.8% male and 50.2% female. Table 2-7 shows how Poquoson’s gender mix compares to the State of Virginia, which has a slightly higher proportion of females.

Table 2-7: Gender Mix, 2000					
	Male	Percent	Female	Percent	Total Population
City of Poquoson	5,789	50.1%	5,777	49.9%	11,566
Hampton Roads	755,400	49.3%	777,792	50.7%	1,533,192
State of Virginia	3,471,895	49.0%	3,606,620	51.0%	7,078,515

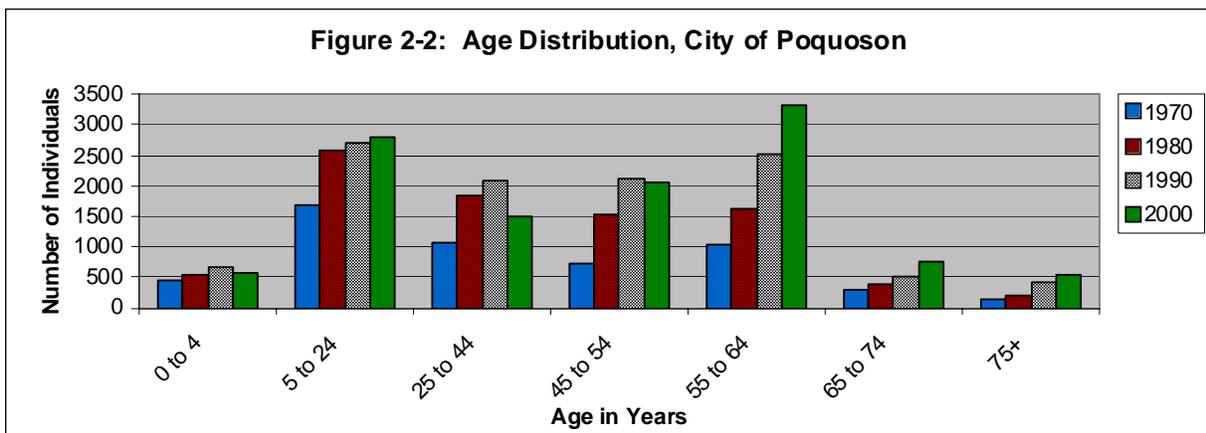
Source: U.S. Bureau of Census, Census 2000

According to the 2000 Census, Poquoson has the second oldest population in Hampton Roads, only to James City County. Notably, over the thirty-year period from 1970 to 2000, the Census reports that the median age of Poquoson’s population increased from 26.8 to 39.5. In contrast, the median age was 33.6 years for the Norfolk -- Virginia Beach -- Newport News Metropolitan Statistical Area (MSA) and 35.7 years for the State. As illustrated in Figure 2-2, the change in Poquoson was due to a significant decrease in the percentage of persons between 20 and 34 years and an increase in the percentage of persons over 65 years. In fact, the number of elderly over 75 increased from 143 persons (2.63% of the population) in 1970 to 548 (4.74% of the population) in 2000. Map 2-2 indicates where the majority of older residents live based on percentage of total population. Table 2-8 represents age distribution of Poquoson’s population from 1980 to 2000; the same trends are reflected in this table as described above.



Table 2-8: Age Distribution in Poquoson						
	1980		1990		2000	
	Number	Percent	Number	Percent	Number	Percent
Under 5	550	6.3%	670	6.1%	587	5.1%
5 to 19	2,593	29.7%	2,686	24.4%	2,790	24.1%
20 to 34	1,842	21.1%	2,100	19.1%	1,504	13.0%
35 to 44	1,526	17.5%	2,108	19.2%	2,052	17.7%
45 to 64	1,623	18.6%	2,516	22.9%	3,319	28.7%
65 & over	592	6.8%	925	8.4%	1,314	11.4%
Totals	8,726	100%	11,005	100%	11,566	100%
Median Age	31.2		35.2		39.5	

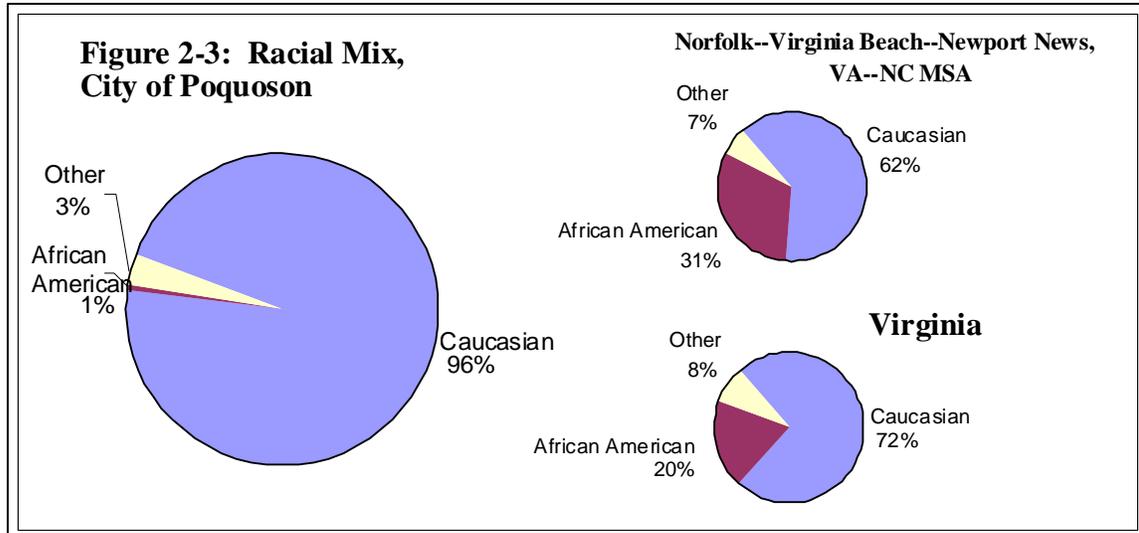
Source: U.S. Bureau of Census, Census 1980-2000.



Source: U.S. Bureau of Census, Census 1970-2000.

Based on U.S. Census data, Poquoson is not as racially diverse as the Hampton Roads region as a whole. Poquoson’s racial mix has varied little since 1980. Figure 2-3 compares Poquoson’s racial demographics to the Norfolk-Virginia Beach-Newport News MSA and the State of Virginia. Poquoson’s 2000 Census population is 96% Caucasian and less than 1% African American (.67%), which is markedly different from the region and the State where African Americans account for 31% and 20% of the population respectively. Other minorities account for more of the Poquoson population than African Americans: 3 percent fall into the “other” race category, including American Indian and Alaskan Native, Asian, Native Hawaiian, some other race, and persons of two or more races.





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

Table 2-9 details the disability status of residents in the City. Along with the increase in total population, Poquoson experienced an increase in the total number of disabled citizens. Of the 1,226 residents aged 65 and over, 509 or 41.5 percent were disabled. This is comparable to the State of Virginia’s population 65 years and over with a disability (42.1%).

Table 2-9: Disability Characteristics of Noninstitutionalized Population, City of Poquoson, 2000		
	Persons	Percent
Population 5 to 20 years	2,883	100.0%
With a Disability	199	6.9%
Population 21 to 64 years	6,589	100.0%
With a Disability	851	12.9%
Percent Employed	58.0%	
No Disability	5,738	87.1%
Percent Employed	79.1%	
Population 65 years and over	1,226	100.0%
With a Disability	509	41.5%

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

Households

The number of households in Poquoson is projected to increase by nearly 30% by the year 2030, from 4,166 in 2000 to 5,408 in 2030. Map 2-3 shows household density in the City according to the 2000 Census. As shown in Table 2-10 below, the projected household increase in Poquoson is lower than the increases anticipated for North Hampton Roads (nearly 35%) and the Hampton



Roads region (nearly 32.5%) as a whole. Based on 2000 Census data, the average number of persons per household in Poquoson was 2.75, down from 2.90 in 1990.

Table 2-10: Number of Households (1980-2030)						
	Households				Percent Change	Percent Change
	1980	1990	2000	2030	1990-2000	2000-2030
Poquoson	2,763	3,763	4,166	5,408	10.71%	29.81%
Northern Hampton Roads	124,178	159,724	183,488	247,691	14.88%	34.99%
Hampton Roads*	390,531	504,180	579,107	767,185	14.86%	32.48%

Source: U.S. Bureau of Census, Census 1980-2000. HRPDC 2034 Socio-Economic Regional Forecast.

*Hampton Roads is used synonymously with Virginia Beach--Norfolk--Newport News, VA, NC MSA for year 2030.

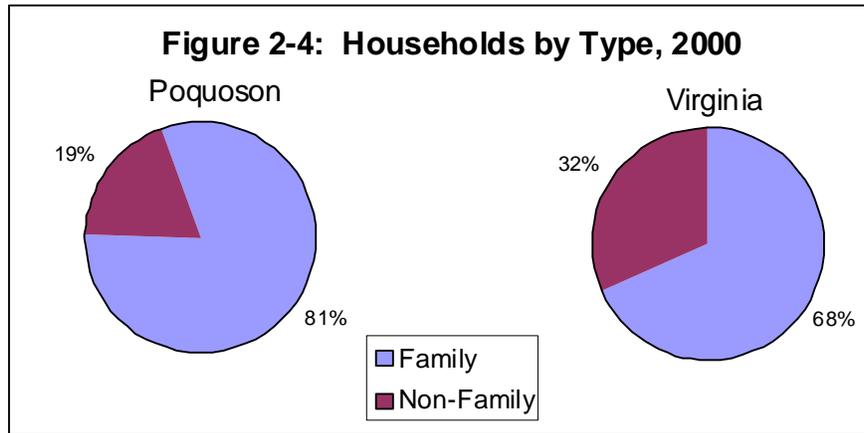
Table 2-11 documents the change in household size during the last decade. Generally, the increase in the number of small households accounts for the decline in the size of the average household in the City. The number of 1-person and 2-person households increased by 26% from 1990 to 2000, while those with three or more people declined as a percentage of the overall number of households. Average household size is also expected to decline, particularly as the population in Poquoson ages. Forecasts provided by the HRPDC indicate that the average household size in Poquoson will fall to 2.68 in 2030, down significantly from 2.78 in 2000. The average household size for Hampton Roads is projected to be 2.61 in 2030.

Table 2-11: Household Size, City of Poquoson				
	1990		2000	
	Number	Percent	Number	Percent
1-person household	497	13.2%	651	15.6%
2-person household	1166	30.9%	1451	34.8%
3-person household	907	24.1%	862	20.7%
4-person household	780	20.7%	795	19.1%
5-person household	313	8.3%	287	6.9%
6-person household	78	2.1%	80	1.9%
7-or-more person household	28	0.7%	30	0.7%

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

Even though households in Poquoson are getting smaller, families are still the dominant household type. The U.S. Census defines a family as “a group of two or more people who reside together and who are related by birth, marriage, or adoption”. Eighty-one percent (81%) of Poquoson households are occupied by families as compared with sixty-eight percent (68%) of households in the State (Figure 2-4).





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

The majority of families in Poquoson are comprised of married couples. Of the married-couple families, 40% have at least one child under the age of 18. When all family types are considered, 48% of households have at least one child under the age of 18 while 52% have no children less than 18 years. Table 2-12 details family types as reported in the 2000 Census.

	Number Percent	
	Number	Percent
Total	3370	100.0%
Married-Couple Family	2892	85.8%
Under 6 years	213	6.3%
Under 6 and 6 to 17 years	240	7.1%
6 to 17 years	894	26.5%
No children	1545	45.8%
Other Family	478	14.2%
Male householder, no wife present		
Under 6 years	16	0.5%
Under 6 and 6 to 17 years	3	0.1%
6 to 17 years	61	1.8%
No children	47	1.4%
Female householder, no husband present		
Under 6 years	21	0.6%
Under 6 and 6 to 17 years	24	0.7%
6 to 17 years	158	4.7%
No children	148	4.4%

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



School Enrollment and Educational Attainment

The number of children enrolled in the preprimary through high school grades in Poquoson schools increased by 9.5 % between 1990 and 2000, while the number of Poquoson residents enrolled in college or graduate school decreased by approximately 32% (Table 2-13). Of the population 3 years and older enrolled in school in 2000, 6.4 percent are enrolled in preschool, 4.8 percent are enrolled in kindergarten, 46.8 percent are enrolled in elementary school, 25.8 percent in high school and 15.26 percent in college or graduate school. Figure 2-5 provides a detailed breakdown of school-aged residents in Poquoson by grade and sex.

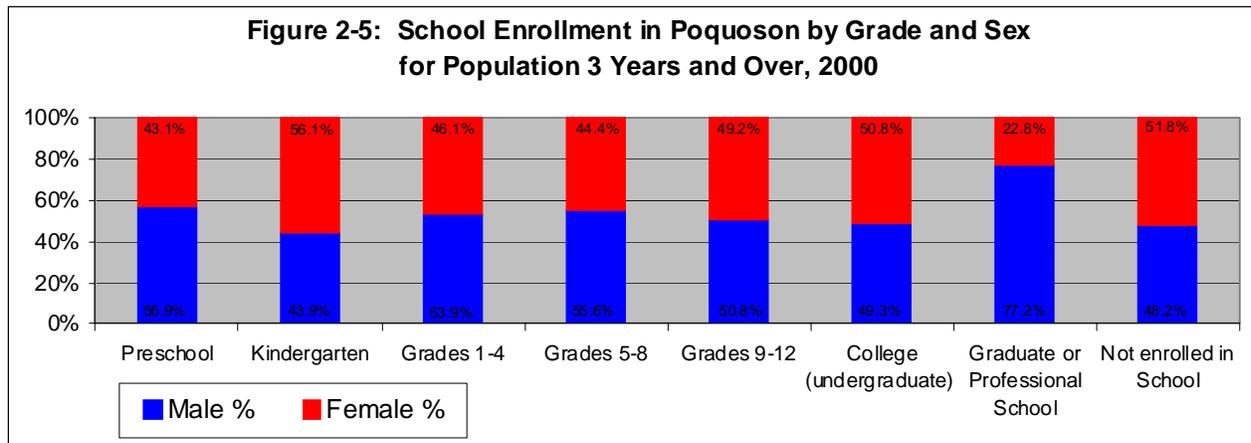
Of students enrolled in preschool through high school (not including college, graduate or professional school), 88.1 percent are enrolled in public school and 11.9 percent are enrolled in private school. There are no private schools located within the City, but the following are located in surrounding communities:

- Bethel Christian School, Hampton
- Denbigh Baptist Christian School, Newport News
- Denbigh Christian Academy, Newport News
- Gloria Dei Lutheran School, Hampton
- Hampton Roads Academy, Newport News
- Orcutt Baptist School, Newport News
- Our Lady of Mount Carmel School, Newport News
- Peninsula Catholic High School, Newport News
- Peninsula Christian School, Newport News
- St. Andrews Episcopal School, Newport News
- St. Mary Star of the Sea, Hampton
- Trinity Lutheran School, Newport News
- Walsingham Academy, Williamsburg

Table 2-13: School Enrollment of the Population 3 Years and Over, City of Poquoson, 1990-2000		
	Number	Percent of Total
1990		
Enrolled in preprimary school (nursery-K)	284	8.7%
Enrolled in elementary-high school (grades 1-12)	2,211	67.8%
Enrolled in college or graduate school	779	23.9%
Total	3,274	100.0%
2000		
Enrolled in preprimary school (nursery-K)	366	11.2%
Enrolled in elementary-high school (grades 1-12)	2,367	72.6%
Enrolled in college or graduate school	527	16.2%
Total	3,260	100.0%

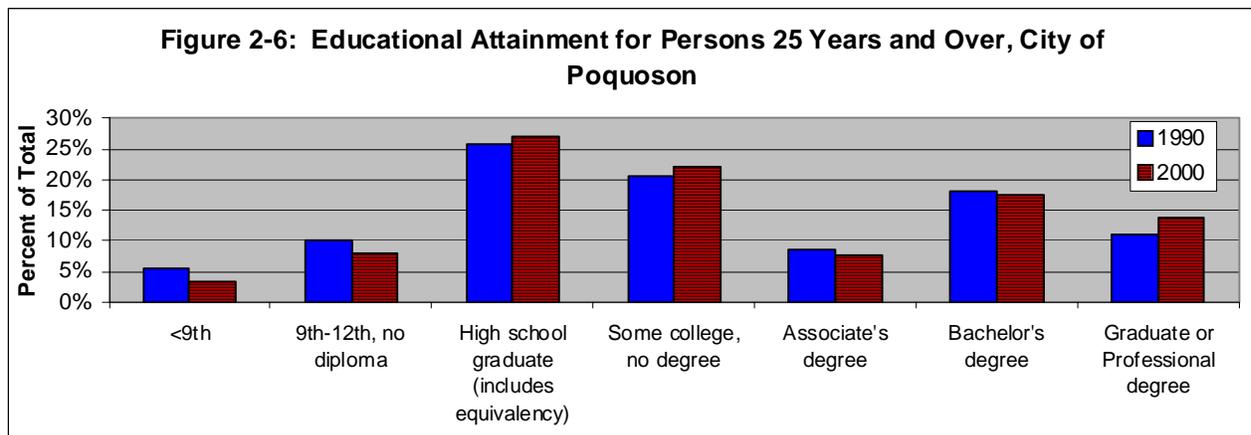
Source: U.S. Bureau of Census, Census 2000.





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

The percent of the population that have attained each level of education over the past decade has remained relatively constant. Figure 2-6 shows educational attainment by category. Since 1970, the percent of high school graduates has increased from 25.9% to 27.1% in 2000. The percentage of residents holding graduate or professional degrees is also slightly higher than in 1990.

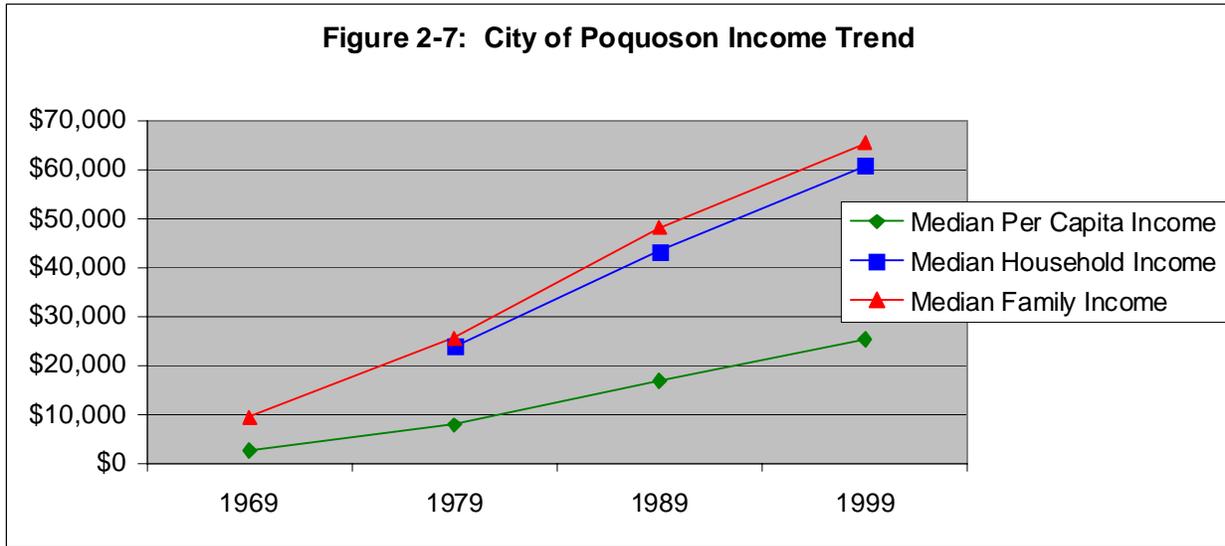


Source: U.S. Bureau of Census, Census 2000.

Income and Poverty Levels

In 1999, the U.S. Bureau of Census reported that the median household income in Poquoson was \$60,920, the median family income was \$65,460, and the per capita income was \$25,336. Figure 2-7 shows how these income levels have increased over time. As noted in Table 2-14, Poquoson outpaced the reported median income for the region, the state, and the United States as a whole.





Source: U.S. Bureau of Census, Census 1970-2000. Note: Median household income not available for places with fewer than 50,000 people in Census 1970 data.

Table 2-14: 1999 Income Comparisons

	Per Capita Income	Median Household Income	Median Family Income
City of Poquoson	\$25,336	\$60,920	\$65,460
Metropolitan Statistical Area - Norfolk--Virginia Beach-- Newport News	\$20,328	\$42,448	\$49,186
Commonwealth of Virginia	\$23,975	\$46,677	\$54,169
United States	\$21,587	\$41,994	\$50,046

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



Poquoson has claimed the highest median household income for the entire Hampton Roads region for several decades. Table 2-15 tracks the median household for all localities on the Peninsula. About 51.5% of the households in Poquoson report incomes of \$60,000 or greater.

	1979	1989	1999
Poquoson	\$23,963	\$43,236	\$60,920
Gloucester County	\$16,126	\$31,591	\$45,421
Hampton	\$17,057	\$30,144	\$39,532
James City County	\$18,706	\$39,785	\$55,594
Newport News	\$15,974	\$27,469	\$36,597
Williamsburg	\$15,004	\$25,393	\$37,093
York County	\$20,916	\$40,363	\$57,956
Peninsula	\$15,946	\$29,484	\$41,099
Virginia	\$17,523	\$33,328	\$46,677

Source: U.S. Bureau of Census, Census 1980-2000

An estimated 84% of Poquoson's 4,166 households reported earnings in 1999, with a mean income of \$63,926. As noted in Table 2-16 below, 23% of the income-earning households collected social security while 0.5% received public assistance and 31% earned retirement income. While the percent of households receiving public assistance dropped from 1989 to 1999, the percent with retirement income increased significantly. As previously illustrated, the number of residents in Poquoson over the age of 65 has been steadily increasing. If this trend continues, it can be expected that the percentage of households drawing retirement income will also increase.

	Income in 1979		Income in 1989		Income in 1999		
	(2743 total households)		(3762 total households)		(4166 total households)		
	Households	Percent	Households	Percent	Households	Percent	Mean
With earnings	2,433	88.7%	3,252	86.4%	3,512	84.3%	\$63,926
With social security income	565	20.6%	775	20.6%	975	23.4%	\$11,008
With public assistance income	93	3.4%	58	1.5%	20	0.5%	\$1,155
With retirement income	--	--	835	22.2%	1,283	30.8%	\$26,118

Source: U.S. Bureau of Census, Census 1980-2000



Of Poquoson’s population of 11,566 people, 512 individuals (4.5%) were identified as being below the poverty level in 1999. Poverty status is determined for all people except institutionalized people, people in military group quarters, and unrelated individuals under 15 years old. Table 2-17 notes the numbers of individuals and families by age group below the poverty level in 1999.

Table 2-17: Poverty Status by Age of Householder by Household Type, City of Poquoson, 1999						
	Age Group and Poverty Status					
	Under 65		65 to 74		75+	
	Above Poverty	Below Poverty	Above Poverty	Below Poverty	Above Poverty	Below Poverty
Married-couple family	8,226	178	609	0	219	15
Male householder, no wife present	316	24	5	0	0	0
Female householder, no husband present	662	164	40	3	27	0
Unrelated Individuals	537	94	100	23	174	11
Totals	9,741	460	754	26	420	26
Percent of population for whom poverty status is determined	85.2%	4.0%	6.6%	0.2%	3.7%	0.2%

Source: U.S. Bureau of Census, Census 1980-2000.

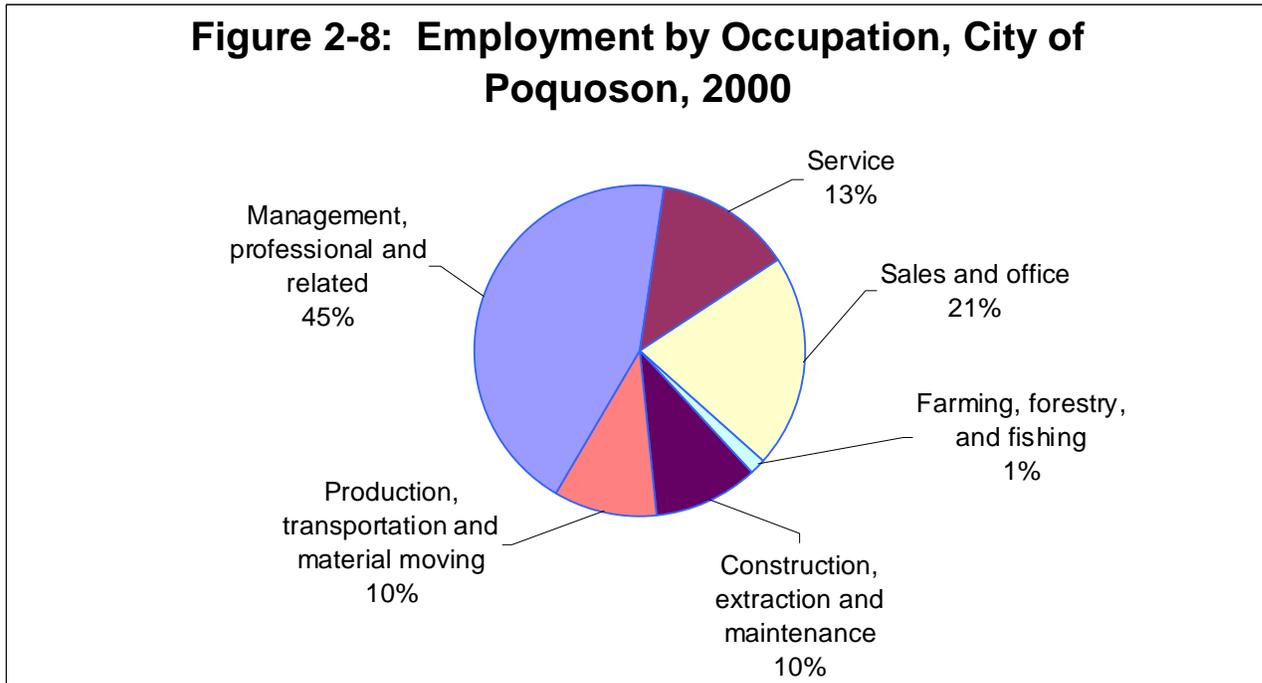
Employment

The majority of employed Poquoson residents, about 65%, are in the civilian labor force while only 2% are classified as working in the Armed Forces. Approximately one-third of the population 16 years and over is not in the labor force. Table 2-18 details the number of persons employed in civilian jobs and the Armed Forces.

Table 2-18: Employment Status, City of Poquoson, 2000		
	Number	Percent
Population 16 years and over	8,838	100.0%
In Civilian Labor Force	5,732	64.9%
In Armed Forces	176	2.0%
Not in Labor Force	2,930	33.2%

Source: U.S. Bureau of Census, Census 1980-2000.





Source: U.S. Bureau of Census, Census 2000, Summary File 3.

Figure 2-8 identifies employment by occupation for the population of Poquoson in 2000. This information identifies types of employment, regardless of whether the citizens work in the City or in another location. The majority of Poquoson’s employed citizens worked in management and professional jobs in 2000 (45%). Sales and office jobs represented about 21% of the jobs held, and service occupations accounted for about 13% of the total. Approximately 25% of Poquoson residents work in government jobs. Most of the employed residents work in surrounding localities.

The top five industry classifications employing the greatest number of Poquoson residents include educational, health and social services (20%), public administration (12%), manufacturing (11%), retail trade (11%), and construction (10%). Table 2-19 details the shift in employment by industry over the past two decades. Employment in the agricultural and manufacturing industries has declined while employment in education, health and social services has increased considerably since 1980.

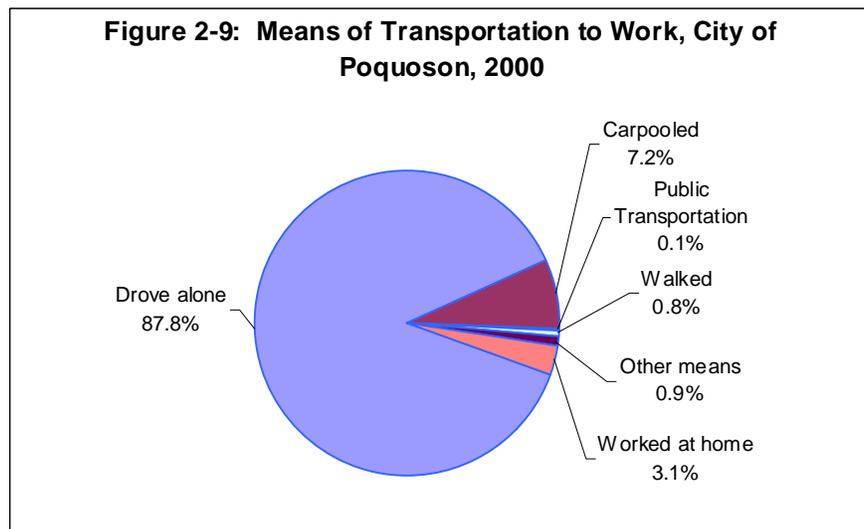


Table 2-19: Employment by Industry, City of Poquoson, 1980-2000			
	Percent of Employed Civilian Population		
	1980	1990	2000
Agriculture, forestry, fisheries, hunting, and mining	4.6%	2.7%	1.3%
Construction	8.2%	7.1%	10.3%
Manufacturing	19.6%	15.3%	11.3%
Wholesale trade	3.1%	3.7%	2.8%
Retail trade	14.6%	14.1%	10.9%
Transportation and warehousing	2.2%	3.4%	2.8%
Information/Communication	1.9%	1.7%	2.6%
Finance, insurance, and real estate	14.6%	5.9%	4.7%
Professional, scientific, management, administrative, and waste management services	4.1%	3.4%	10.1%
Educational, health and social services	13.8%	16.4%	20.3%
Arts, entertainment, recreation, accommodation and food services	2.6%	4.7%	7.0%
Other services (except public administration)	8.2%	9.1%	4.0%
Public administration	13.1%	12.4%	12.0%

Source: U.S. Bureau of Census, Census 1980-2000.

Commute and Travel Time to Work

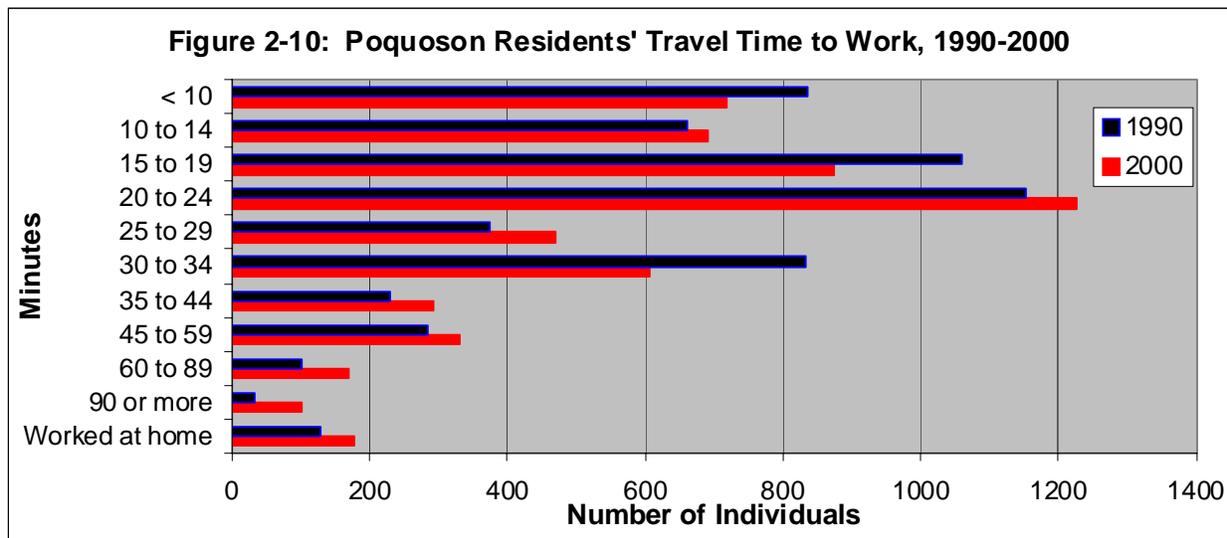
The majority of Poquoson’s workforce age 16 and older (87.8%) drove alone to work according to the 2000 Census. Figure 2-9 illustrates how Poquoson residents commuted to work in 2000.



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



About 72% of working Poquoson residents commuted less than thirty minutes daily – mean travel time to work in 2000 was approximately 24 minutes. Figure 2-10 displays workers’ commute times for both 1990 and 2000. Although most residents traveling to work had commutes of 24 minutes or less, a significant portion travel over thirty minutes to work (27%). The vast majority of employed residents (78%) did not work within the City as of 2000.



Source: U.S. Bureau of Census, Census 1990-2000.

SUMMARY

The data and charts provided in this chapter support the generalizations and notions of the localities in Northern Hampton Roads, especially Poquoson. The large cities of Hampton and Newport News remain transient due to the large military installations and higher learning institutions. The City of Williamsburg’s population remains somewhat transient due to the College of William & Mary campus, but tourism generates the City’s appeal and may be the main cause for the increase in net migration. The counties of James City and York show a rapid increase in population which may be largely attributed to the recent real estate boom in Hampton Roads and the large amount of raw developable land. However, Poquoson’s population has remained static and increased only slightly since 1990. The data presented reinforces the notion that the character of Poquoson is a bedroom community to surrounding areas. This is partly due to the suburban landscape with low density residential units and the environmentally sensitive land. However, the slow population increase may also be due to the lack of commercial businesses, mainly service and retail. While there are some businesses that provide basic goods and services for the area; there are not enough businesses that deter residents from going to the larger cities to acquire specialized services and goods. These subjects are covered more in depth in Chapters 4 and 8, Economics and Land Use respectively.



CITIZEN COMMENTS

Even with continuous population growth, many citizens believe that Poquoson has maintained its small town atmosphere.

As cited in Question #1 of the 2004 survey asked citizens their opinion of the three most important reasons for living in Poquoson; the statement of a ‘small town atmosphere’ was the most selected option in the returned surveys – receiving a majority of the responses. Other responses, out of seven possible choices, that reflect the values of the small town atmosphere were also highly selected and are presented below with percentages of tallied responses:

- (#1 response) small town atmosphere - 23.1% of responses;
- (#2 response) low crime rate - 18.3% of responses; and
- (#4 response) convenient to large city without the problems of a large city – 14.5% of responses.

Again in 2006, Question #1 of the survey asked citizens their opinion of the three most important reasons for living in Poquoson. The result was that three of the top four responses reinforced the notion of Poquoson as a small community. Out of six possible choices, the three most important reasons for living in Poquoson selected by the citizens are presented below with percentages of responses tallied in favor of the selection:

- (#1 response) quiet and peaceful – 22.8% of responses;
- (#2 response) low crime rate – 20.6% of responses; and
- (#4 response) convenient to large city without the problems of a large city – 16.9% of responses.

School system was the third most selected option of the surveys for both years.

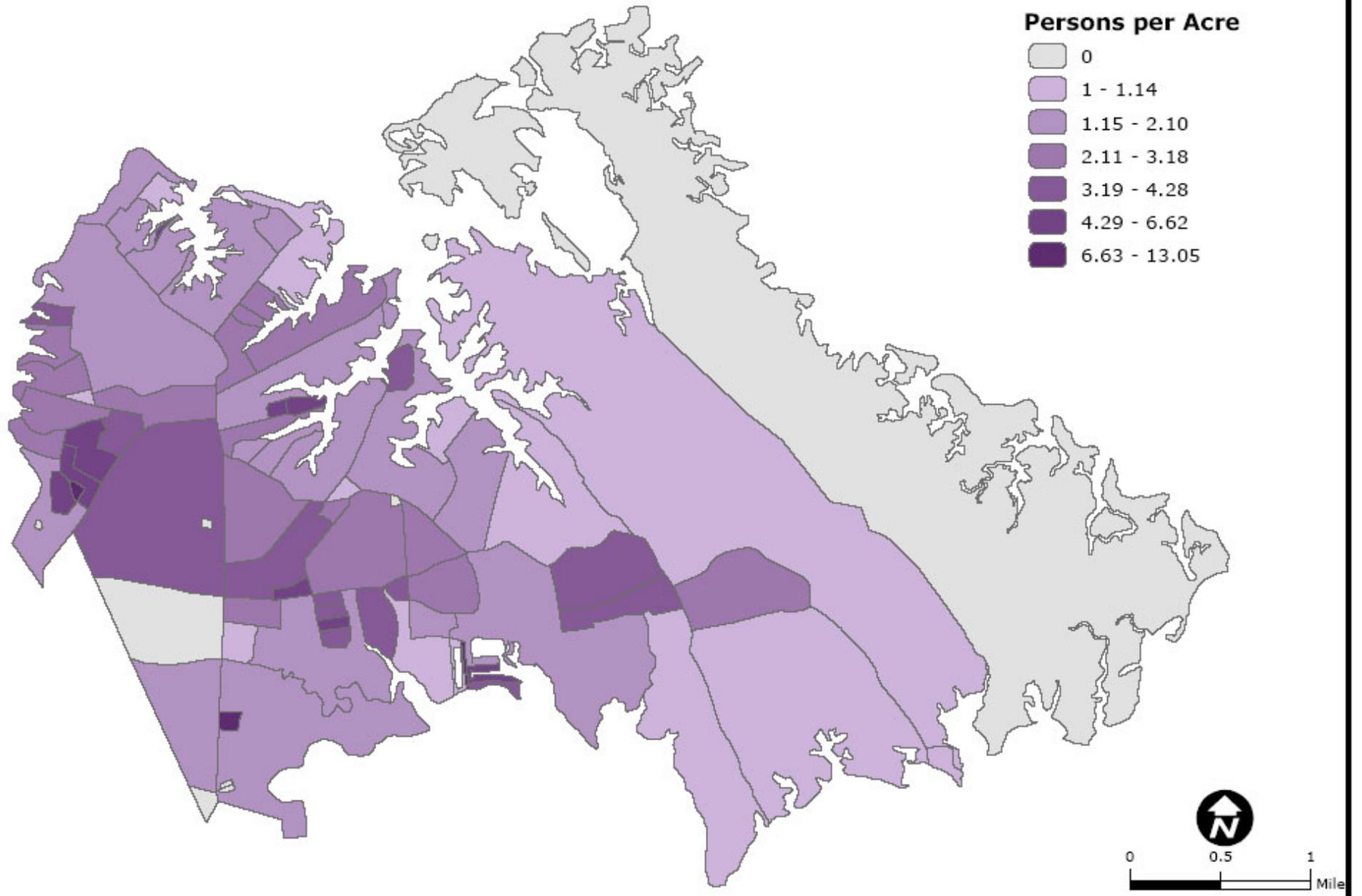
Additional Supporting Information

A Virginia Population estimate for the year 2005, ranked Poquoson’s population 111 out of 134 localities⁴ in the State of Virginia. Only 23 other localities, counties or cities, are **less** populated than Poquoson in the entire State of Virginia! This fact clearly demonstrates that Poquoson is a slow growing community; especially when considering it is located in the second fastest growing region (Hampton Roads), second only to the Northern Virginia region, in one of the fastest growing states in the nation (VA-12th largest state). It is reasonable to conclude that Poquoson has maintained its reputation of a small-town atmosphere through prudent planning and sound decision making.

⁴ Weldon Cooper Center for Public Service; *2005 Virginia Population Estimates*, Table 3 Population Rank in 2005: Virginia Counties & Cities, p. 20.



Map 2-1

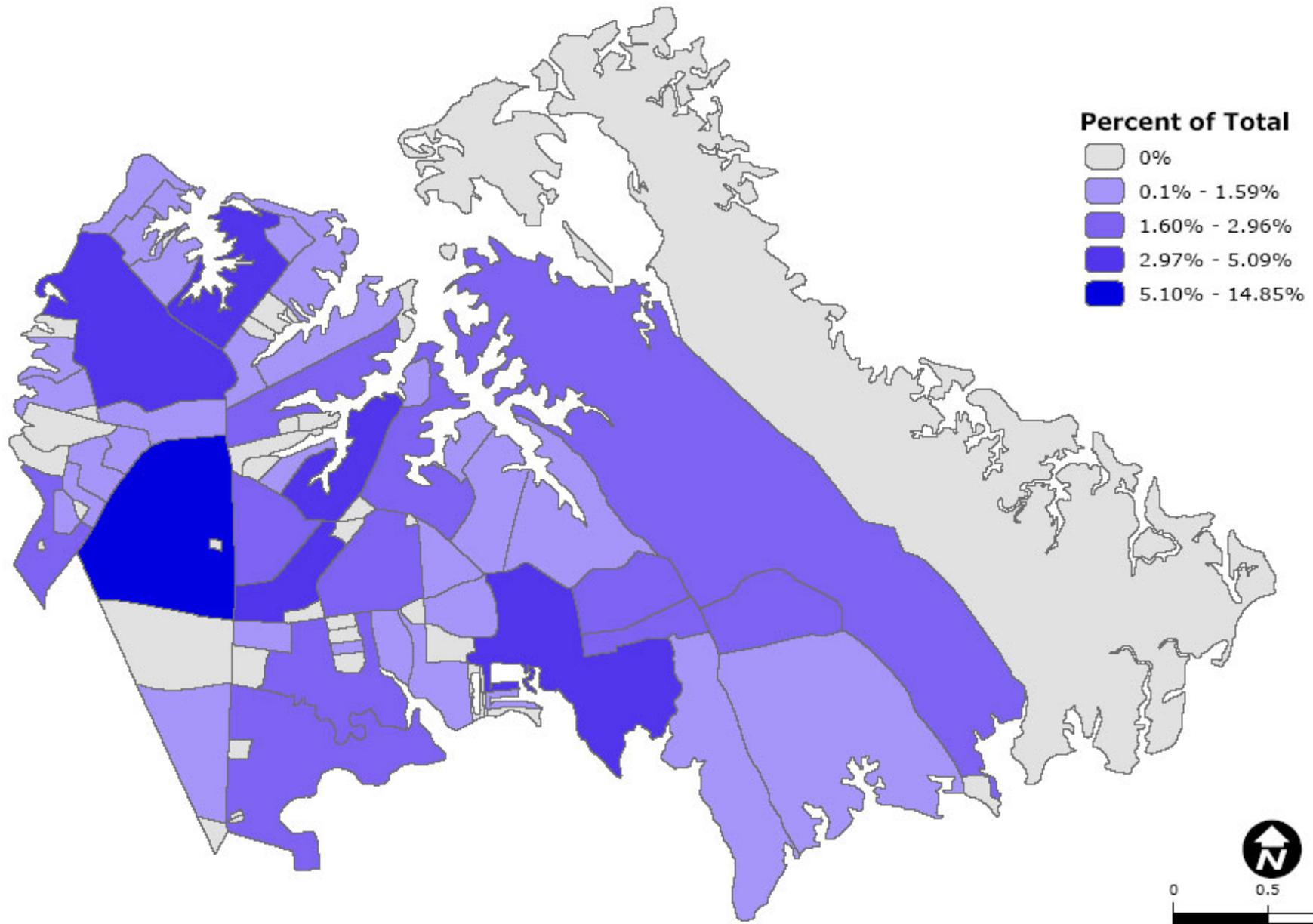


Population Density by Census Block

Map Created by HRPDC GIS Staff, May 2005
Data Source: US Census 2000



Map 2-2

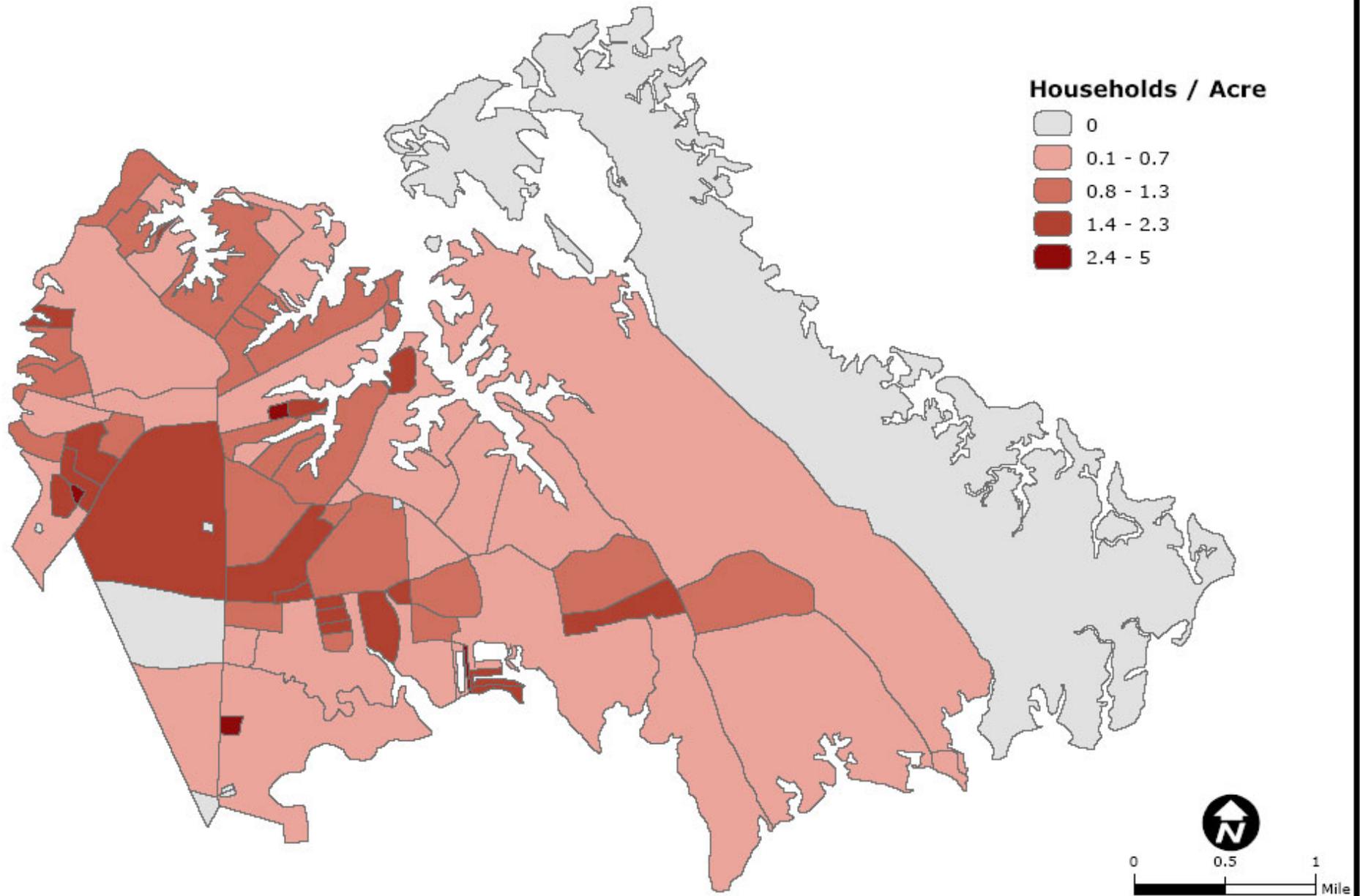


*Population Age 65 and Over
by Census Block*

Map Created by HRPDC GIS Staff, May 2005
Data Source: US Census 2000



Map 2-3



*Density of Households
by Census Block*

Map Created by HRPDC GIS Staff, May 2005
Data Source: US Census 2000



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Map 3-1: Distribution of Owners and Renters



OVERVIEW

This section provides data, analysis and highlights about housing in the City of Poquoson. Information about the number and types of housing units, year of construction, household size, housing prices and average rental costs are presented for the most current year available. The vast majority of developed property in Poquoson consists of single-family homes. The housing stock is in good condition in most areas of the city, although some homes show signs of neglect and damage from past storm systems. Since the last Comprehensive Plan, Poquoson has adopted the Property Maintenance section of the Virginia Uniform Statewide Building Code (VaUSBC). Enforcement of this section will increase awareness for property upkeep. Nevertheless, average home prices will likely continue to rise in the City due to the excellent quality in life. Housing for the elderly, empty nesters and low to moderate income families are immediate and long-term community needs.

DISTRICT CHARACTERISTICS

(For the purpose of this plan, districts refer to the planning districts for the City, not voting districts.)

For the Comprehensive Plan update, the City has been designated into three (3) planning districts - eastern, central and western. The districts do not follow the voting districts, as voting districts may change from time to time, but are based on existing land use patterns. Below is a brief description of each district as well as anticipated growth patterns. It is expected that the past development trends will continue in each district. Please see the Land Use chapter for a detailed description of each planning district and Map 8-1 which graphically depicts each district.

Eastern district- The most sparsely populated due to extensive marshlands and practically fully built-out, consists of eastern most land zoned R-2 and C-1 including all surrounded by R-2 zoning. Only minor in-fill development and possible redevelopment are expected.

Central district- More densely populated due to smaller lot sizes, multi-family housing units and commercial development, consists of centrally located land zoned R-1 including all properties surrounded by R-1 zoning. Most growth is expected in central business area.

Western district- Predominantly developed with low-density single-family homes in a suburban design, consists of western most land zoned R-S including all properties surrounded by R-S zoning. Tracts of developable land still exist in this district.



HOUSING TRENDS

Table 3-1 summarizes historic information about housing units throughout the Lower Peninsula and Gloucester County. According to the 2000 U.S. Census, there are 4,300 housing units located within the City of Poquoson. Of those, approximately 97% were occupied which results in 4,166 households (see table 3-11). The City's housing stock increased by 46% between 1980 and 2000. Similarly, the number of households in the City increased 51% from 1980 to 2000. However, 1980 to 1990 represents most of the increase of new housing units (70% of growth) with only 410 units during 1990 to 2000. Poquoson's growth was more than the Cities of Newport News, Hampton and Williamsburg; but was markedly lower than James City and York Counties which experienced substantial growth, approximately 45% and 34.5% respectively.

	Housing Units			Change, 1990-2000	
	1980	1990	2000	Number	Percent
Poquoson	2,943	3,890	4,300	410	10.54%
Gloucester County	7,878	12,451	14,494	2,043	16.41%
Hampton	43,562	53,623	57,311	3,688	6.88%
James City County	8,524	14,330	20,772	6,442	44.95%
Newport News	54,986	69,728	74,367	4,639	6.65%
Williamsburg	3,041	3,960	3,880	-80	-2.02%
York County	11,401	15,284	20,701	5,417	35.44%
Virginia	2,020,941	2,496,334	2,904,192	407,858	16.34%

Source: U.S. Bureau of Census, Census 1980-2000.

HOUSING CHARACTERISTICS

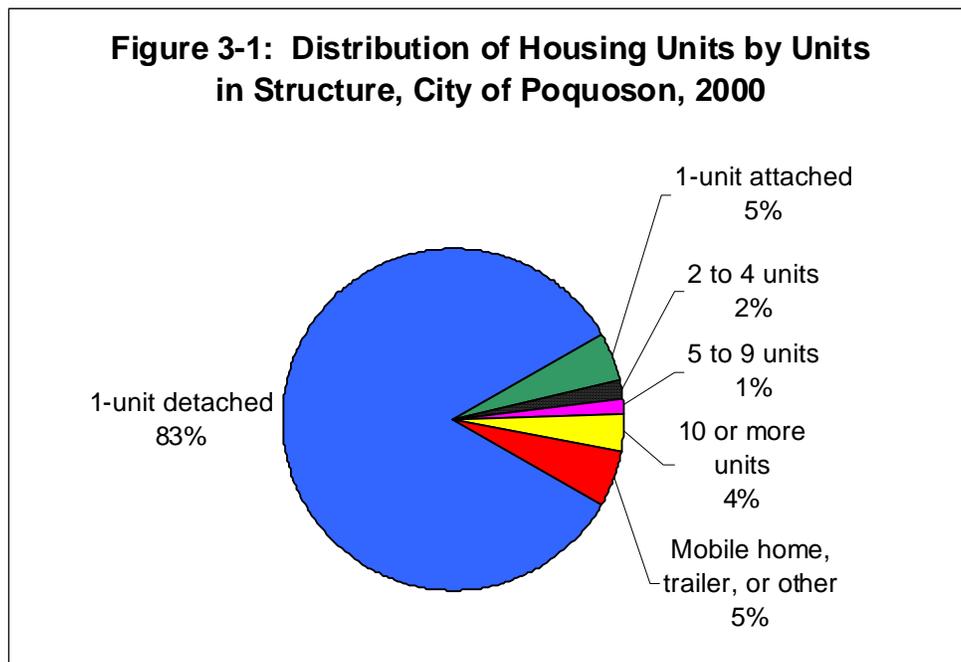
As noted in Table 3-2, 83% of all housing units in the City were classified as single-family detached structures in 2000. Although single-family detached homes predominate, there was a steady increase in the number of multi-family dwellings and mobile homes developed between 1970 and 1990. As a percentage of the housing stock, multi-family units and mobile homes changed little from 1990 to the 2000 Census. The supply of housing units other than single-family detached residential in Poquoson (16.9% of all housing) is relatively low when compared to other suburban Hampton Roads localities such as York County (28.9% of total housing) and James City County (33.1% of total housing). Both localities also have significantly higher percentages of single-family attached residential structures than Poquoson; York County having more than triple (15.1% of total housing) and James City County more than double (12.2% of total housing). Both York County and James City County also more multi-family housing units than Poquoson (6.5% of total housing units) with York County almost double the amount of Poquoson (11.7% of housing stock) and James City County more than twice the amount (14.1%). These observations and their implications are discussed in more detail later in the Housing Element, in the Affordable Housing Section of the chapter. It is important to note that Multi-family housing units and mobile homes account for 39.6% of total housing stock in the



Hampton Roads region as a whole. A detailed breakdown of housing units in Poquoson in 2000 by the number of units in the structure is provided in Figure 3-1.

Table 3-2: Housing Type, City of Poquoson								
Housing Type	1970		1980		1990		2000	
	Units	Percent	Units	Percent	Units	Percent	Units	Percent
single-family Detached	1,615	94.2%	2,642	89.8%	3,212	82.6%	3,578	83.2%
single-family Attached	Combined with Detached	Combined with Detached	23	0.8%	210	5.4%	209	4.9%
Multi-Family	67	3.9%	173	5.8%	257	6.6%	281	6.5%
Mobile Homes	32	1.9%	105	3.6%	211	5.4%	232	5.4%
Total	1,714	100.0%	2,943	100.0%	3,890	100.0%	4,300	100.0%

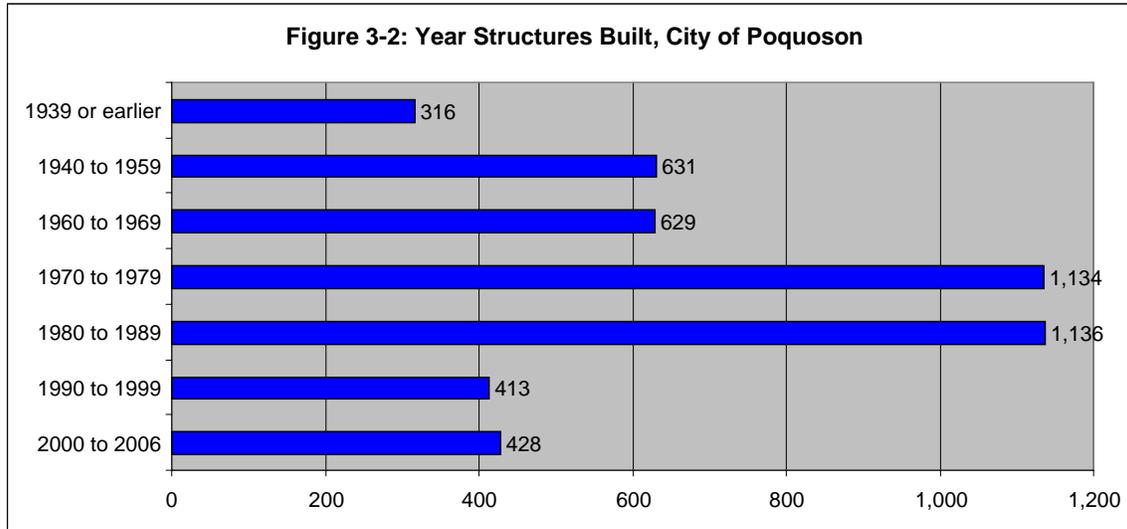
Source: U.S. Bureau of Census, Census 1970-2000.



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

According to the U.S. Census, the majority of the housing stock in Poquoson (52.8%) was constructed in the 1970s and 1980s. Figure 3-2 identifies the number of units built within varying time periods. Development appears to have slowed considerably in the 1990s, when only 413 units were constructed. This time period represents only 9.7% of the housing stock in the City.





Source: U.S. Bureau of Census, Census 2000 & City of Poquoson Building Inspections.

Physical Housing Characteristics

Over three-fourths (75.7%) of Poquoson’s housing stock has six or more rooms. This is a slightly higher percentage of large houses than nearby communities. Similarly, the percentage of housing units with four or less rooms is slightly lower than the adjacent communities of Hampton (28.1%) and York County (12.6%). Table 3-3 details Poquoson housing by size.

Table 3- 3: Number of Rooms, City of Poquoson				
Number of Rooms	1990		2000	
	Units	Percent	Units	Percent
1 room	4	0.1%	0	0.0%
2 rooms	8	0.2%	58	1.3%
3 rooms	82	2.1%	80	1.9%
4 rooms	392	10.1%	346	8.0%
5 rooms	552	14.2%	562	13.1%
6 rooms	810	20.8%	842	19.6%
7 rooms	758	19.5%	878	20.4%
8 rooms	638	16.4%	724	16.8%
9 or more rooms	646	16.6%	810	18.8%

Source: U.S. Bureau of Census, Census 1990-2000.

In order to assess future housing needs, it is necessary to inventory the existing housing stock to determine where inadequate or substandard housing conditions exist. While the 2000 Census did not specifically enumerate substandard units, certain characteristics indicative of low quality housing were tabulated. Table 3-4 details the numbers of units lacking basic facilities.

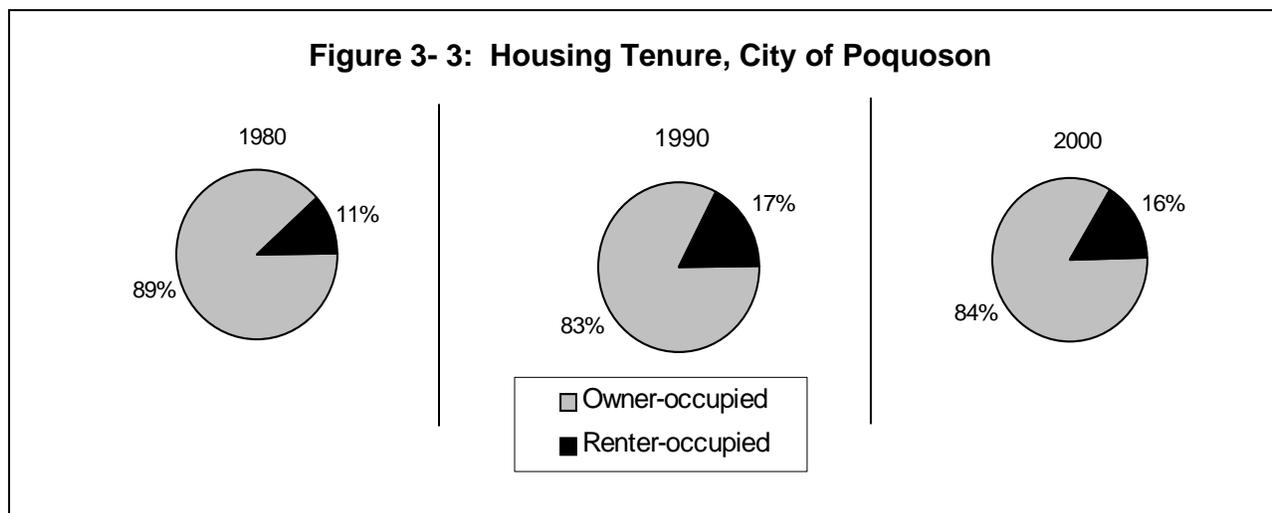


Table 3- 4: Selected Housing Characteristics, City of Poquoson, 2000		
	Units	Percent
Lacking complete plumbing facilities	7	0.2%
Lacking complete kitchen facilities	7	0.2%
No telephone service	24	0.6%

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

Tenure

In 2000, there were 134 vacant housing units in the City of Poquoson, or about 3% of the total. The City averaged 2.75 persons per occupied unit. Owner occupied units had a slightly higher average household size (2.76 persons per unit) than renter occupied units (2.70 persons per unit). The vast majority of the City’s occupied units were owner occupied (3503 units or 84 percent). Figure 3-3 below details housing tenure in Poquoson. The percentage shown was calculated using the total occupied units. Map 3-1 illustrates the location of owner and renter occupied properties in the City (Please see end of Chapter). It is important to note the renter occupancy rate increased by 6% from 1980 to 1990 while remained relatively the same as 1990 in 2000.



Source: U.S. Bureau of Census, Census 1980-2000.

Table 3-5 compares housing tenure in Poquoson to surrounding localities. The City has the highest owner-occupied housing rate among these communities, followed closely by James City County and York County.



Table 3- 5: Housing Tenure, Percent of Occupied Housing Units, 2000					
	Poquoson	Hampton	James City County	Williamsburg	York County
Owner occupied	84.1%	58.6%	77.0%	44.3%	75.8%
Renter occupied	15.9%	41.4%	23.0%	55.7%	24.2%

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

The 2000 Census suggests that in-migration to Poquoson is common. Over half of Poquoson’s householders (54.2%) moved into their housing units between 1990 and March 2000. The years in which the head of household moved into housing units in the City are detailed below in Table 3-6.

Table 3- 6: Year Householder Moved Into Unit, City of Poquoson		
	Number	Percentage
1999 to March 2000	598	14.4%
1995 to 1998	1,024	24.6%
1990 to 1994	636	15.3%
1980 to 1989	852	20.5%
1970 to 1979	492	11.8%
1969 or earlier	564	13.5%
Occupied Housing Units	4,166	100.0%

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

Value and Rent Prices

Housing values in Poquoson are among the highest in the region. Table 3-7, below, details the historical trend of the four localities with the highest home prices in Hampton Roads according to the U.S. Census. Table 3-8 specifically categorizes the housing units in Poquoson into a range of home values. Notably, between 1990 and 2000, homes with values of \$100,000 or less have declined significantly while growth has occurred in the number of homes valued at \$300,000 or more. Nonetheless, the majority of homes in Poquoson have values between \$100,000 and \$199,000.



Table 3- 7: Median Housing Value of Owner Occupied Housing Units and Per Capita Income, 1970-2000					
	Poquoson	Hampton	James City County	Williamsburg	York County
1970	\$16,600	\$16,600	\$17,800	\$26,600	\$19,600
1980	\$60,700	\$38,900	\$52,700	\$61,600	\$58,500
1990	\$113,700	\$78,200	\$119,500	\$121,000	\$121,600
2000	\$153,400	\$91,100	\$167,300	\$212,000	\$152,700
1999 Per Capita Income	\$25,336	\$19,774	\$29,256	\$18,483	\$24,560

Source: U.S. Bureau of Census, Census 1970-2000.

Table 3- 8: Value of Owner-Occupied Housing, City of Poquoson			
	Number of Units		Percent change
	1990	2000	
Less than \$50,000	112	22	-80.4%
\$50,000 to \$99,000	976	576	-41.0%
\$100,000, to \$149,000	949	933	-1.7%
\$150,000 to \$199,000	471	864	83.4%
\$200,000 to \$299,000	176	520	195.5%
\$300,000 or more	57	281	393.0%
Specified owner-occupied housing	2,741	3,196	16.6%

Source: U.S. Bureau of Census, Census 1990-2000.

According to the U.S. Census, the median contract rent for units in Poquoson is \$588 per month, placing the City among the four most expensive localities in Hampton Roads. Gross rent is defined by the U.S. Bureau of Census as the contract rent plus the estimated average monthly cost of utilities and fuels. It is intended to eliminate differences among various rental procedures with respect to the inclusion of utilities and fuels as part of the rental payment. Even when considering median gross rent figures, Poquoson is still one of the most expensive localities in Hampton Roads (\$697 per month).

Table 3-9 identifies the number of units within each rental price range in 1990 and 2000. The number of units renting for less than \$500 declined sharply during this time, while the greatest increase was seen in the number of units renting for \$1000 or more.



Table 3- 9: Gross Rent, City of Poquoson				
	1990		2000	
	Number	Percent	Number	Percent
Less than \$200	6	0.9%	0	0.0%
\$200 to \$299	10	1.5%	0	0.0%
\$300 to \$499	144	22.2%	56	8.4%
\$500 to \$749	254	39.1%	318	47.9%
\$750 to \$999	132	20.3%	125	18.8%
\$1000 or more	73	11.2%	124	18.7%
No cash rent	30	4.6%	41	6.2%
Specified renter-occupied units	649	100.0%	664	100.0%
Median (dollars)	\$574		\$697	

Source: U.S. Bureau of Census, Census 1990-2000.

Selected housing cost characteristics are summarized in Table 3-10 below. The localities selected for inclusion in this comparison were most equivalent to Poquoson with regard to median home value and median monthly rent price.

Table 3- 10: Selected Housing Cost Characteristics, 2000					
	Poquoson	Hampton	James City County	Williamsburg	York County
Median Value of Owner Occupied Housing Units	\$153,400	\$91,100	\$167,300	\$212,000	\$152,700
-below \$99,000	18.7%	61.1%	19.2%	22.4%	19.3%
-above \$200,000	25.1%	3.9%	38.9%	53.1%	25.6%
Median Rent	\$697	\$603	\$703	\$616	\$708
-below \$500/month	8.4%	27.9%	17.9%	15.9%	13.2%
-above \$750/month	37.5%	23.6%	43.1%	24.0%	31.8%
Owners paying 30%+ of income for housing	19.3%	24.4%	21.5%	21.1%	19.1%
Renters paying 30%+ of income for housing	33.7%	37.6%	41.5%	41.5%	23.1%
Home Ownership Rate	84.06%	50.95%	68.48%	24.10%	67.81%

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



Depicted in Table 3-10 is the region-wide phenomenon of strong housing demand and rising incomes forcing prices above the means of some low to moderate-income households. Nevertheless, the home ownership rate in Poquoson is the highest among localities on the Peninsula within the Hampton Roads Planning District.

HOUSING ESTIMATES AND PROJECTIONS

Household trends based on occupied housing data for Poquoson during the period from 1970 to 2000 are provided in Table 3-11, along with projections up to the year 2030. By 2030, the number of households in Poquoson is expected to increase to 5,408, up 29.81% from 2000 with 1,242 additional households. Although the increase is only slightly lower than the increase anticipated for the Hampton Roads region as a whole (less than 3%), Poquoson’s housing stock is projected to grow at a significantly slower pace compared to the projections for surrounding communities like York County and Gloucester County (projected to grow more than 53% each) and James City County (projected to more than triple).

The projected increase in housing is seems to follow a linear rate, depicting a low yet increasing growth rate. The minimal availability of vacant land (less than 20%) and the extensive environmental sensitivity of the land in Poquoson will continue to constrain residential development. Without these two factors, development would surely resemble the rest of Hampton Roads. While some vacant land is yet to be developed, the City is slowly reaching an apex of residential build-out which will eventually require rezoning of existing vacant land or redevelopment for new residential growth. Residential areas with potential redevelopment opportunities are limited and outlined in the Land Use chapter.

Projected Households in Hampton Roads							
	1970	1980	1990	2000	2010	2020	2030
Poquoson	Not Available	2,763	3,763	4,166	4,545	4,958	5,408
Gloucester County	4,431	7,159	10,957	13,127	15,218	17,643	20,454
Hampton	31,564	41,550	49,680	53,887	55,535	57,234	58,985
Newport News	39,586	51,310	64,420	69,686	24,614	31,883	41,297
James City County	4,551	7,493	12,990	19,003	73,981	78,541	83,381
Williamsburg	2,396	3,024	3,462	3,619	4,394	5,335	6,477
York County	7,391	10,879	14,452	20,000	23,091	26,659	30,779
North Hampton Roads	89,919	124,178	159,724	183,488	202,788	224,117	247,691
Hampton Roads*	Not Available	390,531	504,180	579,107	636,023	698,532	767,185

Source: HRPDC, Years 2010-2030 derived from Hampton Roads 2034 Socio-Economic Regional Forecast.
*Hampton Roads is used synonymously with Norfolk--Virginia Beach--Newport News, VA,NC MSA for years 2010-2030.



AFFORDABLE HOUSING

VA statute §15.2-2223 requires Comprehensive Plans include “the designation of areas and implementation of measures for the construction, rehabilitation, and maintenance of affordable housing which is sufficient to meet the current and future needs of residents of all levels of income while considering the current and future needs of the planning district within which the locality is situated”, referenced as Affordable Housing by State Code. Unfortunately, connotations of “affordable housing” are generally negative and misinterpreted to represent ‘public’ (or free) housing, which is not factual. Many localities have discouraged using the term of “affordable” and proceed to call this effort “workforce housing” for two main reasons: (1) the housing is for a working families that must purchase the housing and therefore not free, and (2) affordable has different meanings to different people. It is recommended that this effort be referenced as ‘workforce housing’ during implementation since this term best matches the character of Poquoson as a small town of hard working individuals.

The State of Virginia requires localities to address this Affordable Housing in their Comprehensive Plans. The Affordable Housing section of the plan proposes two strategies to address Poquoson’s housing issues in a manner that best matches the values of the residents and remains compatible with the community’s existing land use pattern by using a key tenet of Smart Growth strategies and Sustainable Development strategies as the foundation to the recommendations.

Existing Conditions Analysis

The Housing element has presented Poquoson’s existing suburban landscape through various narratives, charts, graphs and tables throughout the chapter and can be summarized as consisting primarily of single-family detached residential dwellings (83.2% of stock) built during the 70s and 80s (52.8%) with limited single-family attached dwellings and multi-family dwellings. Poquoson’s housing stock consists of structures possessing six or more rooms (75%) with almost 19% of the housing stock consisting of houses with nine or more rooms, both qualities indicative of Poquoson’s character as a family oriented bedroom community. In comparison to neighboring suburban designed communities, Poquoson possesses the third highest median value of housing cost on the Lower Peninsula (North Hampton Roads) and lacks housing diversity that can support different income levels.

Current Zoning

The base zoning for the City of Poquoson are zoning classifications that allow single-family detached residential uses at a maximum of two dwelling units per acre in designated areas (R-S, R-1, R-2). Land currently zoned for multi-family residential is already developed which would require proposals for high density residential to obtain land and request a rezoning for development. It should also be noted that under the City of Poquoson’s current Zoning Ordinance Multi-family Residential zoning (R-3) is the only zoning that allows a density more than two units per acre (2 du/acre); therefore, any land development proposal of more than 2



units per acre, whether or not the proposal attempts to maximize unit yield, must undergo the rezoning process and the controversy associated with R-3 zoning (multi-family residential). This fact may explain the lack of single-family attached residential housing in Poquoson.

Past Trends and Effects

As previously mentioned in Table 3-3, over seventy-five percent (75%) of Poquoson's dwellings consist of six (6) or more rooms with less than twelve percent (12%) of the housing stock dedicated to four (4) rooms or less. It is sensible to believe the market during this time was supplying a demand by providing a quality product which has led the high quality of housing stock found in the City. Profit was maximized by building larger high quality dwellings, as opposed to building smaller sized detached dwellings that would not draw as much return in profit on land that shares the same cost.

Consequently, Poquoson's high quality of life and the recent boom in the real estate market created an environment where the existing housing stock became extremely valuable and new construction provided larger more expensive housing. In fact, from 1990-2000 the housing stock increased by 3.5% with dwelling units boasting seven rooms or more, and the number of dwelling units with four rooms reduced by 2.1%. The effect of this trend is that few citizens in Poquoson who rented were able to purchase and few who owned were able to upgrade their housing situation. However, Poquoson maintained its status as a "bedroom community" as the additional, larger newly constructed housing attracted new residents with higher incomes.

Housing Issues Poquoson faces

As the availability of residentially zoned land decreases, it is important for the City of Poquoson to address important housing issues. Data analyses, past surveys and public comments have identified housing issues the City faces such as:

- More affordable housing for low to moderate income families within the community;
- Affordable shared living arrangement housing that provides assisted care facilities, services and housing for the elderly and disabled; and
- Active lifestyle housing for retirees and empty-nesters with limited maintenance responsibilities.

The City of Poquoson must strive to achieve more affordable housing for its current and future residents in a manner that best suits the community. The aforementioned issues represent a demand in the real estate market and within the community, and are generally addressed by diversifying the housing stock through a variety of housing types and ownership options. However, under the City's current zoning ordinance, any housing type or style other than single-family detached residential would have to utilize Multi-Family Residential zoning. The concept of Multi-Family housing has proven to be a highly controversial topic and forces City staff members and governing officials to think of different ways to address the housing needs of the community. This plan presents two strategies intended to address these issues.



Key Observations

As mentioned previously in the Housing Characteristics section, the City of Poquoson has a limited amount of Attached single-family Residential housing and Multi-family housing, especially when compared to nearby suburban communities of James City County and York County. In fact, multi-family residential structures outnumber single-family attached residential structures in Poquoson by 1.5%. Table 3-12 illustrates that York County has more than three times the amount of Attached single-family Residential than Poquoson, 15.1% of the total housing to 4.9% of the total housing respectively. James City County also has significantly more single-family attached residential structures than Poquoson, 12.2% of the total housing, more than twice the amount. These claims are not an attempt to imply that Poquoson should attempt to match the percentages found in James City County or York County; however, the observation is presented in an attempt to discuss an opportunity to diversify the housing stock in a manner appropriate for Poquoson.

Table 3 - 12: Housing Type Comparison - 2000						
Housing Type	James City County		York County		Poquoson	
	Units	Percent	Units	Percent	Units	Percent
Single-Family Detached	13,899	67.0%	14,719	71.1%	3,578	83.2%
Single-Family Attached	2,536	12.2%	3,128	15.1%	209	4.9%
Multi-Family	2,914	14.0%	2,411	11.7%	281	6.5%
Mobile Homes	1,413	6.8%	443	2.1%	232	5.4%
Total	20,772	100.0%	20,701	100.0%	4,300	100.0%

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

In the City of Poquoson, property transfer records confirm that, on average, attached residential dwellings generally sell for approximately a third (33%) less than comparable detached dwellings, according to information provided by the City’s Assessor Office¹. The difference in cost may be due to the fact that typically lots containing attached residential dwellings are located on smaller lots of land, thereby reducing the cost. The number attributed to this difference was calculated to be roughly a \$100,000 savings². This disparity was once greater, but the scarcity of attached residential in Poquoson has essentially increased the demand which has increased the price of this product. This market trend clearly demonstrates the demand for this type of housing while also indicating that the supply is limited. Single-family attached residential presents an opportunity for the community to capitalize on its great quality of life while advancing towards its goal of becoming a more sustainable community with a diversified housing stock.

¹Information provided by City Assessor, Robert Faison, in interview on January 25, 2008.

²Information provided by City Assessor, Robert Faison, in interview on January 25, 2008.



Background

Values of the Community

Strategies to address workforce housing must maintain the values of the community to ensure compatibility with adjacent neighborhoods and public acceptance. The following list of community values have been compiled from data analyses, citizen surveys and public comments³:

- The City of Poquoson is a suburban bedroom community predominantly consisting of single-family detached residential homes (83.2%) and approximately 78% of the City's residents worked outside the City. The majority of dwellings are less than three stories in height.
- The City of Poquoson is a family oriented community. Families populate the housing (80.9% of the households) with an average household size of 2.75 persons and an average family size of 3.08 persons. Poquoson's percentage of families as population is the most on the Peninsula with York County the next closest locality with a similar family population 79.4%. Other than James City County, no other localities on the Peninsula had populations consisting of at least 70% families. Poquoson's average household size and average family size rank second on the Peninsula, behind only York County with an average household size of 2.78 persons and an average family size of 3.15 persons.
- The community holds home ownership in high regard boasting the highest rate of owner occupied housing units on the Peninsula (84.1%) and 74.3% of its total dwelling inventory occupied by owners.
- The community mostly consists of hardworking diligent individuals with only 2.1% of the labor force unemployed, tied for 2nd least on the Peninsula with James City County behind only York County with 1.8%.
- Poquoson has a small town atmosphere with a small central commercial core to serve basic community needs and services along Wythe Creek Road.

Citizen Comments

2004 Survey

The 2004 survey asked citizens what land uses should be of highest priority to the City of Poquoson. Respondents of the 2004 survey answered that affordable housing for young families and elderly housing were 3rd and 4th priority out of 8 choices regarding land use, garnering a combined 33.5% of the responses. The combination of the 2 choices outranked all other choices by more than 10%. However, it should be noted that the respondents of the survey ranked single-family homes as the 1st priority with a slight edge of one percent (1%) over elderly

³All numbers are from the 2000 Census and the Department of Planning & Building Inspections records.



housing. The choice of office/professional just barely ranked 2nd over elderly housing with only two (2) more responses than elderly housing. Affordable housing for young families garnered 15.4% of the responses, selected the 4th most priority.

2006 Survey

Like the 2004 survey, the 2006 survey asked the citizens what the City's three (3) top priorities should be regarding land use. A total of nine (9) choices were listed for the question with a non-descriptive selection of 'affordable housing' and 'age restricted housing' as choices. Affordable housing received enough responses to remain in the upper half of priorities as the 4th most nominated priority while 'age restricted housing' received only modest support as a priority in 2006. Affordable housing was only 2.6% behind detached single-family homes (15.8% of responses) with 13.2% of the respondents selecting affordable housing. Age restricted housing dropped significantly to represent only 6.25% of the responses. This number is quite peculiar since a similar selection in the 2004 survey (elderly housing) was edged out as the 2nd most priority by only 2 votes, especially since Poquoson has the 2nd oldest population in Hampton Roads. Speculation of current events during the distribution of the 2006 survey would suggest a controversial rezoning application may have influenced respondents' choices. The top three responses for this question (Question #7) were:

- Parks & open areas – 22%
- Conservancy with no development - 20.5%
- Detached single-family homes – 16%

The 2006 survey also asked citizens if more R-3 areas should be made available that target retired and elderly, 51% of the respondents stated yes and 22% selected the response of 'no opinion' (It is important to note that a group of citizens assisted in the development of the 2006 survey). Unfortunately, the survey did not include a selection for a 'no' response for this question. However, the remaining tallies of the responses (27%) were handwritten responses of 'no' on the survey for this question. It is possible that respondents may have chosen to select 'no opinion' in order to express a 'no' response to the question. A scenario of assuming that every 'no opinion' was actually a 'no' response combined with the handwritten 'no' responses would provide almost a 50/50 split on the issue. Nonetheless, the effects of this error cannot be fully determined leaving the issue for debate and to the discretion of local elected officials. The responses for 'yes' were divided into 3 different categories and each selection is shown below along with corresponding percentage of responses:

- Yes, single-story housing – 31%
- Yes, multi-story housing – 4%
- Yes, either - 16%

Favorable responses indicate that single-story housing is the most preferred option to address housing for the retired and elderly (receiving 31% of the selection from respondents) and the 'Yes, either' option receiving the fourth most selections from respondents (16%). The choice favoring multi-story responses received the least amount of favorable responses, only 4% of the responses. Although multi-story is still considered in the 'Yes, either' response, the 'Yes, either'



choice can be interpreted that the respondents would find single-story housing to address elderly housing acceptable as well. With this in mind, single-story housing received the most support in the survey.

Justification for Action

While respondents of the surveys did not feel that affordable and elderly housing was of the utmost priority, most respondents to the surveys agreed that these types of housing are needed. The State of Virginia has also given directives via legislation requiring local governments to address affordable housing issues in their Comprehensive Plan. It would also be temerarious of the City to not consider housing for the elderly population a priority since Poquoson has the second oldest population in the Hampton Roads area, out of 17 localities, with a median age of 39.5. Poquoson's median age is higher than the Norfolk -- Virginia Beach -- Newport News Metropolitan Statistical Area (MSA) of 33.6 years and 35.7 years for the State of Virginia. Looking back to Table 1-8 (page 1-8), 33.4% of the population is 45 years old or greater with 9.5% 65 years of age and older. Of that number, nearly 5% (4.74%) of the population is above the age of 75. These numbers depict an older population that will need elderly housing; an issue which is quickly approaching a point of action.

Citizen comments from the surveys resulted in the majority of respondents answering that single-family detached residential should be the City's priority. Evaluating the landscape and regulations governing land use, one can determine that the single-family detached residential is the land use Poquoson's elected officials hold in the highest priority. As previously stated, the 2000 Census data supports this fact with 83.2% of the City's dwellings classified as single-family Residential – Detached and the base zoning layer of the City permitting single-family Residential – Detached as the only by-right use.

It is an important element of this plan to continue to promote single-family detached residential as a recommended land use to maintain the character and stability of Poquoson as a suburban community. However, attempts to address affordable housing in Poquoson must consider alternative types of housing that complement its landscape in order to achieve the Poquoson's vision of "Building a Sustainable Community". One of the key tenets to Smart-Growth and Sustainable Development strategies is to diversify the housing stock in a manner compatible to the community⁴. The proposed strategies that follow are derived from these same Smart Growth and Sustainable Development strategies complemented by analysis performed by City Planning Staff.

⁴ Smart Growth Network (www.smartgrowth.org) and Sustainable Communities Network (www.sustainable.org).



Key Recommendation: Diversify the Housing Stock

As mentioned previously, addressing the issue of affordable housing is required by the State of Virginia by State Code. Analysis of Poquoson’s existing conditions indicates that attached residential naturally leans towards addressing the social issues Poquoson faces with its housing market because it typically does not require the owner to purchase a large amount of land with the dwelling, thereby reducing the overall cost of the dwelling. The real estate market provides different types of housing that may be appropriate for Poquoson if implemented properly. It is important that the sites designated to implement the recommended strategy of affordable housing be appropriately located in areas that affect the least amount of residents and that public infrastructure can support the use. The following paragraphs explain two concepts used in the housing market, single-family attached residential and condominiums, for better understanding of what is being proposed:

Single-family attached residential represents a fee simple purchase option that involves the purchase of land with a dwelling unit that typically contains smaller versions of both attributes, especially when compared to single-family detached residential. A fee simple purchase option is one in which the buyer purchases the land and the structures found on it with entitlements to the rights and responsibility of that land. This is the same purchase option for single-family detached residential except their will be provisions for the structure on shared property lines or “party wall” as it is commonly called. Each unit has separate entrances and no shared access arrangements.

Condominiums do not require a buyer to purchase any land, as the arrangement of sell is for the dwelling only. A phrase typically used in the market is that the buyer purchases “sheet rock to sheet rock” meaning the interior of the dwelling. An association regulates, owns and maintains the exterior including the land, but it is shared amongst those living within the development for equal access and use. Essentially condominiums are not a style of development but rather a description of purchase that usually requires the buyer to agree to terms of covenants which they must abide. It is possible for condominium to resemble a single-family detached dwelling. These are commonly called “patio or carriage homes”.

The high demands of the market and citizen resistance to housing other than detached single-family are obstacles that must be faced by the community’s leaders. However, the City must work to educate the public on issues such as these in order to provide the community with affordable housing. There are different types of attached residential options in the market, some of which are purposely designed and constructed to emulate a single-family detached structure. The designs and styles of housing that attempt to resemble single-family detached residential structures seem most appropriate for Poquoson’s landscape. Therefore the style recommended for consideration in this plan as Strategy #1 is listed below:

- Duplex (or commonly called a twinhome) - Two units sharing one common party wall with each unit located on its own parcel.



Recommended Strategy

Incorporating attached residential that fits the landscape of Poquoson can be done through a variety of implementation methods, two of which are recommended for consideration by this section:

Recommended

Strategy #1 - Allow compatible types of single-family attached residential dwellings in future formally planned subdivisions that also contains single-family detached residential dwellings. The balance of the subdivision is recommended to be primarily detached single-family dwellings. This strategy would blend ownership options with single-family residential uses together and provide compatibility in areas designated for low density dwellings.

Essentially the aforementioned recommended strategy is a method to diversify the housing inventory for current and future residents of Poquoson by providing the regulations that will allow the private sector to address the market demand. Again these strategies are not intended to be the limit of what is needed to address the affordable housing needs of Poquoson as there may be additional steps needed to continue to address these issues, some of which could be: creating a Housing Authority, partnering with neighboring communities, public/private partnerships, federal assistance or assistance from non-profit organizations. However, the strategy recommended intends to diversify the housing stock in a manner appropriate for the landscape and character of Poquoson by NOT increasing density.

Strategy #1 – Mix Single-Family Residential Types

The first strategy recommends allowing compatible types of single-family attached residential dwellings in future formally planned detached subdivisions. This method is typically called mixing residential types and the purpose of this strategy is to permit land designated for low density residential the capability to provide affordable housing by mixing single-family attached dwellings with detached single-family dwellings. Again, on average, attached residential dwellings sell for less in this community than comparable single-family detached dwellings. However, this strategy is proposed only for new subdivisions and not for subdivisions with infill capability. The reasoning for this restriction is not to impact persons who purchased property in of single-family detached residential subdivision that reasonably assumed that the subdivision was planned only for detached dwellings.

Due to their design, a duplex (also known as a twinhome in the real estate market) is the most compatible type of single-family attached residential structure for integration with single-family detached residential. Nearby subdivisions in York County, such as Coventry, reflect this strategy with duplex units that visually resemble a large single-family detached dwelling. As previously mentioned, a duplex dwelling is 2 units, each located on their own separate parcel, sharing only one (1) vertical party wall located on the center lot line. Duplexes are the only type of attached residential recommended for areas designated for low density residential, such as the underlying zoning districts R-1, R-2, and R-S. This type of housing mix can be found in new urbanism and traditionally designed developments across the nation. It is important to note that while *Strategy*



#1 mixes the type of single-family residential, the permitted density for the subdivision remains the same. Again, the permitted density for Low Density Residential only allows a maximum of 2 units per acre.

For example, a scenario of a formal subdivision proposal that is allowed to yield 100 dwelling units (or lots) but the design plan can only accommodate 90 dwelling units (or lots) is an opportunity to provide this mix of units. Strategy #1 would allow 10 lots to be halved for single-family attached residential; thereby creating 10 additional lots for a total of 20 lots to be utilized for single-family attached residential. The remainder of this subdivision, 80 lots, would stay single-family detached residential with a total of 100 dwelling units for the site.

One incentive for a developer to do this type of development is the opportunity to build the total number of units allowed. Since Poquoson has many environmentally constrained lands, these constraints often preclude developers from achieving the total number of units that may be allowed upon subdivision development. For instance, if a significant amount of acreage located on the parcel is wetlands, the developer may not be able to attain the total number of unit allowed through the conventional development method due to the amount of available buildable land. Permitting the developer to integrate mixed residential types would create a ‘win/win’ situation because of these significant issues:

- Flexibility within the subdivision maximizes the developer’s profit and ability to provide improvements by providing additional units to sell with the same cost of land and extension of utilities;
- Construction of single-family attached residential units minimizes land disturbance by keeping the disturbed area compact since two units attached would eliminate one (1) side yard for each between the two. Limiting the amount of disturbed land helps improve water quality by reducing the amount of sediment transfer thereby reducing pollution. This notion follows a key practice of Low Impact development; and
- Single-family attached residential creates affordable units for working class families in the community since they sell for 33% less than comparable sized single-family detached structures.

Strategy #1 Implementation Recommendations

Before this strategy can formally become reality a means of regulating this opportunity must be in place. It is highly recommended that a process for this strategy to operate be in place before any consideration of a proposal. Since the Comprehensive Plan is advisory, the process which to permit the integration of duplexes with detached dwellings in future formally planned subdivisions requires formal action by City Council by ordinance amendment. The following are key issues recommended for consideration when developing ordinance provisions to implement *Strategy #1*; it is recommended that *Strategy #1*:



- Be utilized for instances similar to the aforementioned described scenario where a project design cannot yield the maximum number of lots and allowing the mixing of residential types would allow the developer to yield the maximum number of units allowed.
- Be implemented in future formally planned detached subdivisions that will be reviewed by City Staff for compliance with ordinance provisions.
- Utilize administrative review in the site plan review process with specific criteria that must be met to permit the mixed residential types adopted in the ordinance, similar to the Planned Open Space Development ordinance.
- Regulate the number of single-family attached residential units allowed in such a development not to exceed 20% of the total lot yield. The result would be 80% of the lots must remain single-family detached dwellings thereby maintaining a significant level of the City's character in the neighborhood.
- Regulate the minimum lot size for the single-family attached residential units to not exceed 50% of the required lot size for a detached dwelling lot in the underlying zoning district. Doing so would increase the amount of land the potential buyer would have to purchase, thereby reducing the effectiveness of *Strategy #1*.

Other incentives should be explored in order to fully capitalize on this opportunity, but further study is necessary to determine to what level. For example, density bonuses could be used to grant additional lots for subdivisions in exchange for documentation guaranteeing a certain number of units to be sold to low to moderate income families, fixed income families, elderly, empty nesters or other social groups in need of assistance for affordable housing. Again, this is only an example and additional study of what incentives could be implemented to address affordable housing issues.

Conclusion / Recommendation for Committee Formation

While implementing this strategy alone may not solve the issues facing Poquoson instantaneously, it is a strong first step to address the issues. The method will have to be detailed specifically by the Zoning Ordinance in order to be compatible to the landscape of Poquoson. Since no ordinance provisions exist currently, the Comprehensive Plan provides a purpose, intent and recommendations to the establishment of the strategy for the creation of such provisions to be adopted in the Zoning Ordinance. The ordinance should guide property owners/developers and establish requirements such as minimum lot sizes, compatible dwelling types, and other limitations suitable for Poquoson.

In order to meet the goal of the affordable housing section and guide its effort in Poquoson, it is recommended that the City create a committee that analyzes trends, case studies and implementation procedures that have been successful providing compatible affordable housing. A topic the committee should be charged to evaluate is the creation of ordinances that will effectively address the issues listed in this plan. This plan recommends the committee be titled the workforce housing committee or housing committee and should consist of elected or



appointed government official(s), City Staff, citizens and local business leaders in the real estate market. The committee will provide an objective study of these issues and hopefully develop a solution to present to City Council for consideration.

SUMMARY

While residential growth is still occurring in Poquoson today, its pace is significantly slower than past years, especially in comparison to the decade of 1980-1990. In this time period, single-family detached subdivisions were the predominant housing development following the design of suburban sprawl. The suburban layout encompassed large portions of available land, required utility extension and increased demand for services. Today's slower pace of growth indicates that Poquoson is nearing a residential build-out due to decreasing amounts of vacant land and significant environmental encumbrances on the lands available. These factors will force developers to become more creative in design and construction which will more than likely result in proposals with higher densities, such as multi-family housing.

Multi-family housing has primarily been discouraged in the City of Poquoson due citizen reaction to the proposed higher density. A benefit of higher densities is that more dwellings over the same span of land and installation of infrastructure returns more tax revenue with less impact to the environment since it is located in a tighter or compact area. As mentioned previously, many citizens have expressed the need for affordable housing but in a manner suitable for Poquoson. Typically, multi-family housing is used to address housing issues, but the areas zoned for multi-family residential in the City are currently occupied with developments. Eventually, this subject will surface as social needs require attention with a high-demand market attempting to provide attached housing and new proposals will require rezoning or redevelopment.

Since multi-family is highly controversial, the comprehensive plan contains recommendations to meet the goal of diversifying the housing stock, a key tenet to Smart-growth and Sustainable Development, by mixing residential types without increasing density levels or changing the character of the community. This strategy enables the private sector to meet social needs of the community by giving developers of land flexibility for responsible community development.



GOALS, OBJECTIVES, AND STRATEGIES – HOUSING

The following goals, objectives and strategies for housing were developed through public worksessions and comments:

Goals

1. Promote affordable, safe, sanitary, and aesthetically pleasing housing for all Poquoson residents.
2. Encourage open space housing developments; exchanging smaller lot sizes for maximum usable open space including wetlands conservation.
3. Provide opportunities for a variety of housing types and arrangements so that suitable housing will be available to households of a wide range of income levels.
4. Promote appropriate residential development in compatible districts to preserve the overall character of the City.

Objectives

1. Promote the upgrading of housing conditions by encouraging maintenance and upkeep of housing and property by the owner.
2. Provide opportunities for the construction of attached residential and condominiums in appropriate areas as an attempt to address the housing concerns facing Poquoson's citizenry.
3. Identify areas for residential rehabilitation projects.
4. Promote adequate housing opportunities for the physically challenged, elderly citizens, and moderate-income families.
5. Encourage pride in home ownership and promote a sense of community responsibility for neighborhood character.

Strategies

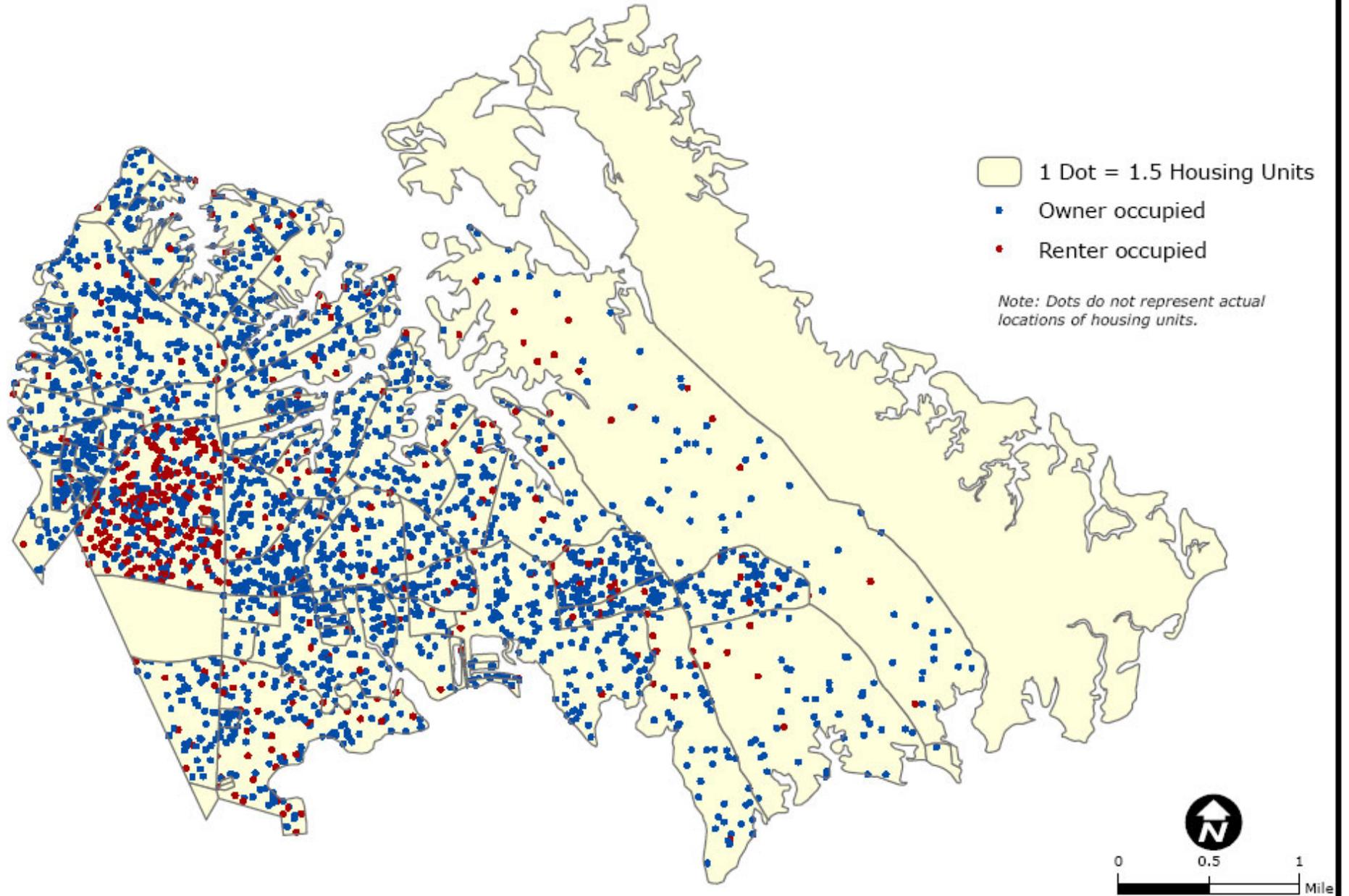
1. Create a committee whose purpose is to address Workforce Housing options for the City of Poquoson.
2. Continue to encourage large lot residential developments for all subdivisions not specifically designed to serve populations with special needs.
3. Utilize federal and state housing subsidies, grants, and loans to the fullest extent possible in order to meet the needs of the elderly and lower income families, and to rehabilitate housing.



-
4. Develop a housing inventory to include the condition, age, and assessed value of homes and use as a monitoring mechanism for future planning for rehabilitation, replacement, and/ or demolition of dilapidated structures.
 5. Provide educational programming to encourage the maintenance and repair of housing to prevent deterioration.
 6. Institute a Home Pride Program to improve and maintain the existing aging housing stock in the City.
 7. Support housing rehabilitation efforts sponsored by local community service and volunteer groups.
 8. Consider offering real estate tax exemptions for substantially rehabilitated, renovated, or replaced homes in the City.



Map 3-1



*Distribution of Owners and Renters
by Census Block*

Map Created by HRPDC GIS Staff, May 2005
Data Source: US Census 2000

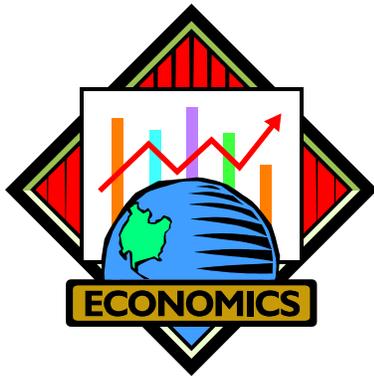


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OVERVIEW

The Economics Element provides an overview of the regional economic situation, the financial status of the City, a discussion of two recent economic development studies commissioned by the Poquoson Industrial Development Authority (PIDA) and associated recommendations for economic development. Poquoson continues to have the highest median income in Hampton Roads, indicative of certain stability and buying power that can sustain the community. However, in order to relieve upward pressure on residential real estate tax rates, it is imperative that the City seeks to increase its ratio of commercial real estate.

The City of Poquoson faces a complex set of opportunities and challenges in its economic development future. The primary market area for the City is growing in population and a recent analysis of Poquoson's retail market found there to be a significant sales gap, with considerable opportunities for new retail development. However, certain hindrances exist for any new economic development that includes environmental restraints, the City's remote physical location and its small population. Given that the City is currently dependent on real estate taxes to provide the majority of its operating budget, any broadening of the tax base will contribute significantly to its future fiscal integrity.

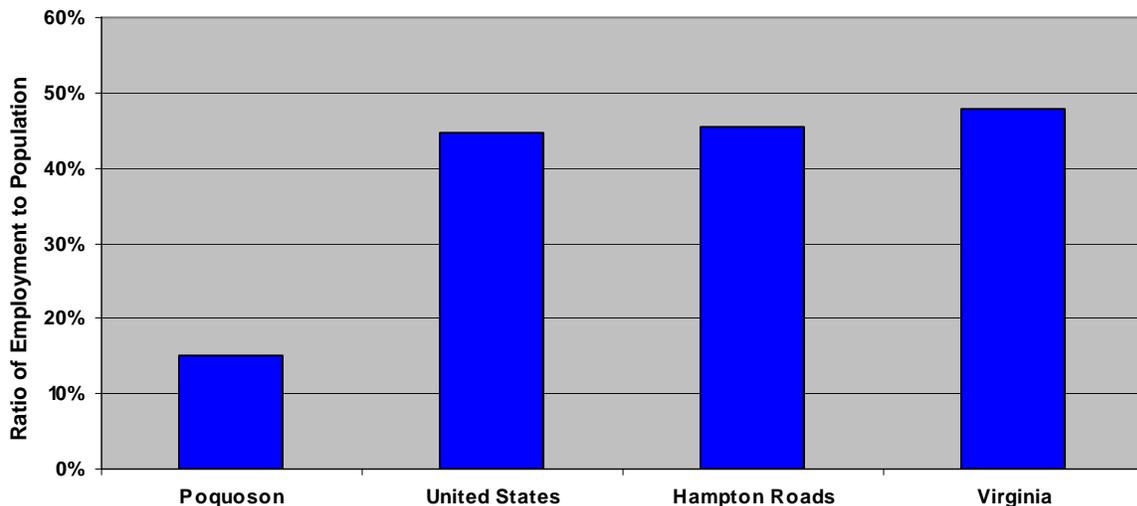
'Broadening the tax base' means developing new commercial properties to diversify the City's sources of revenue. As previously stated the City of Poquoson's main source of revenue is real estate taxes and, in consequence, places much of the financial burden on the individual citizens. Commercial properties broaden the tax base because they are assessed at higher values, due to the inherent use by businesses, and demand less government services than residential properties. Without any diversification of the tax base, real estate taxes will continue to be the main source of revenue for the City. Therefore, tax rates will have a direct correlation with the City's costs of operation and the costs of operation will certainly rise before they fall. It is presumed the citizens have not yet realized the burden of cost due to the higher incomes.



Both Poquoson and the Tabb area of York County have enjoyed steady population growth at rates above the Peninsula average. The majority of this population growth has occurred in the Tabb area, which, due to its proximity to the Big Woods, represents approximately half of the city's potential retail service radius. City retail sales are presently under represented in the areas of restaurant sales, apparel, general merchandise, gifts and novelties. However, the smaller population of this service area is a drawback that forces businesses into York County close to the city boundaries of Hampton and Newport News.

Figure 4-1 provides a comparison of the employment to population ratio in Poquoson to that in Hampton Roads, Virginia and the United States. The significant difference highlights the need for broadening the economic base in the City.

Figure 4-1: Comparison of Employment to Population Ratio for 2003



Sources: U.S. Census Bureau and the Virginia Employment Commission

REGIONAL ECONOMIC SETTING

The Hampton Roads economy has been expanding since the last recession in 1991. The expansion continued through the end of 2000, but slowed in 2001 and 2002. Regional economic activity began accelerating again in 2003 and through 2004. A strong, but slightly reduced growth rate is expected through 2005. The following section compares data on various economic indicators across regional, state and/or national scales.

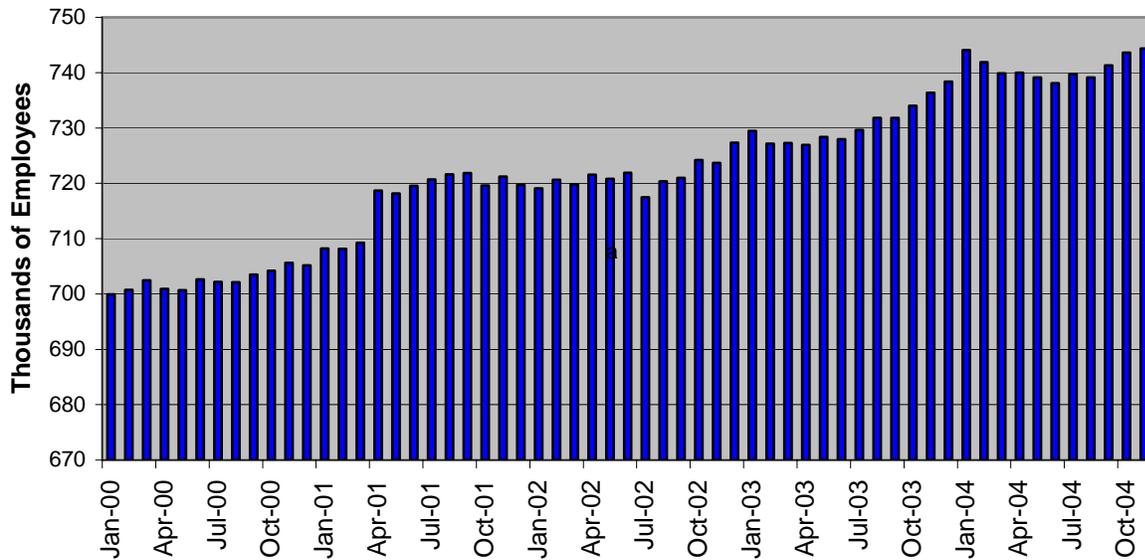


Employment

From 1990 through 2004, National employment grew at an annual average rate of 1.32%. Employment growth in Virginia and Hampton Roads both out-performed the Nation, growing at 1.53% and 1.50% respectively. Virginia’s higher employment growth was due in large part to Northern Virginia’s economic boom, which realized an annualized growth rate of 2.71%. Annualized employment growth in Virginia’s other MSAs was as follows: Bristol, 1.06%; Charlottesville, 1.43%; Danville, 0.52%; Lynchburg, 0.68%; Richmond, 1.30%; Roanoke, 0.83%.

While annual employment figures are valuable in explaining broad economic trends, monthly employment statistics offer a more dynamic view of the regional economy. Deseasonalized employment figures, as illustrated in Figure 4-2, provide a detailed account of how Hampton Roads has fared over the last few years.

Figure 4-2: Deseasonalized Monthly Employment for the Hampton Roads MSA

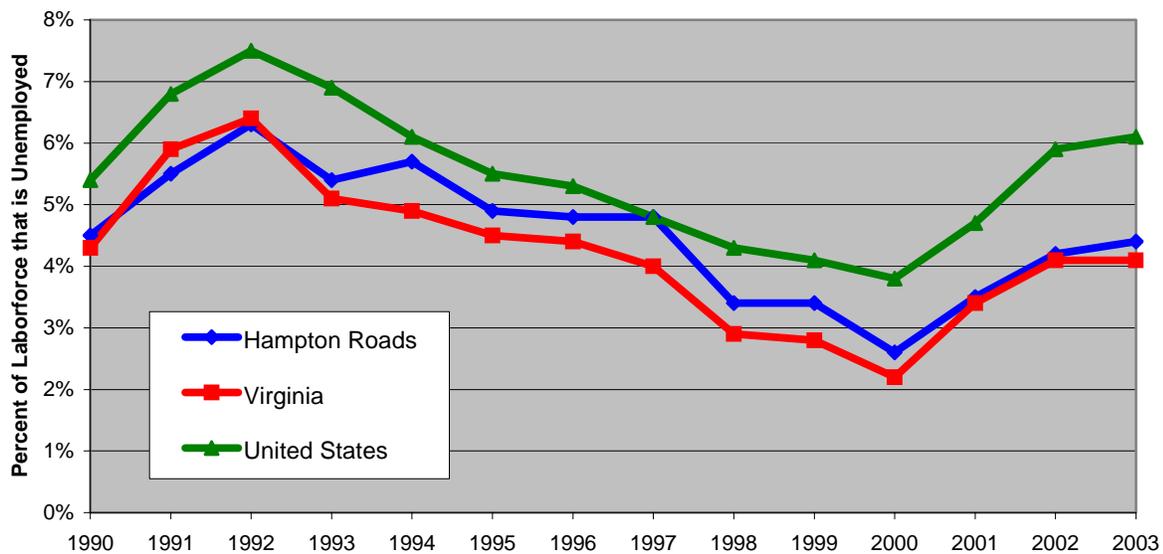


Source: Bureau of Labor Statistics



The unemployment rate in Hampton Roads has historically been lower than the national average. Unemployment figures released by the Bureau of Labor Statistics do not include military employment numbers and, as a result, over-estimate the already low unemployment rate in Hampton Roads. Figure 4-3 illustrates the unemployment rates on the local, state, and national levels. As is clearly evident in the graphic, state and local unemployment rates tend to reflect the national unemployment trends.

Figure 4-3: Local, State, and National Unemployment Rates

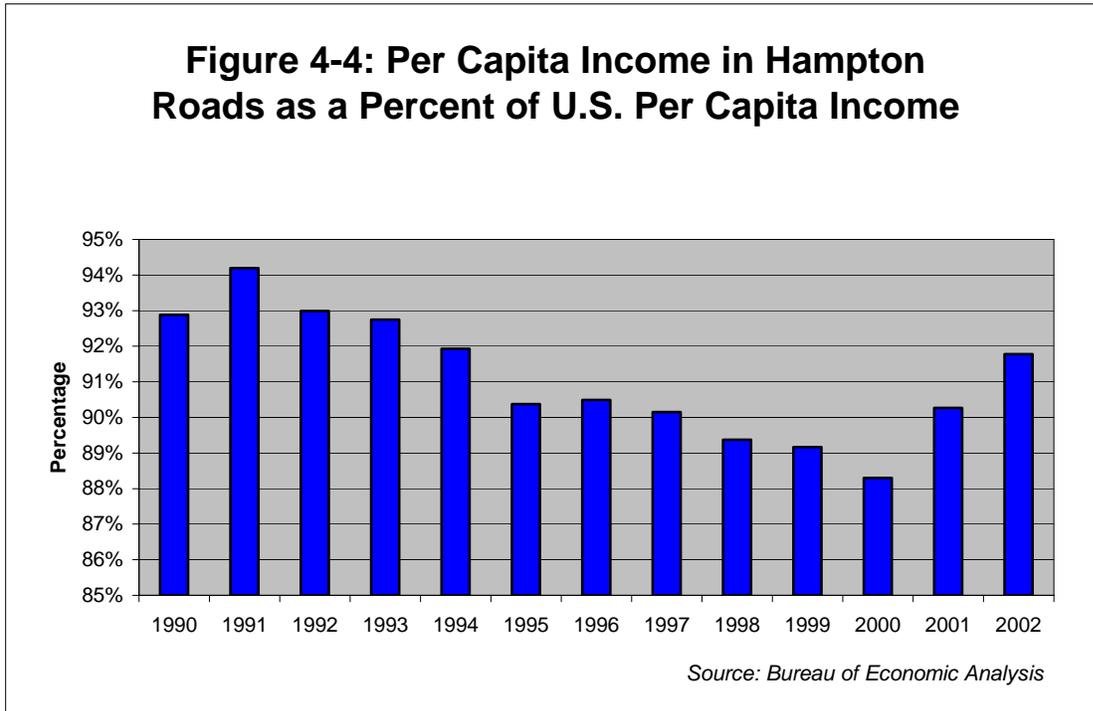


Source: Bureau of Labor Statistics

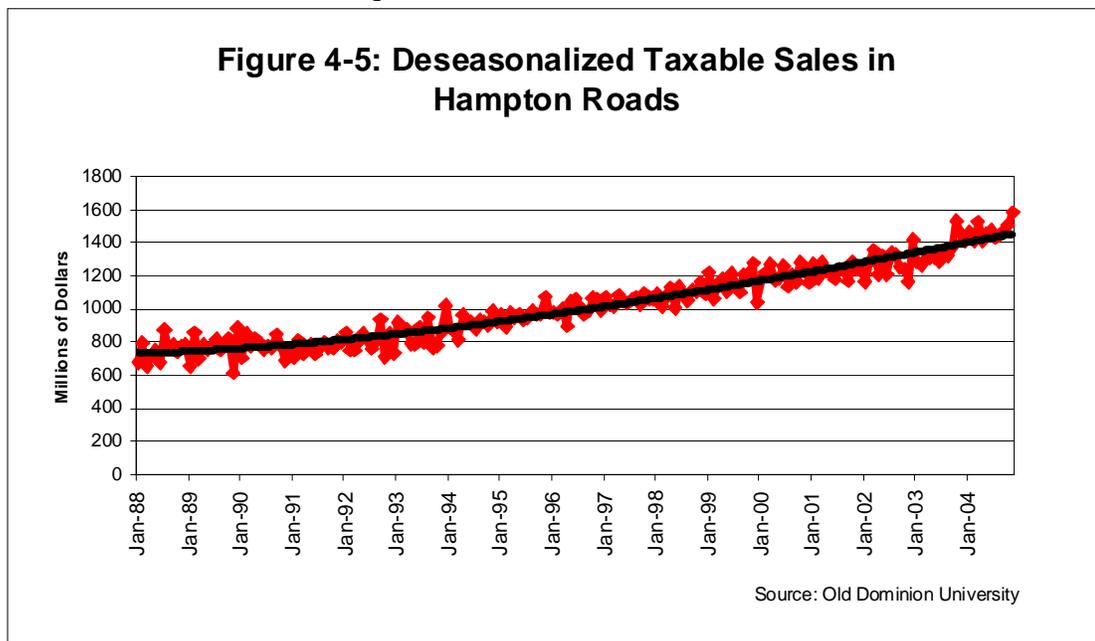
Income, Retail Sales and Real Estate

Per capita incomes in Hampton Roads have historically been lower than the national average, as is shown in Figure 4-4. Relative to the nation, per capita incomes in Hampton Roads were on a downward trend from 1991 through 2000. The recent increase in military spending coupled with a soft national economy has helped to decrease the income gap over the past couple of years. Despite the recent increase, incomes in Hampton Roads remain much lower than the national average. In 2002 Hampton Roads per capita income was \$28,365 as compared to the national per capita income of \$30,906.



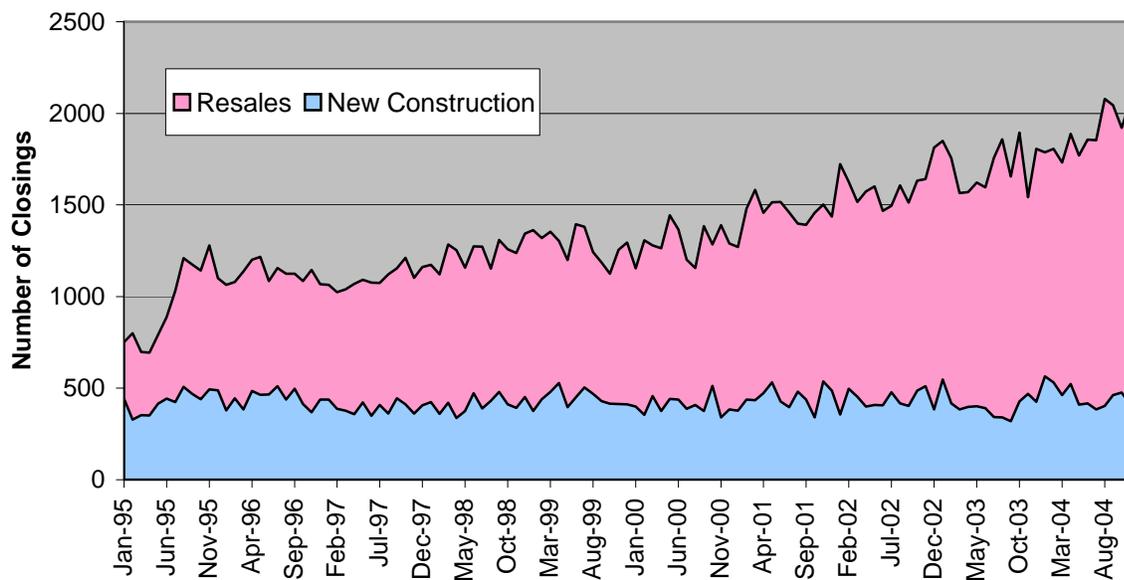


Regional retail sales continue to grow in Hampton Roads, as shown in Figure 4-5. Over the past ten years, regional taxable sales have increased by an average of 5.12% per year. Local sales now account for 20.3% of the state total, sixty-six percent of which comes from the Southside. Taxable sales figures for 2004 are as follows: Hampton Roads - \$16.5 billion, Peninsula - \$5.2 billion, Southside - \$11.3 billion, Poquoson - \$39 million.



Home sales in Hampton Roads have been steadily increasing over the past few years, growing at an annual average rate of 6.5%. This strong growth rate is a direct result of the escalating number of housing re-sales, as is illustrated in Figure 4-6. Low interest rates have played an important role in the high number of housing re-sales, by lowering the mortgage rates and increasing the value of real estate, providing a stimulus for both housing sales and purchases. While new home sales have remained relatively constant, they continue to play an important role in the economy by providing a strong and consistent employment base.

Figure 4-6: Home Sales in Hampton Roads



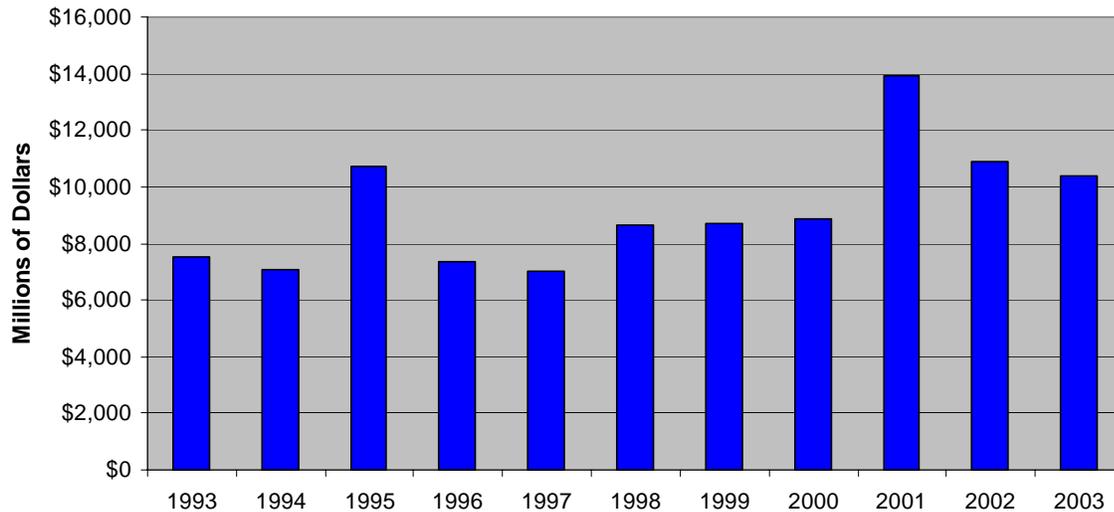
Source: Rose and Womble Realty

Military

The military plays a central role in the Hampton Roads economy, comprising more than 11.7% of the region's employment. With 114,992 people employed in the military, Hampton Roads has one of the largest concentrations of military personnel in the world. Figure 4-7 shows Department of Defense expenditures in Hampton Roads for the period 1993 – 2003. These strong ties to the Department of Defense make Hampton Roads especially sensitive to changes in the defense budget. The decline in defense expenditures from 1987 through 1998 softened the local economy, while the more recent increase in military expenditures helped to shield Hampton Roads from the last recession. While forecasting future defense expenditures in Hampton Roads is made especially difficult by the nature of the federal budget process, there is general consensus that the region will likely experience cuts in defense spending in the near term.



Figure 4-7: Department of Defense Expenditures in Hampton Roads



Source: Consolidated Federal Funds Report

Tourism

Tourism in the United States is a multi-billion dollar industry with foreign and domestic tourist expenditures comprising 5.9 percent of gross domestic product. Tourism is the third largest employer in Virginia, making it a critical component of the state's economy. The industry has expanded more than 47% from 1994 to 2002. In 2002, the economic contribution of tourism was \$14.1 billion, one of the largest travel markets in the nation. On an average day in Virginia, travelers spend \$35.3 million on lodging, meals, gasoline, shopping, transportation, admissions, and other services. Travelers contribute \$652 million in taxes to the state coffers and \$413 million to local governments.

With five of the top ten State attractions, the local economy relies heavily on the tourism industry. In Hampton Roads, local travel taxes totaled \$85.3 million in 2001. These tax revenues have helped to finance the construction of local schools, libraries, roads, parks and other public facilities. Travel expenditures in area communities in 2001 were as follows: Virginia Beach, \$708.8 million; Norfolk \$446.0 million; Williamsburg, \$368.0 million; James City County, \$249.3 million; Newport News, \$164.5 million; Chesapeake, \$153.1 million; Hampton, \$136.3 million; Gloucester County, \$27.4 million; Isle of Wight County, \$19.5 million; Franklin, \$8.8 million; Southampton County, \$8.7 million; Surry County, \$7.3 million; and Poquoson, \$2.4 million. These numbers are expected to increase respectively for each locality in FY 2007 due to the Jamestown 400-year celebration of the settling of America.



Regional Summary

After experiencing a slight recession and a mild recovery, the U.S. economy appears settling into a period of moderate, yet solid growth. Interest rates are expected to rise, cooling off the housing market; however, increasing employment will reduce the jobless rate. Historically, the regional business cycle tends to follow that of the nation. The largest threat to the local economy is with respect to potential changes in defense spending. If current defense expenditures are maintained, the local economy will continue to grow.

POQUOSON TRENDS AND CURRENT STATUS

Several trends can be identified from the 2000 U.S. Census data. Total population and the total number of housing units within the City of Poquoson are steadily increasing. About 62 percent of the population is in the working age cohort of 15 years to 59 years old. Over 78 percent of Poquoson residents are traveling outside of Poquoson to work. On average, Poquoson residents are commuting 24 minutes. Poquoson claims the highest median household income in Hampton Roads (\$60,920), York County has the second highest median income (\$57,956) and James City County has the third highest (\$55,594).

The following data begins to provide some insight into the economy in and around Poquoson. Additional employment opportunities are needed within the city limits to provide employment for current citizens as well as attract new residents to the City.

Current Status

Population

When analyzing Poquoson's economic development potential, it is important for the City to include the demographic impacts of surrounding communities. Political boundaries have little or no impact on economic markets. For this reason, Poquoson's Economic Development market includes the Tabb area of York County. Tabb has been the fastest growing area on the Peninsula and the area's immediate proximity to the Big Woods make it a natural part of Poquoson's potential retail service area.

Income

Poquoson's population, while small, is the most affluent in the entire Hampton Roads region as previously stated in Chapter 2: Population. As can be noted in Tables 2-14 & 2-15 in Chapter 2, Poquoson and York County's median family incomes exceed that of the Hampton Roads region by 70 and 73 percent, respectively. This suggests a market for a range of upscale commercial activity that can be supported by an affluent population with significant discretionary income.



Retail Development

Both Poquoson and the Tabb area of York County have enjoyed steady population growth at rates above the Peninsula average. The majority of this population growth has occurred in the Tabb area, which, due to its proximity to the Big Woods, represents approximately half of the city's potential retail service radius. City retail sales are presently under represented in the areas of restaurant sales, apparel, general merchandise, and gifts and novelties. These opportunities, combined with Poquoson's and Tabb's high median family incomes, suggest a market for upscale, "niche" retail development. Such upscale development can be supported by relatively affluent populations with sizable discretionary income such as is found in Poquoson and Tabb. However, the smaller population of this service area is a drawback that forces businesses into York County close to the city boundaries of Hampton and Newport News.

The challenge for Poquoson is how to capture a share of this market, preferably by complementing, rather than competing with the retail mega-centers. Poquoson is too far from main thoroughfares to compete directly with adjacent areas, and must seek a way to establish its own niche as a high-end, specialty retail market while attempting to plug the leak of resident retail sales outside of the City.

Fiscal Considerations

Residential real estate taxes, while the largest source of revenue to Virginia localities, are but one potential revenue source. A community's relative ratio of commercial real estate tax revenues is significant in that it is commercial enterprises that typically return local tax revenues to the community in excess of the cost of the business's public service demands. This becomes particularly clear when one looks at the cost of public education that is necessitated by residential development as discussed above. A clear challenge to the City of Poquoson is to increase the ratio of commercial real estate tax revenues in order to partially offset the intense service demands of the residential sector.

Military and Department of Defense

The federal government is a significant employer for residents in the City of Poquoson as well as other localities on the Peninsula and in the Hampton Roads region as a whole. The Hampton Roads region is one of the largest areas of military buildup on the east coast. Not only does the Hampton Roads region house military personnel, but the bases also employ government contractors and civil servants. NASA and Langley Air Force Base are approximately 3 miles outside of the City's corporate limits.



Transportation Network

The City of Poquoson is connected to Interstate 64 by Virginia Route 171 (Victory Boulevard) via a new interchange in the Kiln Creek area that was opened in 1990. This road is a four-lane, divided highway from the Interstate to Route 134. As noted in the Transportation Element of this Plan, the Virginia Department of Transportation has designated Route 171 as limited access through York County and proves to be a hinderance to access to the Big Woods property because it is located on Route 171 (Victory Boulevard), 4 miles from I-64. The City is connected to the City of Hampton, NASA and Langley Air Force Base via Wythe Creek Road. NASA and the Langley Research and Development Park are located approximately 3 miles from the Big Woods property. Virginia Route 134 (Magruder Boulevard) is also a four-lane divided highway that connects York County to Interstate 64 in Hampton.

Clearly, the City's location off the interstate is an obstacle that must be considered in any economic development effort. This location, combined with the residential character of much of the City suggests that companies that rely on a large amount of heavy truck traffic, such as large manufacturers and wholesale trade and distribution establishments are not likely to be attracted to the City. Along with the fact that Victory Boulevard is only a two-lane road from Route 134 (Magruder Boulevard) to Rt. 172 (Wythe Creek Road); the City's accessibility is reduced especially during peak traffic hours due to congestion.

Waterways

Messick Point is located on the Back River. Channel depths in what is known as the Front Cove average approximately 2-3 feet at mean low water. Channel depths in Back Cove average less than 2 feet at mean low water. Without additional dredging, these channel depths are insufficient to handle anything but shallow draft vessels. The City recently had the U.S. Army Corps of Engineers dredge a portion of Messick Point to a depth of six feet, primarily to benefit the local seafood industry. Redevelopment of the City's marinas would greatly benefit the area and hopefully encourage economic growth. Poquoson's waterways are an asset and should be protected, maintained and accessible for both commercial and recreational uses.

Airports

The City of Poquoson shares a disadvantage with the entire Hampton Roads region with its lack of first class air service. Even with the new terminal at Newport News/Williamsburg International Airport, direct air service is unavailable to all but a few East Coast markets. This lack of first class air service has been documented as a primary impediment in the attraction of new, white-collar employers to the region. Obviously, there is little the City of Poquoson can do to rectify this situation, and this must be viewed as a development constraint.



Utilities

Newport News Waterworks has constructed a new 16-inch public water main along Victory Boulevard simultaneously with the construction of the new City Hall/Library Complex in the Big Woods area. This completed water line has sufficient capacity to serve all of the Big Woods property, including the General Commercial and Research and Development Zoning Districts. The City of Poquoson has constructed a new 16-inch sanitary sewer gravity line along Victory Boulevard from the new pump station located near the McDonalds restaurant to the new City Hall/Library Complex. This sewer line has sufficient capacity and depth to service the entire Big Woods property, though it stops just short of the Research and Development Zoning District.

Environmental Constraints

As with the entire Lower Peninsula, the presence of non-tidal wetlands may serve as a development constraint within the City. These wetland and Chesapeake Bay Preservation issues will likely be less of a concern in the Messick Point area where most of the uses contemplated are waterfront-dependent.

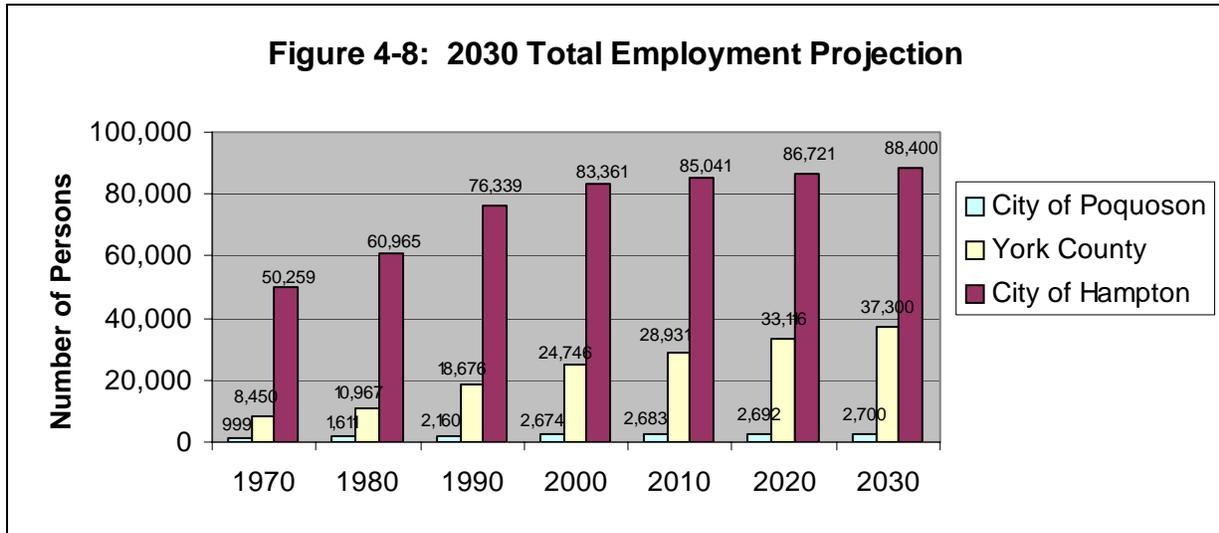
With regard to the Big Woods area, it is likely that the presence of non-tidal wetlands will serve as a development constraint. These wetland areas have not been mapped, and an accurate wetlands inventory needs to be completed to determine the extent to which development will be constrained. With proper site planning, much of these wetland areas can be incorporated into required open space, thus minimizing the amount of acreage actually lost to development.

Employment, Unemployment & Industry

Employment Projections

As shown in Figure 4-8, sustained employment growth was experienced in Poquoson and adjacent localities between 1970 and 2000. The Hampton Roads Planning District Commission (HRPDC) predicts that this trend will continue for each locality, albeit on different scales. Employment in York County is predicted to increase by 51 percent, from 24,746 employees to 37,300. The City of Hampton is projected to increase by nearly 6 percent, from 83,361 to 88,400 employees. In contrast, employment within the City of Poquoson is projected to increase by less than 1 percent, from 2,674 employees to 2,700 in 2030.





Sources: Bureau of Economic Analysis, Hampton Roads Planning District Commission, 2030 Economic Forecast

Employment by Industry

Figure 4-9 identifies employment by industry for 2003 within the City of Poquoson. Employment is accounted for by place of work regardless of place of residence. (Table 2-19 in Chapter 2 describes the occupations of Poquoson residents working both within and outside of the City.)

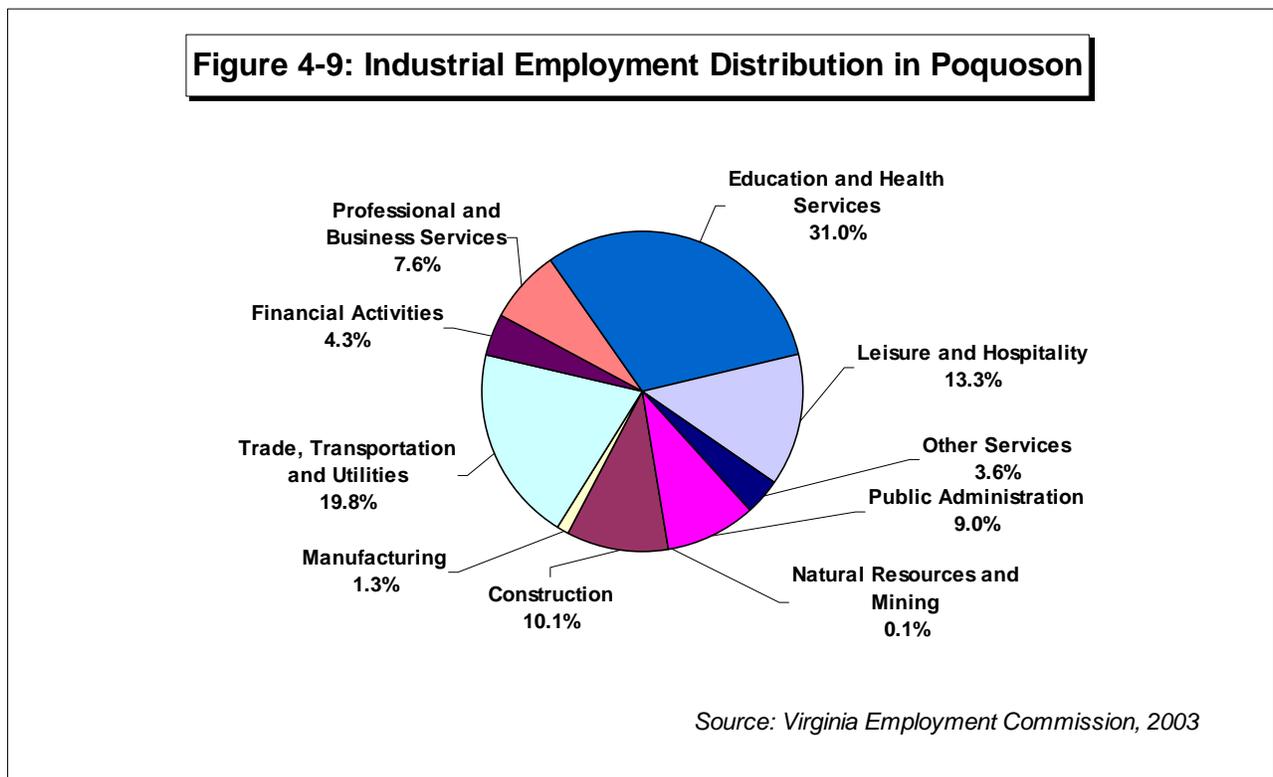
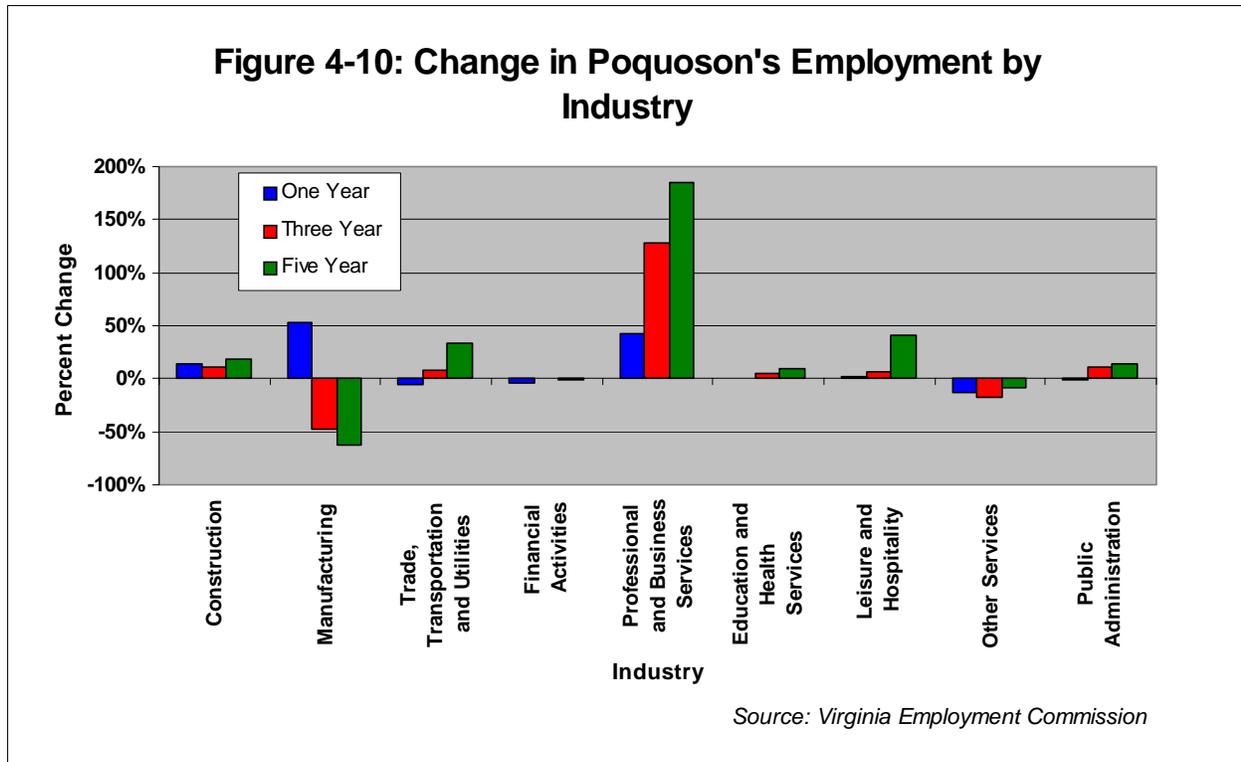


Figure 4-10 illustrates the percent change in employment by industry between 1998 and 2003. The service industry has grown significantly in the past decade while manufacturing has declined considerably. According to data provided by the Virginia Marine Resources Commission, the fishing industry is also declining. Total commercial landings of finfish and shellfish have decreased about 11% in Virginia, down from 84,126,039 pounds in 1998 to 75,084,658 pounds in 2003.



Unemployment

One indicator of a region's economic health is unemployment. Table 4-1 shows unemployment trends in Poquoson between 1999 and 2004. The table also presents the 2004 figures for the State of Virginia.

Table 4-1: Labor Force and Unemployment							
	City of Poquoson						Virginia
	1999	2000	2001	2002	2003	2004	2004
Civilian Labor Force	6,112	6,135	6,145	6250	6398	6,516	3,843,394
Employed	5,977	6,030	6,003	6108	6222	6,360	3,711,336
Unemployed	136	105	142	142	176	157	132,058
Unemployment Rate	2.22%	1.71%	2.30%	2.28%	2.75%	2.41%	3.44%

Source: Bureau of Labor Statistics



Table 4-2 reflects unemployment rates over the past ten years for the City of Poquoson as compared to that of the Peninsula, Hampton Roads and the state as a whole.

Table 4-2: Unemployment Rates, Years 1996-2006				
Year	Poquoson	North HR	HR MSA	Virginia
1996	3.0	4.6	4.8	4.3
1997	2.9	4.2	4.5	3.7
1998	2.2	3.3	3.4	2.8
1999	2.1	3.3	3.3	2.7
2000	1.8	2.4	2.5	2.3
2001	2.4	3.2	3.3	3.2
2002	2.7	4.3	4.2	4.2
2003	3.1	4.4	4.3	4.1
2004	2.9	4.2	4.2	3.7
2005	2.8	4.1	4.0	3.5
2006	2.3	3.3	3.3	3.0

Source: Virginia Employment Commission (VEC) 1996-2006.

Clearly shown in Table 4-2, unemployment has not been a problem in Poquoson. The unemployment rate for the City of Poquoson’s residents has consistently been significantly below that of the region and state, maintaining almost a one percent (1%) difference at all times with the region and state. Data from 1996-2006 shows an unemployment rate consistently at or below three percent (3%). With this data, Poquoson can be considered to be essentially at full employment.

Major Employers

The majority of Poquoson residents (78%) do not work within the City of Poquoson. It is likely that many Poquoson residents work at the NASA Langley Research Center that is adjacent to the City’s border and employs nearly 2,500 people according to the Hampton Roads Economic Development Alliance (HREDA). Langley Air Force Base is also in close proximity to the City and likely employs many Poquoson residents. Northrop Grumman/Newport News Shipyard is located on the Peninsula and employs approximately 18,000 workers. A significant number of residents likely work at the shipyard also.

The Virginia Employment Commission (VEC) has a list of the top employers in Poquoson from the 2003 Covered Employment and Wages. However, the exact number of employees working at each establishment is not disclosed, only a range is provided. Table 4-3 details the top 20 employers according to the VEC.



Table 4-3: Top Employers in Poquoson

Employer	Range of Employees	Employer	Range of Employees
1. Poquoson City Public Schools	250 to 499	11. Eckerd Corporation	20 to 49
2. City of Poquoson	100 to 249	12. Playtime Child Care	20 to 49
3. Farm Fresh	50 to 99	13. Poquoson Veterinary Hospital	20 to 49
4. Food Lion	50 to 99	14. McLellan Builders	20 to 49
5. McDonald's Restaurant	20 to 49	15. After 5 Plumbing Inc.	20 to 49
6. Dominion Village at Poquoson	20 to 49	16. The Crabcake House	20 to 49
7. Pizza Hut	20 to 49	17. Islander Hardware & Sporting Goods	20 to 49
8. Poquoson Discount Pharmacy	20 to 49	18. BriarPatch	10 to 19
9. Stephen's Office Supply	20 to 49	19. Mare's Exterminating Co LLC	10 to 19
10. J & J Kids & Company	20 to 49	20. Resurfaced By US Inc	10 to 19

Source: Virginia Employment Commission, 3rd Quarter 2006, Top 50 employer listing for City of Poquoson.

Gross City Product

Gross City Product (GCP) is a measure used to evaluate municipal economic growth. GCP can be defined as the value added (gross output) in production by the labor and property located within a city. In 2002, the total GCP of Poquoson was estimated to be \$106.5 million. In comparison, York County's GCP was \$1.207 billion and Hampton's GCP was \$4.80 billion. As noted in Table 4-4, real estate was the largest contributor to the Poquoson's GCP.

Table 4-4: Poquoson's Top 10 Industries

Industry	Total Value Added*
Real Estate	\$10.37
Food and Beverage Stores	\$5.06
Monetary Authorities and Depositories	\$3.25
Wholesale Trade	\$3.17
Food Service and Drinking Places	\$2.80
New Residential 1-unit structures	\$2.51
Doctors and Dentists	\$2.17
Commercial and Institutional Building	\$1.96
Miscellaneous Store Retail	\$1.75
Automotive Repair	\$1.73
Others	\$71.78
Total	\$106.55
*Millions of dollars	

Source: Implan



Retail Sales

Retail establishments are typically the highest generators of local tax revenues of any type of commercial activity on a per acre basis. This is because 1 percent of all retail sales within a community revert to the locality as its share of the 4.5 percent state sales tax. Restaurants and hotels are even more significant local tax generators due to the ability of cities in Virginia to levy meals and lodging taxes above and beyond the state sales tax. The rationale for these types of taxes is that the burden of taxation typically falls upon tourists and other non-residents, rather than on the City’s populace. While clearly the case with hotels and motels, this case can only be made for meals tax revenues in areas that cater to a large number of tourists or non-residents. An example would be the entertainment districts of Ghent in Norfolk or the greater Williamsburg market.

The under-representation in restaurant sales is particularly noteworthy in light of the affluent nature of Poquoson’s populace and the potential impact of the meal tax referenced above. Given Poquoson’s location, the City must create for itself an image as a destination point that will draw residents of neighboring jurisdictions as well as Poquoson residents.

Compared to adjacent localities, Poquoson has a relatively low level of retail sales. Table 4-5 details the historical patterns of retail sales in each locality on the Hampton Roads Peninsula.

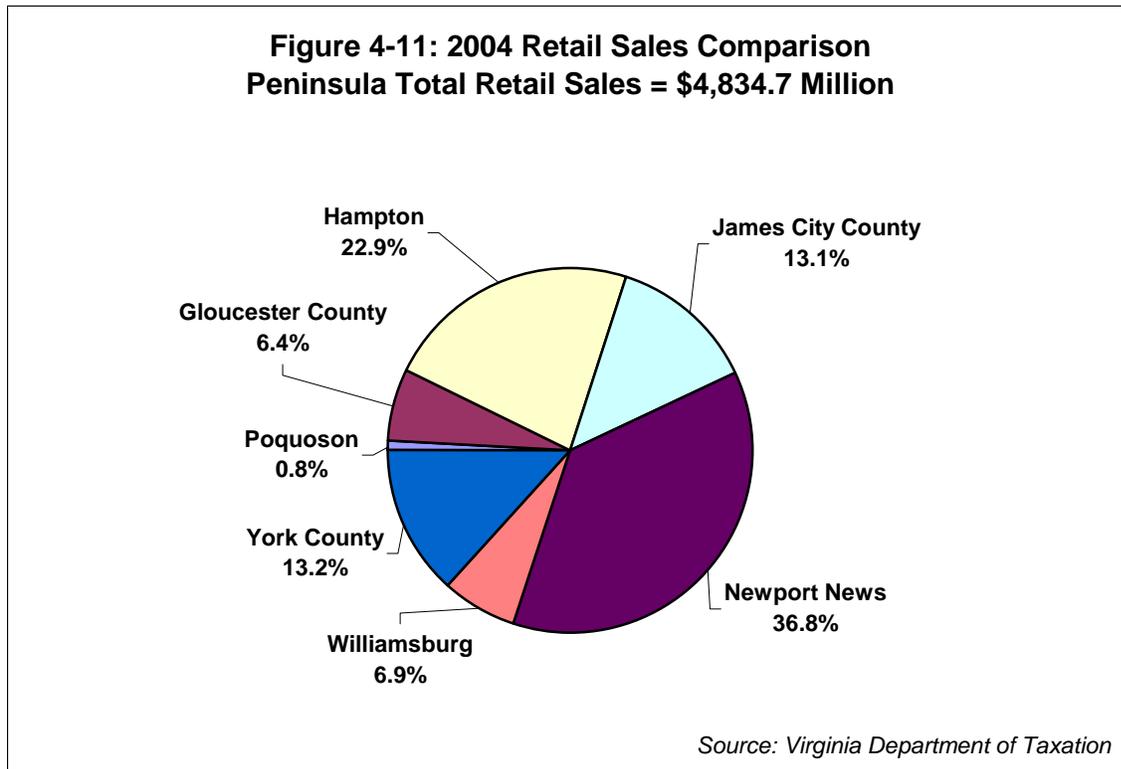
Table 4-5: Retail Sales on the Peninsula (millions of dollars)

	1980	1990	1999	2000	2001	2002	2003	2004
Poquoson	6	24.2	31.4	32.2	34.6	37.8	38	39.0
Gloucester County	57.3	126.5	201.8	220.8	223.9	243.8	275.1	330.9
Hampton	501.9	937.7	1,107.40	1,072.20	1,062.60	1,072.40	1,105.90	1179.7
James City County	118.9	328.3	607.3	644.1	638.7	644.3	639	677.8
Newport News	430.9	873	1,419.70	1,585.50	1,618.10	1,724.90	1,808.90	1897.1
Williamsburg	153	300.7	336.3	326.8	335.1	353.6	349.5	354.1
York County	78.4	227.6	441.1	456.9	461.4	500.6	618.2	683.1
PENINSULA	1,346.40	2,818.00	4,145.00	4,338.40	4,374.30	4,577.60	4,834.70	5161.5

Source: Virginia Department of Taxation



Poquoson's \$39 million in retail sales accounted for less than 1% of the retail sales on the Peninsula in 2004 as shown in Figure 4-11. Residents generally shop in the surrounding cities and counties.



CITIZEN COMMENT

During the Comprehensive Plan Planning Process, two (2) surveys were conducted by the City of Poquoson in 2004 and 2006. Of those questions pertaining to economic development and commercial land use; the following statements summarize citizen comments received during the public input sessions and citizen opinion surveys:

2004 Survey

- 64% of the respondents stated that 10% or less of their family purchases were made in Poquoson.
- The tax rate was the top answer as a reason to move from Poquoson.
- Office/professional land use was the 2nd highest priority behind single family homes.



- Top 3 responses for types of retail shops desired for Poquoson were:
 - Upscale restaurants
 - Clothing
 - Larger Hardware store
 - Variety/ Department store was a close 4th place
- Top 3 responses for types of services desired for Poquoson were:
 - Doctors
 - 24 Hour Emergency Clinic
 - Indoor Recreation/Exercise facilities were the top 3, 4, and 5 answers.
- The respondents of the survey were unsure of whether research & development/light industrial uses were needed splitting their responses equally.
- The number 1 answer for types of development & redevelopment along waterfront properties was restaurants, followed by marinas and boardwalks, respectively.

2006 Survey

- 61% of the respondents stated that 10% or less of their family purchases were made in Poquoson.
- The number 1 answer for types of development & redevelopment along waterfront properties was restaurants, followed by boardwalks and marinas, respectively.
- The tax rate was the top answer as a reason to move from Poquoson.
- 75% of the respondents did not want an increase in taxes (real estate or personal property) to fund improvements to public facilities or city services.

GOALS, OBJECTIVES, AND STRATEGIES

Goals

1. Promote economic development in order to enhance the quality of life for all citizens of Poquoson.
2. Reduce upward pressure on tax rates by diversifying tax and employment base.
3. Encourage the diversification of the City's tax and employment base through the attraction and retention of clean, environmentally sensitive professional and commercial land uses.



Objectives

1. Expand white collar and technical employment in order for our highly educated and trained citizens, including recent graduates, to find employment in the City.
2. Expand the City's base of capital-intensive business and industry both to create higher-paying jobs and to generate the tax revenues to help meet the public service needs of the City's growing population.
3. Work toward the ultimate goal of providing a real property tax ratio of 40% non-residential property to 60% residential property in order to provide a desirable balance at the eventual build-out of the city.
4. Provide increased shopping opportunities for City residents.
5. Enhance Poquoson's commercial development image throughout the region.
6. Foster a business friendly climate.

Strategies

1. Encourage property owners in the Big Woods to jointly market their property for commercial and professional development opportunities.
2. Ensure commercial and professional business developments are consistent with the City's Comprehensive Plan.
3. Consider creating a consortium of local business owners to promote the local, existing business community in Poquoson.
4. Analyze and revise zoning districts to promote efficient mixed-use commercial and professional business developments where appropriate.
5. Support the development of necessary telecommunications facilities in the City to serve both the educational and professional/commercial communities.





INTRODUCTION

Prior to developing strategies regarding economic development, it's important to assess the City's financial trends. Each year the City of Poquoson Finance Department prepares a five-year financial trend analysis. This report contains a series of multi-year trends that depict the current financial health of the City of Poquoson. The system used in assessing financial health is based upon the Financial Trend Monitoring System, developed nationally by the International City Management Association, the Government Finance Officers Association, and the accounting firm of KPMG Peat Marwick. The Financial Trend Monitoring System is a practical approach for monitoring the ability of a locality to pay its way on a continuing basis by identifying the factors that affect financial conditions and arranging them in a rational order so that they can be more easily analyzed. By pulling together pertinent information from the City's financial reports, mixing this information with the appropriate economic and demographic data, a series of indicators can be generated that, when plotted over time, can be used to monitor and predict changes in financial conditions.

FINANCIAL TREND ANALYSIS

The *Financial Trends Analysis 1996 - 2005* is presented here to show some of the trends over time. Much of the following data is presented in 1996 dollars as well as current dollars. The intent is to take inflation out of the numbers in order that the real change, if any, will be more apparent. No single statistical index precisely measures inflation in a given locality. The report uses the National Consumer Price Index (CPI) because it is the index most widely understood by the public at large and because it is historically consistent from year to year. Due to the date of the information used in this section, it is recommended that this chapter be updated with current numbers.

Similarly, data is also presented on a per household basis because as revenues grow and additional expenditures become necessary as a result of population growth, the underlying trend is most important. Household estimates from year to year are not precise, but are derived from a combination of U. S. Bureau of Census information, the University of Virginia Center for Public Service and the City of Poquoson Planning Department. Therefore, as is the case with the estimates for inflation, no single year's data should be viewed in isolation. The numbering for the tables and figures shown have been modified from the original Financial Trends Analysis document to remain consistent with the Comprehensive Plan format. The factors used in the analysis are shown below:

Table 4-6: Factors Used in Analyzing Trends



Year	Consumer Price Index	Annual Increase in CPI	Population	Housing Units
1996	100.0	3.3%	11,341	4,113
1997	103.3	1.7%	11,397	4,159
1998	105.1	1.6%	11,453	4,207
1999	106.7	2.7%	11,509	4,246
2000	109.6	3.4%	11,566	4,300
2001	113.3	1.6%	11,694	4,349
2002	115.2	2.4%	11,845	4,418
2003	117.9	1.9%	12,076	4,489
2004	120.2	3.3%	11,600	4,534
2005	124.1	3.4%	11,900	4,568
% Change	24.1%		4.9%	11.1%

CPI Change is December - December. 2005 change estimated by the Kiplinger Washington Letter. 2000 Population and housing unit's figures from U.S. Census. 2001 - 2005 Population estimated by the City of Poquoson's Planning Department.

Population and Growth

Population and number of households have increased at a steady pace since 1996. Population changes can affect governmental revenues since many taxes are collected on a per capita basis. Population change can also create pressures for new capital outlay and higher levels of service.

The following table indicates Poquoson's building permit activity over the past several years. As indicated in Table 4-7, the majority of building permits issued have been residential. The number of residential building permits increased at a steady pace from 1999 to 2003. The years of 2004 to 2006 represents a dynamic real estate market that produced only 6 residential building permits in 2004 and then a staggering increase in 2005 and 2006, with 126 and 103 residential permits respectively.

Table 4-7: Building Permits Issued in Poquoson

Year	Residential	% Change from Previous Year	Nonresidential	% Change from Previous Year
1999	42	45.7%	0	+33.3%
2000	46	+9.5	5	+500.0
2001	27	-41.3	6	+20.0
2002	66	+144.4	0	-100.0
2003	54	-18.2	3	+300.0
2004	6	-88.9	2	-33.0
2005	126	+2,000.0	5	+150.0
2006	103	-18.3	6	+20.0

Household Income



Household Income is an important measure of a community's ability to pay for the services provided by the local government. The higher the income, the greater the ability to generate revenue to pay for the desired level of services. For example, a higher income can translate into greater spending power within the community, which translates into greater local sales tax, and meals tax revenue, as well as a greater base of personal property value. In addition, if income is evenly distributed, a higher-than-average household income will usually mean lower dependency upon governmental services, particularly in the health and welfare area. Bond rating firms also use such an indicator as an important measure of a locality's ability to repay debt.

The following table indicates that Poquoson has the highest median household income in the Hampton Roads area for 2003, at \$67,664, which is 35% above the Virginia average of \$50,028.

Table 4-8: Median Household Income

	2001	2002	2003
Poquoson	\$64,011	\$66,985	\$67,664
York County	\$60,729	\$62,965	\$65,302
James City County	\$57,352	\$59,483	\$62,271
Chesapeake	\$50,692	\$52,336	\$53,996
Virginia Beach	\$49,742	\$50,317	\$50,257
Gloucester County	\$45,640	\$46,247	\$47,137
Suffolk	\$41,623	\$43,875	\$46,352
Hampton	\$39,005	\$39,078	\$39,795
Newport News	\$36,850	\$37,323	\$38,334
Williamsburg	\$36,463	\$36,123	\$34,495
Portsmouth	\$32,858	\$33,354	\$34,413
Norfolk	\$24,640	\$30,648	\$31,933
Virginia	\$48,130	\$48,224	\$50,028

Source: University of Virginia Center for Public Service, *County & City Estimates for Median Household Income for Virginia*: 2003. Latest date available.

The above noted factors suggest the following:

- Population and households have been increasing at a manageable pace for the last several years.
- Building permits have primarily been residential and the majority of building permits are for new construction. The biggest impact that new residential construction has on City services is in the School system as many of the new residents have school age children.
- The growth has had little strain on infrastructure and sewer systems since developers have paid for the improvements.



- Poquoson continues to have the highest median income in Hampton Roads. This indicates certain stability and buying power that can sustain the community in the present and short-term future. The addition of commercial properties are critical for future costs and services.

Total Revenues

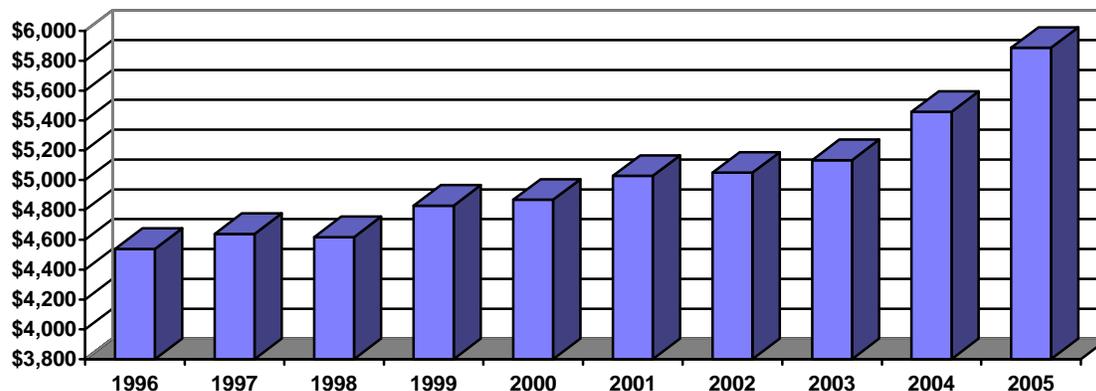
After adjusting for inflation, total revenue received per Poquoson household has increased 29.7% since 1996, or an average of 3.0% per year.

Table 4-9: Total Revenue Per Household- Poquoson

Year	Revenue in Current Dollars	Revenue Per Household	Revenue in 1996 Dollars	Revenue Per Household
1996	\$18,669,553	\$4,539	\$18,669,553	\$4,539
1997	\$19,930,849	\$4,792	\$19,294,142	\$4,639
1998	\$20,410,930	\$4,852	\$19,428,601	\$4,618
1999	\$21,879,704	\$5,153	\$20,498,707	\$4,828
2000	\$22,944,724	\$5,336	\$20,931,358	\$4,868
2001	\$24,783,411	\$5,699	\$21,865,284	\$5,028
2002	\$25,687,323	\$5,814	\$22,305,870	\$5,049
2003	\$27,172,586	\$6,053	\$23,042,593	\$5,133
2004	\$29,733,770	\$6,558	\$24,744,357	\$5,458
2005	\$33,377,932	\$7,307	\$26,889,659	\$5,887
% Change	78.8%	61.0%	44.0%	29.7%

Source: Annual edition of the City of Poquoson's *Comprehensive Annual Financial Report*, includes General, Special Revenue, Debt Service and Capital Projects Funds.

Figure 4-12: Total Revenue Per Household- Poquoson



In the mid 1990's, a greater percentage of the total revenue was raised from local sources as a result of decreases in receipts from the State and Federal governments. This trend changed in 1999 when the State implemented the Personal Property Tax Relief Act (PPTRA).

Table 4-10: Sources of Revenue - Poquoson

Year	Local	State	Federal	Total
1996	57.8%	39.4%	2.8%	100.0%
1997	58.3%	39.4%	2.3%	100.0%
1998	58.1%	39.5%	2.4%	100.0%
1999	56.4%	41.1%	2.5%	100.0%
2000	54.3%	43.2%	2.5%	100.0%
2001	53.5%	43.3%	3.2%	100.0%
2002	52.8%	43.8%	3.4%	100.0%
2003	54.8%	42.1%	3.1%	100.0%
2004	49.5%	39.8%	10.7%	100.0%
2005	52.6%	43.5%	3.9%	100.0%

Source: Annual edition of the *Comparative Report of Local Government Revenues and Expenditures*, Auditor of Public Accounts.

When compared with the following data, Poquoson still relies less upon local revenue sources and more upon State revenue, than does the typical Virginia locality. This is primarily due to Schools receiving approximately 55% of their revenue from the State.

Table 4-11: Sources of Revenue - All Virginia Localities

Year	Local	State	Federal	Total
1996	61.3%	31.3%	7.4%	100.0%
1997	60.9%	32.0%	7.1%	100.0%
1998	60.6%	32.1%	7.3%	100.0%
1999	58.4%	34.1%	7.5%	100.0%
2000	56.8%	35.6%	7.6%	100.0%
2001	55.6%	36.9%	7.5%	100.0%
2002	56.2%	36.1%	7.7%	100.0%
2003	56.2%	35.1%	8.7%	100.0%
2004	56.3%	33.9%	9.8%	100.0%
2005	56.3%	35.0%	8.7%	100.0%

Source: Annual edition of *Comparative Report of Local Government Revenues and Expenditures*, Auditor of Public Accounts.



It is also useful to consider the various sources from which local revenue is raised. As can be seen from the following table, 84.9% comes from General Property Taxes (Real Estate and Personal Property) and Other Local Taxes (Local Sales Tax and Consumer Utility Tax, etc.). This percentage has fluctuated between 82% and 88% since 1996.

Table 4-12: Sources of Local Revenue - Poquoson

Year	General Property Taxes	Other Local Taxes	Permits & Fees	Fines	Charges For Services	Interest and Rent	Misc.
1996	73.9%	14.0%	0.8%	0.3%	7.9%	1.6%	1.5%
1997	74.3%	13.6%	0.7%	0.3%	8.1%	1.7%	1.3%
1998	74.0%	13.6%	0.8%	0.2%	8.2%	2.0%	1.2%
1999	73.2%	14.2%	0.9%	0.3%	7.8%	2.3%	1.3%
2000	70.4%	14.4%	0.7%	0.3%	11.2%	1.7%	1.3%
2001	71.9%	14.3%	0.8%	0.2%	9.9%	1.7%	1.2%
2002	67.8%	16.7%	1.0%	0.2%	11.9%	0.9%	1.5%
2003	68.4%	15.4%	0.7%	0.2%	11.0%	0.8%	3.5%
2004	67.1%	15.1%	1.0%	0.2%	10.8%	0.4%	5.4%
2005	70.2%	14.7%	1.0%	0.2%	11.2%	0.7%	2.0%

Source: Annual edition of *Comparative Report of Local Government Revenues and Expenditures*, Auditor of Public Accounts.

As one would expect in a community that does not have an extensive commercial and industrial base, property taxes generate more revenue than in the typical Virginia locality. Poquoson's local revenue sources are compared to the statewide figures in the following table.

Table 4-13: Sources of Local Revenue Poquoson Compared to State Average

	1996		2005	
	Poquoson	All Cities	Poquoson	All Cities
General Property Taxes	73.9%	54.2%	70.2%	52.8%
Other Local Taxes	14.0%	29.4%	14.7%	30.7%
Permits & Fees	0.8%	0.7%	1.0%	0.9%
Fines	0.3%	0.8%	0.2%	0.9%
Charges for Services	7.9%	9.6%	11.2%	10.0%
Interest and Rent	1.6%	2.3%	0.7%	1.8%
Miscellaneous	1.5%	3.0%	2.0%	2.9%

Source: Annual edition of *Comparative Report of Local Government Revenues and Expenditures*, Auditor of Public Accounts.



Real Estate Tax Revenue

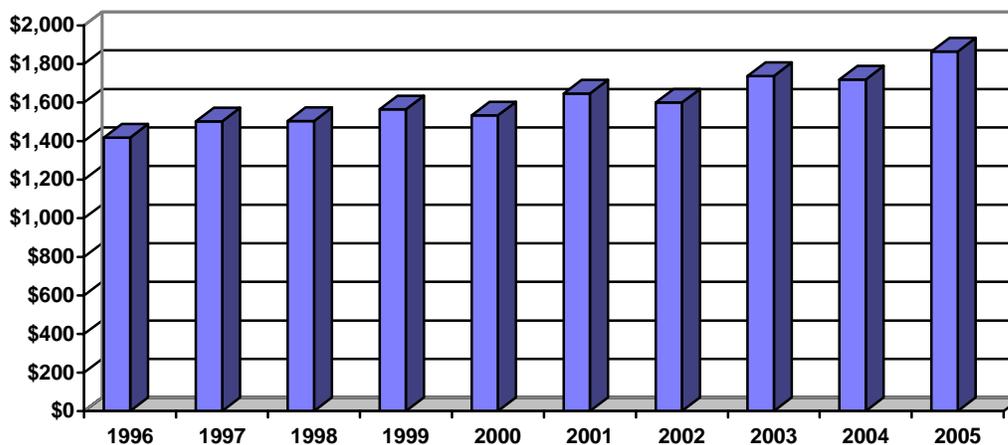
After adjusting for inflation, real estate tax revenue per Poquoson household has increased by approximately 31.5% since 1996, or an average of 3.2% per year.

Table 4-14: Total Real Estate Property Tax Revenue Per Household- Poquoson

Year	Revenue In Current Dollars	Revenue Per Household	Revenue in 1996 Dollars	Revenue Per Household
1996	\$5,833,365	\$1,418	\$5,833,365	\$1,418
1997	\$6,451,606	\$1,551	\$6,245,504	\$1,502
1998	\$6,648,708	\$1,580	\$6,328,722	\$1,504
1999	\$7,093,100	\$1,671	\$6,645,400	\$1,565
2000	\$7,224,688	\$1,680	\$6,590,732	\$1,533
2001	\$8,120,847	\$1,867	\$7,164,656	\$1,647
2002	\$8,142,010	\$1,843	\$7,070,204	\$1,600
2003	\$9,200,578	\$2,050	\$7,802,171	\$1,738
2004	\$9,368,376	\$2,066	\$7,796,335	\$1,720
2005	\$10,573,098	\$2,315	\$8,517,813	\$1,865
% CHANGE	81.3%	63.2%	46.0%	31.5%

Source: Annual edition of the City of Poquoson's *Comprehensive Annual Financial Report*.

Figure 4-13: Real Estate Tax Revenue Per Household- Poquoson



In 1995, the City's nominal tax rate was slightly above the average rate for all cities within the State.



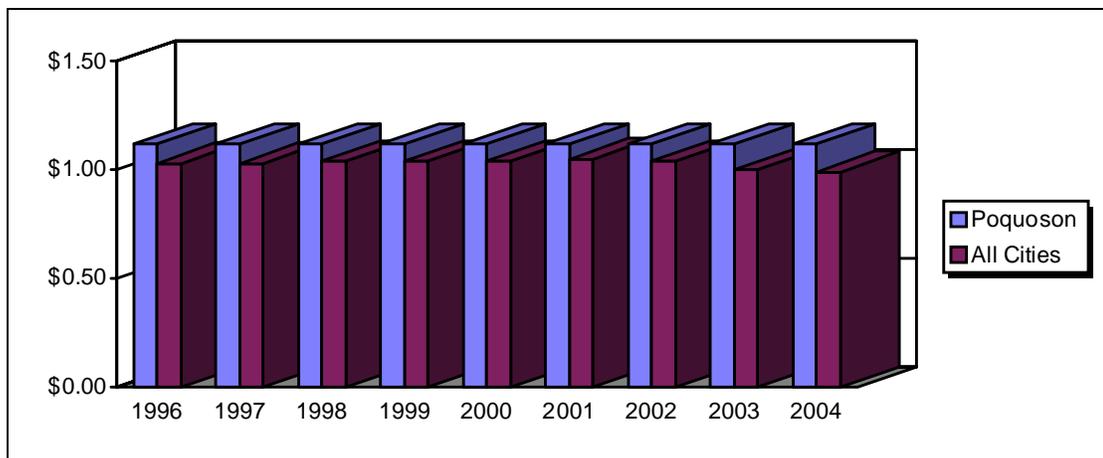
In considering Real Estate Tax Revenue, the locality's assessments must also be considered. The Assessment/Sales Ratio, computed by the State Department of Taxation, compares assessed values and selling prices of all residential property sold within a locality during a given year. Poquoson's ratio almost mirrors the State average, although during non-assessment years, it tends to drop below the average.

Table 4-15: Median, Nominal and Effective Real Estate Tax Rates

Year	Median Ratio		Nominal Tax Rates		Effective Tax Rates	
	Poquoson	VA Cities/ Counties	Poquoson	VA Cities/ Counties	Poquoson	VA Cities/ Counties
1996	91.5%	91.5%	\$1.12	\$1.03	\$1.02	\$0.94
1997	96.0%	91.7%	\$1.12	\$1.03	\$1.08	\$0.95
1998	94.6%	91.1%	\$1.12	\$1.04	\$1.06	\$0.94
1999	96.1%	88.9%	\$1.12	\$1.04	\$1.08	\$0.92
2000	91.7%	85.6%	\$1.12	\$1.04	\$1.03	\$0.89
2001	93.8%	76.8%	\$1.12	\$1.05	\$1.05	\$0.80
2002	87.5%	76.4%	\$1.12	\$1.04	\$0.98	\$0.79
2003	85.8%	77.8%	\$1.12	\$1.00	\$0.96	\$0.78
2004	94.1%	73.2%	\$1.12	\$.99	\$1.05	\$0.72

Source: *The Virginia Assessment/Sales Ratio Study*, Virginia Department of Taxation. Latest date available.

Figure 4-14: Nominal Real Estate Tax Rate



The City remains overwhelmingly dependent upon the single-family residential taxpayer base. The Commissioner of the Revenue has furnished the assessed values for single-family, multi-family residential property, commercial and agricultural property for each of the years shown below.



Although there has been a slight increase since 1996 in the percentage of the tax base represented by commercial property, the category still accounts for only 6.7% of total assessments.

Table 4-16: Real Property Assessments by Category and Percent of Total-Poquoson

Year	Residential		Other		Total
	Single Family	Multi-Family	Commercial	Agriculture	
1996	93.3%	1.4%	5.1%	0.2%	100.0%
1997	93.7%	1.3%	4.8%	0.2%	100.0%
1998	93.5%	1.3%	5.0%	0.2%	100.0%
1999	91.9%	1.3%	6.5%	0.3%	100.0%
2000	91.6%	1.3%	6.8%	0.3%	100.0%
2001	91.6%	1.3%	6.8%	0.3%	100.0%
2002	91.8%	1.4%	6.6%	0.2%	100.0%
2003	91.8%	1.4%	6.6%	0.2%	100.0%
2004	92.0%	1.2%	6.6%	0.2%	100.0%
2005	91.9%	1.2%	6.7%	0.2%	100.0%

Source: Assessment data furnished by the City of Poquoson's Assessor.

Finally, any analysis of real estate revenue must consider the percentage of taxes actually collected by the Treasurer. Poquoson's record is as follows:

Table 4-17: Uncollected Current Property Taxes as a Percent of Net Levy-Poquoson

Year	Percent
1996	1.7%
1997	0.7%
1998	0.8%
1999	1.9%
2000	1.7%
2001	3.0%
2002	3.8%
2003	3.1%
2004	2.5%
2005	3.2%

Source: Annual edition of the City of Poquoson's *Comprehensive Annual Financial Report*.



Bond rating firms consider that a municipality will normally be unable to collect about two or three percent of its current and back property taxes each year. If uncollected property taxes rise to more than five to eight percent, rating firms consider this a negative factor because it signals potential problems in the stability of the property tax base. Rating firms also consider it a negative factor if the rate of delinquency significantly rises for two consecutive years.

Personal Property Tax Revenue

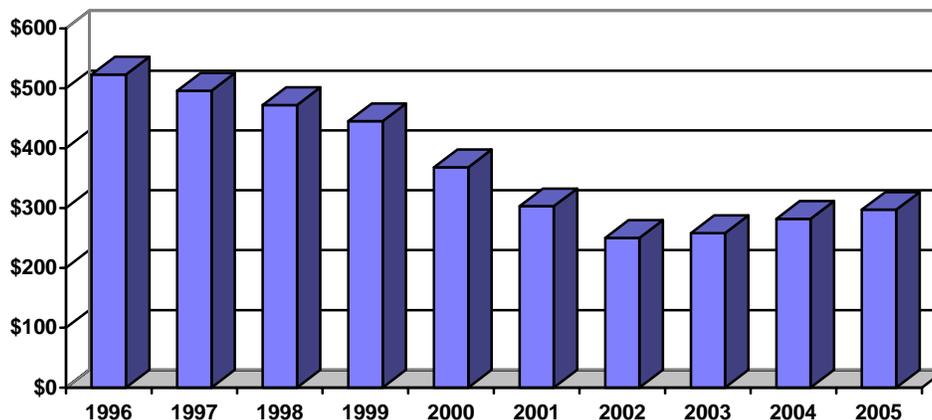
Assessments on personal property have been increasing. In 1999, the State implemented the Personal Property Tax Relief Act, where the State reduced the percentage of personal property tax the citizen paid on vehicles. The State reimbursed localities for the reduced personal property taxes.

Table 4-18: Total Personal Property Tax Revenue Per Household- Poquoson

Year	Revenue in Current Dollars	Revenue Per Household	Revenue in 1996 Dollars	Revenue Per Household
1996	\$2,151,495	\$523	\$2,151,495	\$523
1997	\$2,128,861	\$512	\$2,060,853	\$496
1998	\$2,086,271	\$496	\$1,985,864	\$472
1999	\$2,017,181	\$475	\$1,889,861	\$445
2000	\$1,735,218	\$404	\$1,582,955	\$368
2001	\$1,495,673	\$344	\$1,319,565	\$303
2002	\$1,271,261	\$288	\$1,103,914	\$250
2003	\$1,367,354	\$305	\$1,159,528	\$258
2004	\$1,538,520	\$339	\$1,280,352	\$282
2005	\$1,682,524	\$368	\$1,355,461	\$297
% CHANGE	-21.8%	-29.6%	-37.3%	-43.3%

Source: Annual edition of the City of Poquoson's *Comprehensive Annual Financial Report*.

Figure 4-15: Personal Property Tax Revenue Per Household- Poquoson



Other Local Sales Tax Revenue

Other Local Tax Revenue consists of revenue received from three general sources: revenue received from the local sales tax of 1% on taxable retail sales, revenue received from the Consumer Utility Tax imposed on electrical, gas and telephone bills, and revenue from other local taxes such as meals tax, business licenses, motor vehicle licenses, E-911 tax, taxes on recordations and wills, etc.

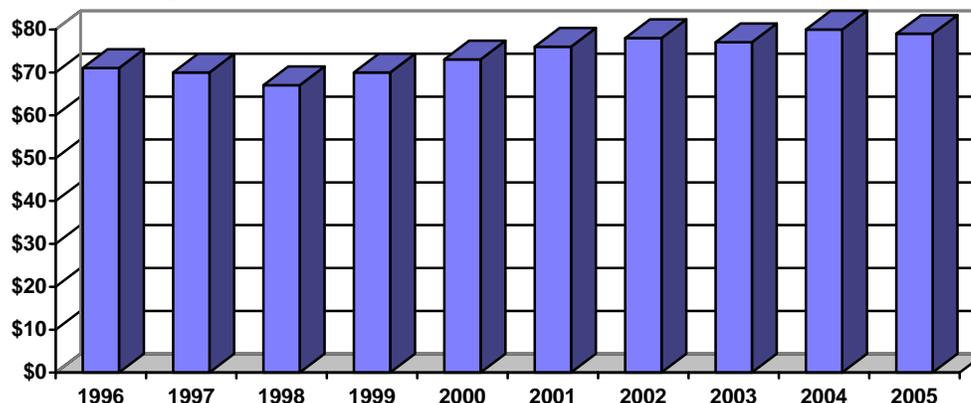
In current dollar terms, revenue received from the local 1% sales tax has increased by 53.4% since 1996. However, when viewed on a per household basis and after adjustment for inflation, revenue has increased by 11.3%. This particular source of revenue, like personal property tax revenue, tends to follow general economic conditions.

Table 4-19: Local Sales Tax Revenue Per Household

<i>Year</i>	<i>Revenue in Current Dollars</i>	<i>Revenue Per Household</i>	<i>Revenue in 1996 Dollars</i>	<i>Revenue Per Household</i>
1996	\$291,028	\$71	\$291,028	\$71
1997	\$301,752	\$73	\$292,112	\$70
1998	\$296,954	\$71	\$282,662	\$67
1999	\$319,236	\$75	\$299,087	\$70
2000	\$343,158	\$80	\$313,046	\$73
2001	\$375,179	\$86	\$331,003	\$76
2002	\$395,630	\$90	\$343,550	\$78
2003	\$407,006	\$91	\$345,145	\$77
2004	\$435,253	\$96	\$362,216	\$80
2005	\$446,435	\$98	\$359,653	\$79
% CHANGE	53.4%	38.1%	23.6%	11.3%

Source: Annual edition of the City of Poquoson's *Comprehensive Annual Financial Report*.

Figure 4-16: Local Sales Tax Revenue Per Household



Revenue from the Consumer Utility Tax has declined when viewed on a per household basis.

Table 4-20: Consumer Utility Tax Revenue Per Household

Year	Revenue in Current Dollars	Revenue Per Household	Revenue in 1996 Dollars	Revenue Per Household
1996	\$373,725	\$91	\$373,725	\$91
1997	\$382,232	\$92	\$370,021	\$89
1998	\$358,490	\$85	\$341,237	\$81
1999	\$421,374	\$99	\$395,059	\$93
2000	\$436,602	\$102	\$398,059	\$93
2001	\$416,631	\$96	\$367,575	\$85
2002	\$419,694	\$95	\$364,446	\$82
2003	\$440,543	\$98	\$373,584	\$83
2004	\$439,998	\$97	\$366,165	\$81
2005	\$447,622	\$98	\$360,610	\$79
% CHANGE	19.8%	7.8%	-3.5%	-13.1%

Source: Annual edition of the City of Poquoson's *Comprehensive Annual Financial Report*.

When viewed on a per household basis after adjusting for inflation, Other Local Tax Revenue has kept pace with residential development. In 1998, the City had new restaurants open which increased both meals tax and sales tax. In 2002, meals tax increased from 4.0% to 5.5% and a 10 cent cigarette tax was instituted.

Table 4-21: Other Local Tax Revenue

Year	Revenue in Current Dollars	Revenue Per Household	Revenue in 1996 Dollars	Revenue Per Household
1996	\$903,512	\$220	\$903,512	\$220
1997	\$948,580	\$228	\$918,277	\$221
1998	\$1,016,366	\$242	\$967,451	\$230
1999	\$1,084,665	\$255	\$1,016,203	\$239
2000	\$1,110,667	\$258	\$1,013,208	\$236
2001	\$1,192,544	\$274	\$1,052,127	\$242
2002	\$1,587,462	\$359	\$1,378,490	\$312
2003	\$1,594,936	\$355	\$1,352,520	\$301
2004	\$1,649,713	\$364	\$1,372,886	\$303
2005	\$1,741,665	\$381	\$1,403,106	\$307
% CHANGE	92.8%	73.6%	55.3%	39.8%

Source: Annual edition of the City of Poquoson's *Adopted Annual Financial Plan*.



Expenditures

Total expenditures supported by Local, Federal and State funding, in current dollar terms, have grown from \$19 million in 1996 to over \$33 million in 2005, an increase of 74.8%. However, after adjustment for inflation and growth in households, the increase has been approximately 2.7% per year.

Total expenditures supported by Local, Federal and State funding, in current dollar terms, have grown from \$11 million in 1987 to a little over \$18 million in 1995, an increase of 66.5%. However, after adjustment for inflation and growth in households, the increase has been only 12.1%, or approximately 1.3% per year.

The operating budget, which funds recurring expenses, has shown a slight increase as new services have been added to meet the needs of a growing community and more mature services have been improved. However, this increase has been extremely small at an average of 0.67% per year. Capital expenditures declined steadily from 1989 to 1993, then increased in 1994 as a result of a grant from the Virginia Port Authority to purchase land in the Messick Point area of the City along with the use of a one time tax windfall to address long standing capital needs. In 1994 the City issued general obligation bonds to fund some long delayed capital projects. In 1995 the City built a Middle School cafeteria with part of the bond funds. The remaining bond funds were spent in 1996 and 1997 for the new municipal building and library.

The tables demonstrate in more detail these points. Total expenditures are shown on this page, with a further breakdown between operating and capital expenditures being given on the following pages.

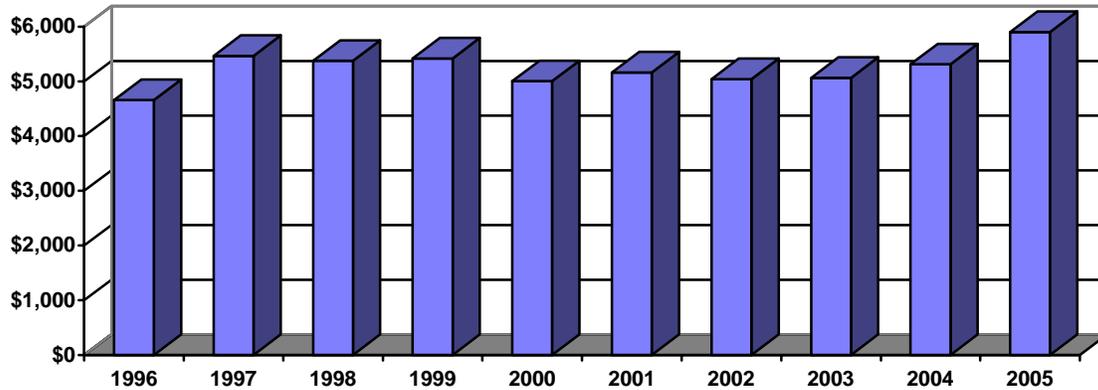
Table 4-22: Total Expenditures Per Household

Year	Expenditures in Current Dollars	Expenditures per Household	Expenditures in 1996 Dollars	Expenditures per Household
1996	\$19,157,965	\$4,658	\$19,157,965	\$4,658
1997	\$23,487,977	\$5,648	\$22,737,635	\$5,467
1998	\$23,764,843	\$5,649	\$22,621,098	\$5,377
1999	\$24,576,933	\$5,788	\$23,025,693	\$5,423
2000	\$23,596,725	\$5,488	\$21,526,147	\$5,006
2001	\$25,570,167	\$5,880	\$22,471,177	\$5,167
2002	\$25,665,657	\$5,809	\$22,287,056	\$5,045
2003	\$26,816,117	\$5,974	\$22,740,304	\$5,066
2004	\$28,944,097	\$6,384	\$24,087,193	\$5,313
2005	\$33,484,255	\$7,330	\$26,975,314	\$5,905
% CHANGE	74.8%	57.4%	40.8%	26.8%

Source: Annual edition of the City of Poquoson's *Comprehensive Annual Financial Report*, includes General, Special Revenue, Debt Service and Capital Projects Funds.



Figure 4-17: Total Expenditures Per Household



The operating budget, which funds recurring expenses, has shown a slight increase as new services have been added to meet the needs of a growing community and existing services have been improved. However, this increase has been extremely small at an average of 3% per year.

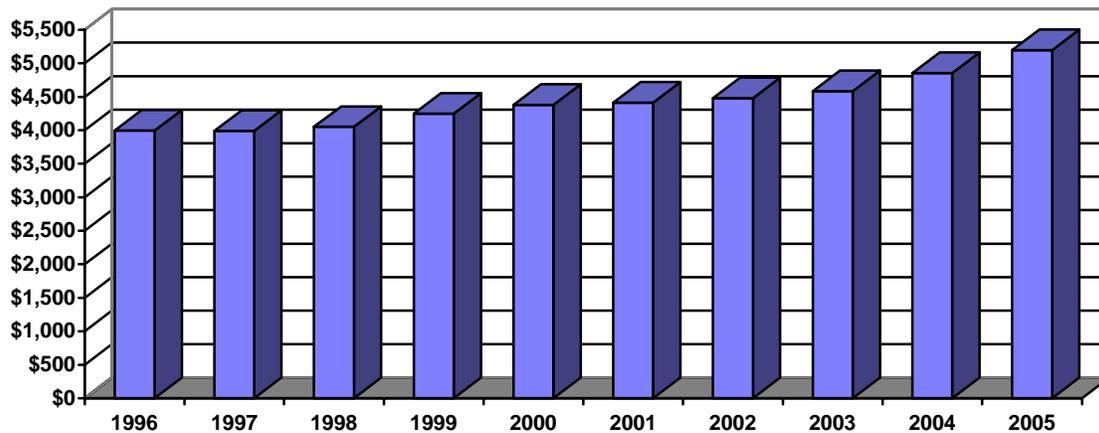
Table 4-23: Total Operating Expenditures Per Household

Year	Expenditures in Current Dollars	Expenditures per Household	Expenditures in 1996 Dollars	Expenditures per Household
1996	\$16,437,759	\$3,997	\$16,437,759	\$3,997
1997	\$17,148,987	\$4,123	\$16,601,149	\$3,992
1998	\$17,900,325	\$4,255	\$17,038,825	\$4,050
1999	\$19,248,993	\$4,533	\$18,034,040	\$4,247
2000	\$20,645,634	\$4,801	\$18,834,010	\$4,380
2001	\$21,742,499	\$4,999	\$19,182,424	\$4,411
2002	\$22,785,888	\$5,158	\$19,786,377	\$4,479
2003	\$24,262,997	\$5,405	\$20,575,236	\$4,583
2004	\$26,448,517	\$5,833	\$22,010,379	\$4,855
2005	\$29,461,311	\$6,449	\$23,734,382	\$5,196
% CHANGE	79.2%	61.4%	44.4%	30.0%

Source: Annual edition of the City of Poquoson's *Comprehensive Annual Financial Report*.



Figure 4-18: Total Operating Expenditures Per Household



Capital expenditures were low in the early 1990's, as there were no large City projects. In the mid-nineties, the City started to address many long delayed capital projects. In 1995, the City built a new cafeteria for the Middle School and in 1996 started building a City Hall and Library. In 1998 the City started a major renovation and addition to Poquoson High School. This work was completed in 1999. In 2000 to 2002, the City addressed smaller projects including renovations to the Police Station and Parks and Recreation complex, replaced some larger Public Works equipment, built a second Fire Station, replaced a fire aerial/pumper truck, and dredged Messick Point area. In late 2004, the City began several projects located at Messick Point. The first two projects, a pier and boat ramp, were completed in 2005.

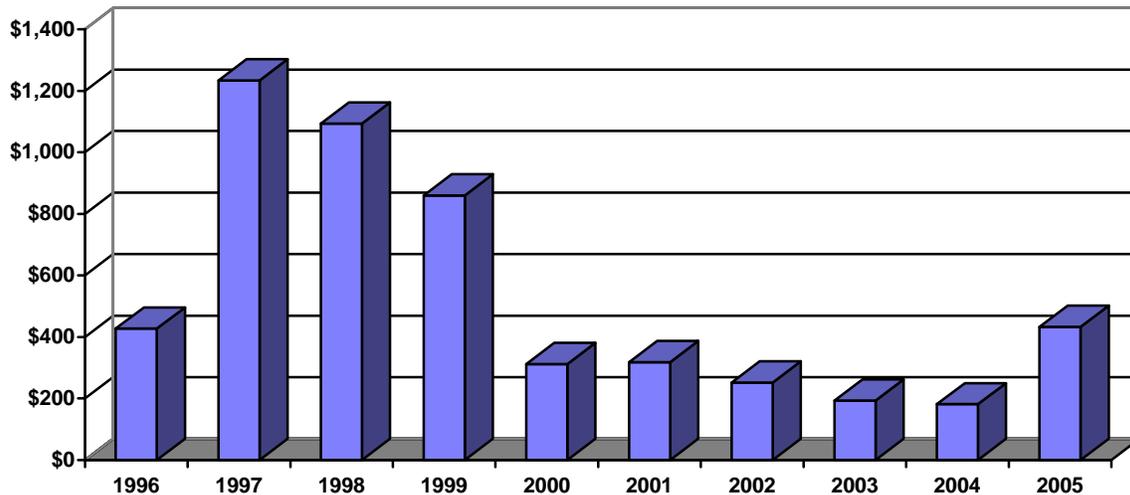
Table 4-24: Total Capital Expenditures Per Household

Year	Expenditures in Current Dollars	Expenditures per Household in 1996 Dollars	Expenditures per Household	Expenditures per Household
1996	\$1,755,324	\$427	\$1,755,324	\$427
1997	\$5,299,946	\$1,274	\$5,130,635	\$1,234
1998	\$4,832,525	\$1,149	\$4,599,947	\$1,093
1999	\$3,898,984	\$918	\$3,652,889	\$860
2000	\$1,471,535	\$342	\$1,342,410	\$312
2001	\$1,567,339	\$360	\$1,382,792	\$318
2002	\$1,282,450	\$290	\$1,113,630	\$252
2003	\$1,021,949	\$228	\$866,622	\$193
2004	\$987,539	\$218	\$821,827	\$181
2005	\$2,457,918	\$538	\$1,980,128	\$433
% CHANGE	40.0%	26.1%	12.8%	1.6%

Source: Annual edition of the City of Poquoson's *Comprehensive Annual Financial Report*.



Figure 4-19: Total Capital Expenditures Per Household



The table below depicts the growth in operating expenditures by function of government, on a per-household basis and after adjustment for inflation.

While education, public safety, parks, recreation and culture, and debt service categories have increased since 1996, total expenditures are still about 11% under the average level of expenditures incurred by other Virginia localities, as shown on the following table. Poquoson residents fund their school system at 119% of the average local expenditures, while other areas of government are generally under the average expenditures level prevailing throughout the State.

Table 4-25: Operating Expenditures Per Household In 1996 Dollars

<i>Year</i>	<i>Education</i>	<i>Public Safety</i>	<i>Public Works</i>	<i>Parks, Recreation and Culture</i>
1996	\$2,810	\$508	\$175	\$113
1997	\$2,790	\$528	\$198	\$123
1998	\$2,794	\$549	\$187	\$131
1999	\$2,922	\$598	\$192	\$141
2000	\$3,002	\$625	\$209	\$141
2001	\$3,063	\$627	\$180	\$148
2002	\$3,058	\$645	\$202	\$142
2003	\$3,080	\$713	\$191	\$144
2004	\$3,290	\$736	\$207	\$140
2005	\$3,511	\$783	\$226	\$147
% CHANGE	24.9%	54.1%	29.6%	30.1%



Table 4-26: General Administration and Debt Service

Year	General			Total
	Administration	Debt Service	All Other	
1996	\$261	\$235	\$130	\$4,231
1997	\$211	\$242	\$126	\$4,217
1998	\$225	\$233	\$165	\$4,284
1999	\$234	\$315	\$161	\$4,563
2000	\$244	\$314	\$160	\$4,694
2001	\$238	\$438	\$154	\$4,849
2002	\$247	\$314	\$185	\$4,793
2003	\$241	\$289	\$214	\$4,873
2004	\$245	\$277	\$237	\$5,131
2005	\$272	\$276	\$256	\$5,472
% CHANGE	4.4%	17.7%	97.6%	29.3%

Source: Annual edition of the City of Poquoson's *Comprehensive Annual Financial Report*.

**Table 4-27: Operating Expenditures
 City of Poquoson Compared to State Average
 by Per-Capita Expenditures**

	1996			2005		
	Poquoson	All Cities	% of Avg.	Poquoson	All Cities	% of Avg.
Education	\$990.29	\$924.30	107.1%	\$1,712.23	\$1,435.40	119.3%
Public Safety	\$181.87	\$312.44	58.2%	\$379.09	\$525.29	72.2%
Public Works	\$91.58	\$188.03	48.7%	\$145.23	\$248.78	58.38%
Parks, Recreation and Cultural	\$59.81	\$86.34	69.3%	\$115.91	\$131.16	88.4%
General Administration	\$93.21	\$81.85	113.9%	\$131.16	\$128.08	102.4%
Judicial Administration	\$5.54	\$30.27	18.3%	\$15.14	\$54.09	28.0%
Health & Welfare	\$60.97	\$212.72	28.7%	\$124.52	\$369.92	33.7%
Community Development	\$17.18	\$56.29	30.5%	\$52.71	\$105.34	50.0%
TOTAL	\$1,500.45	\$1,892.24	79.3%	\$2,675.99	\$2,998.06	89.3%

Source: Annual edition of the *Report of Local Government Revenues and Expenditures*, Auditor of Public Accounts.



Debt Service

Debt Service is defined as the amount of interest and principal that must be paid on long-term debt. As the amount decreases, it lessens obligations and increases expenditure flexibility. Credit industry standards provide for a 20% ratio of total operating expenditures before debt service is considered to be a potential problem.

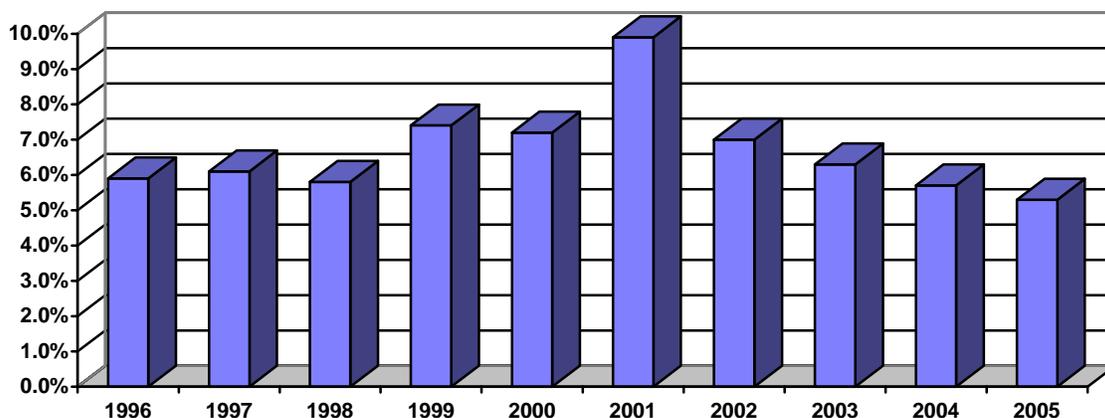
As shown in the table below, the City's 5.3% ratio of debt service to total operating expenditures is acceptable. In 1999, the City started paying for debt on the new wing at the high school. In 2001, the City started paying on the new Fire Station.

Table 4-28: Ratio of Debt Service to Total Operating Expenditures

Year	Debt Service	Operating Expenditures	Percent of Expenditures
1996	\$964,882	\$16,437,759	5.9%
1997	\$1,039,044	\$17,148,987	6.1%
1998	\$1,031,993	\$17,900,325	5.8%
1999	\$1,428,956	\$19,248,993	7.4%
2000	\$1,479,556	\$20,645,634	7.2%
2001	\$2,160,329	\$21,742,499	9.9%
2002	\$1,597,319	\$22,785,888	7.0%
2003	\$1,531,171	\$24,262,997	6.3%
2004	\$1,508,041	\$26,448,517	5.7%
2005	\$1,565,026	\$29,461,311	5.3%

Source: Annual edition of the City of Poquoson's *Comprehensive Annual Financial Report*.

Figure 4-20: Ratio of Debt Service to Total Expenditures



There is also a legal limit for cities in Virginia whereby the amount of bonded long-term debt cannot exceed 10% of the cities total assessed value or real property. As the table below shows, the city's ratio of bonded debt to assessed valuation amounts to 2.5%.

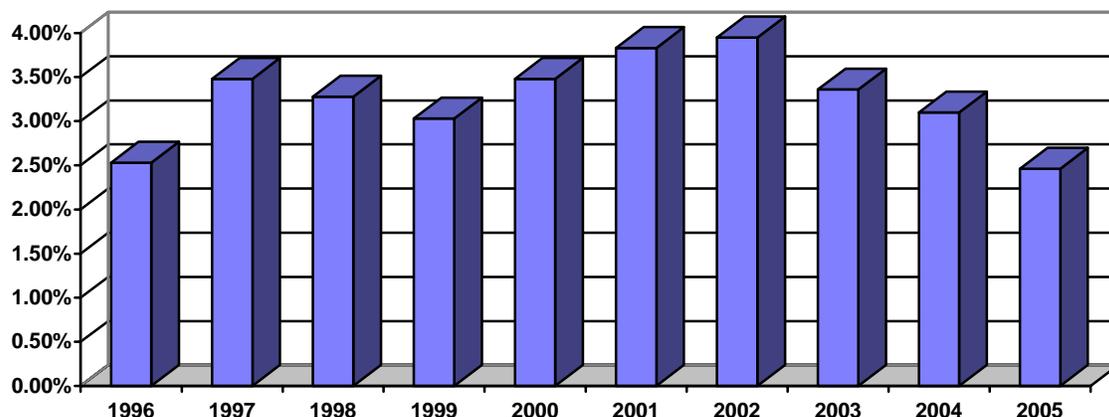
Capacity is therefore available should City Council decide to undertake additional long-term borrowing to fund infrastructure and capital improvements.

**Table 4-29: Ratio of Bonded Debt to Assessed Value
 Bonded Debt**

Year	Assessed Value of Taxable Real Estate	General Fund Supported	Enterprise Funds	Total	Ratio Debt to Assessed Value
1996	\$526,576,600	\$8,389,503	\$4,909,000	\$13,298,503	2.5%
1997	\$573,426,552	\$15,244,732	\$4,698,000	\$19,942,732	3.5%
1998	\$586,329,508	\$14,758,832	\$4,502,000	\$19,260,832	3.3%
1999	\$634,147,446	\$14,631,049	\$4,560,591	\$19,191,640	3.0%
2000	\$647,091,321	\$13,818,890	\$8,699,313	\$22,518,203	3.5%
2001	\$721,546,098	\$14,536,070	\$13,108,140	\$27,644,210	3.8%
2002	\$732,405,108	\$14,145,971	\$14,779,335	\$28,925,306	4.0%
2003	\$814,646,831	\$13,233,807	\$14,131,490	\$27,365,297	3.4%
2004	\$832,002,644	\$12,269,134	\$13,506,624	\$25,775,758	3.1%
2005	\$1,002,511,357	\$11,914,942	\$12,791,016	\$24,705,858	2.5%
% CHANGE	90.4%	42.0%	160.6%	85.8%	0.0%

Source: Annual edition of the City of Poquoson's *Comprehensive Annual Financial Report*.

Figure 4-21 Ratio of Bonded Debt to Assessed Value



Undesignated Fund Balance

In accordance with good financial practices, it has been a goal of City Council to use as little fund balance as possible to balance the annual operating budget. This procedure helps to ensure that there are sufficient ongoing operating revenues available to meet ongoing expenditures.

The City’s policy is that the General Fund undesignated fund balance should not go below 15% of current year budgeted expenditures. The fund balance also provides a contingency so those emergencies can be funded during the forthcoming fiscal year, whether they arise from revenue shortfalls or unanticipated expenditures. In addition, the undesignated fund balance provides operating cash so that short-term borrowing prior to the receipt of tax collections in December and June can be avoided.

While it is the City’s goal not to use undesignated fund balance to balance the annual operating budget, when the balance grows above 15% it is often used to fund needed capital projects in the Capital Improvements Budget and other one-time expenditures.

As shown in Table 4-30 and Figure 4-23, the City's fund balance in 2004 was at 19.3%, which is over the target range. Although the balance as a percent of the current year expenditure budget has declined over the years, the level is still well within the City’s fund balance reserve policy of 15%.

**Table 4-30: General Fund
Undesignated Fund Balance**

<i>Year</i>	<i>Amount of Balance</i>	<i>Operating Cash on Hand as of 6/30</i>	<i>Amt Used to Balance Operating Budget</i>	<i>Balance as a Percent of Current Year Budget</i>
1996	3,192,406	4,056,200	0	30.2%
1997	3,460,593	3,967,022	325,530	31.0%
1998	3,149,859	4,948,914	90,380	26.7%
1999	4,058,440	4,916,805	0	32.4%
2000	3,957,859	3,630,646	516,259	30.4%
2001	3,946,030	3,722,173	541,900	27.7%
2002	3,861,831	2,475,106	395,220	25.6%
2003	4,239,425	4,001,786	279,800	25.4%
2004	4,015,477	4,006,482	194,611	19.3%
% CHANGE	25.8%	(1.3%)	100.0%	(36.1%)



Figure 4-22: General Fund
Undesignated Fund Balance

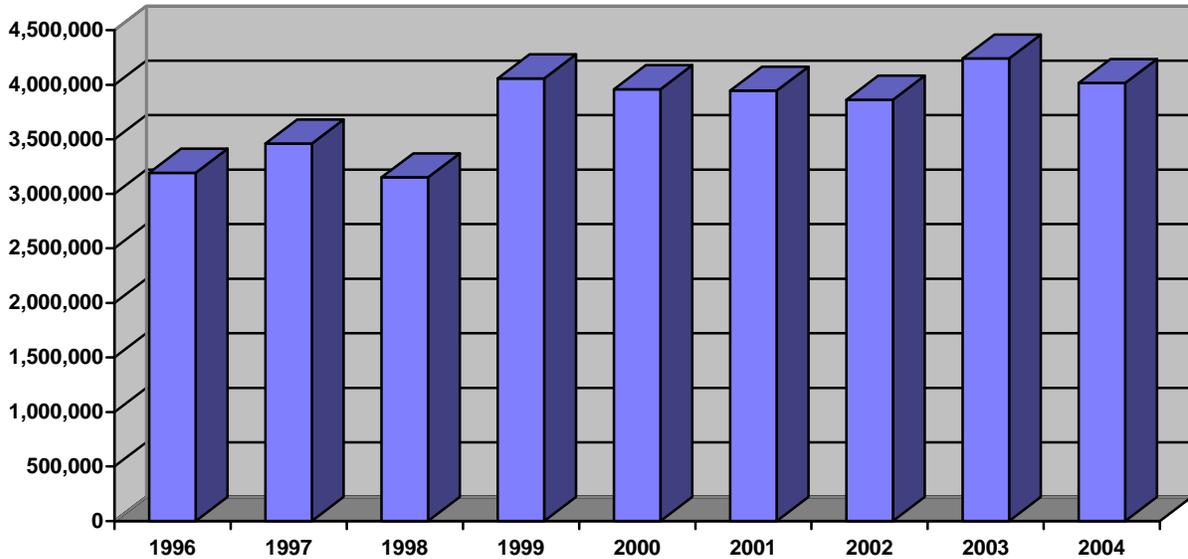
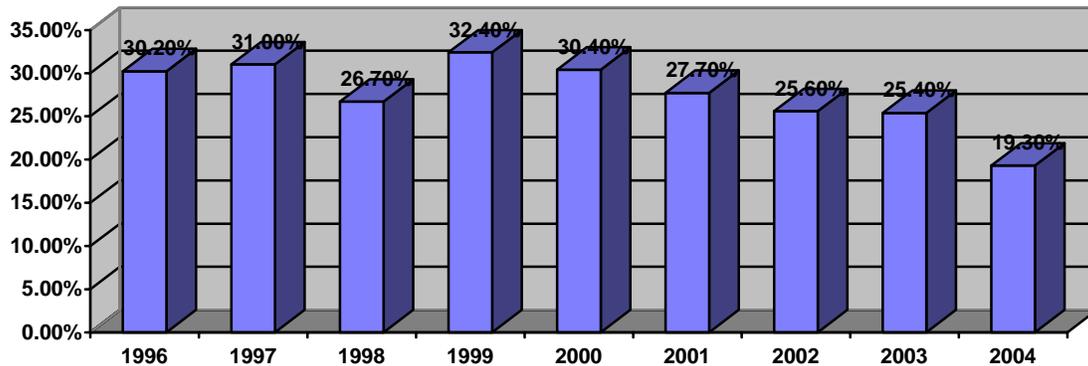


Figure 4-23: Undesignated Fund Balance As Percent Of Current Years Budget



Poquoson's fund balance position is strong and has been relatively stable over the last few years. There are currently enough excessive reserves that the City could consider using some of the fund balance to fund economic development or other one-time projects. The City should have sufficient fund balance to withstand financial emergencies.



GOALS, OBJECTIVES, AND STRATEGIES

Goals

1. Continue to provide budget information to allow for informed decisions concerning the allocation of available resources to deliver goods and services to meet demands of the City citizens in an efficient and effective manner.
2. Continue to provide financial information to meet the needs and legal requirements of management, financial institutions and citizens in an efficient and effective manner.

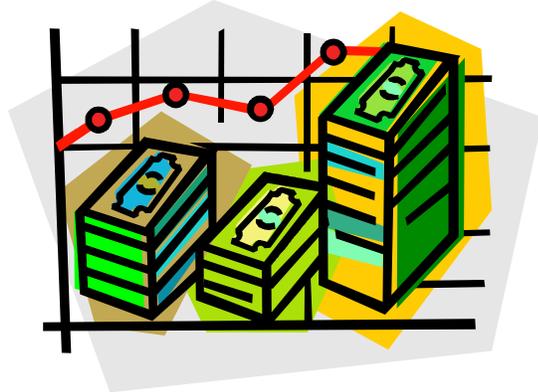
Objectives

1. Strive to maintain the tax rates and fees as low as possible while addressing the needs of the City's and Schools' operations.
2. Continue to maintain responsible, accurate financial accountability of the City's records and monitor operating and capital spending.

Strategies

1. Prepare the annual operating budget within the guidelines adopted by City Council and to qualify for a Distinguished Budget Presentation Award given the Government Finance Officers Association.
2. Prepare the City's Comprehensive Annual Financial Report (CAFR) to meet the requirements to qualify for a Certificate of Achievement for Excellence in Financial Reporting given by the Government Finance Officers Association.
3. Continue to implement new standards issued by the Government Accounting Standards Board to be in conformity with accounting principles generally accepted in the United States of America and to enhance the understandability and usefulness of the City's financial reports.





INTRODUCTION

Business and industry make positive contributions to the fiscal health of a community both by providing employment opportunities for the residents of the community and by contributing local tax revenues that exceed the cost of providing public services to such development. These tax revenues can then be used to assist in funding the public services required by the City's residents while helping to keep residential taxes at an acceptable level.

The following are economic studies commissioned by the Poquoson Industrial Development Authority.

ECONOMIC DEVELOPMENT STUDIES

City of Poquoson Business Development Analysis

The Poquoson Industrial Development Authority commissioned a study of business development opportunities by Landmark Design Group and Thomas Point Associates in 2004. The study provides an analysis of undeveloped and underutilized land in the City and provides specific recommendations for a mixed-use development along Victory Boulevard. Key findings from the analysis are as follows:

- The primary market area for Poquoson (a three mile radius from City Hall) is the fastest growing and has the highest median income, highest educational level and highest median age of residents on the Peninsula.
- Retail development is an important economic development option for Poquoson. A retail trade potential analysis showed a significant sales gap and opportunity.
- Poquoson could support a tailored version of a “lifestyle retail” center based on demand and demographics, anchored by a specialty grocery store.



- There is no immediate speculative market for office space in Poquoson, but Poquoson is well-positioned for capture of office / flex space over the next 10 to 20 years, particularly for professional offices, technology companies, and specialized military contractors.
- The Big Woods area should be the focus of a mixed-use commercial development for the City.
- It will be necessary to assemble land through purchase or cooperative agreements to provide a site large enough for an initial specialty center development of 100,000 square feet or more.
- Commercial development will need to be supported by public investments.

Section III of the study contains an analysis of the economic development potential of several sites within the City. Several of the sites are recommended for residential development due to their proximity to existing residential development or other limiting factors. A portion of the Big Woods adjacent to Victory Boulevard is identified as having the greatest potential as a site for the previously mentioned lifestyle center. Several issues must be addressed prior to any large-scale development at this site including wetlands delineation and cooperation of existing landowners to consolidate undeveloped sites. The lifestyle center proposal calls for the creation of a pedestrian friendly destination featuring mixed retail, restaurants, a hotel and office space.

Messick Point Revitalization Feasibility Study

A second economic development study deals with the Messick Point area. Landmark Design Group and Thomas Point Associates completed the Messick Point Revitalization Feasibility Study in February of 2004. According to the study “Messick Point provides an excellent opportunity to the City of Poquoson to increase their tax base and to provide a site for the development of a high-quality mixed-use program, taking advantage of the unique and dynamic waterfront.”

Key Elements

The study lists the following important elements for the revitalization of Messick Point.

- Messick Point must become a destination for visitors in order to support business development.
- Provision of increased public access to the waterfront is an essential part of the development plan.
- The Plan is intentionally crafted to maintain and possibly expand the waterman industry.



The study also lists the following potential benefits to the City of Poquoson.

- New development of approximately \$18 million
- Annual tax and fee payments of \$310,000
- Annual net income of \$68,000
- Additional jobs (80-100) in professional, sales and services categories
- Attraction of tourists to site and restaurant

The recommended development program for the site includes maritime commercial and residential components including the following:

- Marina Sport Commercial Complex: A small commercial center that mixes fishing and boating uses,
 - Possibly a combination of dry stack storage and wet slips. Storage for 100 boats and 50 equipment lockers
 - 3,000 square feet of retail space
 - Boat Yard: a one-acre boat yard
- Marina Flex Office Center: Possible combination of boat sales, boating equipment manufacturing, boat management and maintenance: 10,000 square feet of Marine Flex/Office
- Restaurant: 5,000 square feet of restaurant space
- Residential: 50 attached condo units
- Yacht Club: 10,000 square feet

Finally the study states that further refinement of the plan will be required to move to implementation.

REDEVELOPMENT OPPORTUNITIES IN POQUOSON

Locations for new economic development projects in Poquoson are limited by several factors including the presence of jurisdictional wetlands and the fact that the City is approaching build-out. Given this situation and the fact that the previously mentioned economic development studies have identified significant opportunities for new retail businesses in Poquoson, it is



important to consider the redevelopment of existing commercial areas as a component of economic development. Wythe Creek Road is currently the City's retail and service center. Given the high average income of the citizens of Poquoson it may be possible in the future to better tailor the range of business in the City to cater to the citizens. As redevelopment takes place, it will also be possible to address urban design concerns.

Waterfront Redevelopment Master Plan

As discussed later in Chapter 5- Natural Resources and Chapter 8- Land Use, the City of Poquoson possesses some rare waterfront property that has previously been developed. Said properties are listed in the aforementioned chapters and are reiterated here for consistency and clarification. They are: Amory's Wharf, Messick Point, York Haven Marina, Poquoson Marina, Islander Marina, and Owens Marina.

Currently these properties are underutilized and have attained minimal maintenance by the property owners which has led to lower quality facilities and pose environmental impacts due to the age of such sites. The City should prepare a *Waterfront Redevelopment Master Plan* that would include these waterfront areas in dire need of redevelopment, address the needs and services of the community as a whole, and provide property owners a prosperous return on their investment. Such a plan will require collaboration on the part of many parties, to include the property owners, real estate professionals, City staff, State agency staff, and citizens within the community. Once prepared and adopted, the Comprehensive Plan should be amended to include the Waterfront Redevelopment Master Plan.

In addition to the Waterfront Redevelopment Master Plan, certain land use categories should be enhanced to designate these areas targeted for redevelopment in the Future Land Use Plan. The areas should be clearly identified on the map with a general description of what is envisioned for these areas. Currently, the Future Land Use categories that encompass these areas are *Waterfront Mixed-Use* and *Waterfront Commercial*. While both of these categories define what is desired for the future land use of these areas, the Zoning Ordinance doesn't necessarily provide the means for these types of development. Therefore, the Zoning Ordinance should be revised to include provisions that would allow the uses projected for the "waterfront" categories.

COMMERCIAL DEVELOPMENT IMPACTS

On a relative basis, it is apparent that retail development generates the greatest returns to the City in terms of tax revenues while retail and office development return the most in the way of job creation. However, several other factors must come into consideration in this regard:

- Retail development will be guided by demand which, with the exception of tourist-related retail, is largely generated by residential growth.



- Retail development also generates a great deal of vehicular traffic and, as such, should be concentrated in those areas best equipped to handle such traffic, such as the Central voting district.
- Retail jobs are generally low paying jobs of any category; however, these jobs would be ideal for the workforce 16 to 19 years of age or retirees.

Office development generates higher tax revenues and job creation than does light industry and does so in a much more aesthetically pleasing environment. However, with the exception of management and scientific/technical jobs, office development generally lags behind manufacturing in average wage rates for less-skilled workers.

All of these considerations lead to the conclusion that a balanced approach must be taken with regard to land-use and real estate development. In essence, the high tax-paying attributes of retail development can be balanced against the aesthetic appeal of office development and the typically higher wages associated with industry. Each of these types of non-residential development has its place in an overall economic development strategy. Consequently, great care must be taken to ensure that the land made available for each type of development is, in fact, suited to such development with regard to such considerations as visibility, access, availability of utilities, environmental sensitivity, and proximity to residential neighborhoods.

PROPERTY OWNERSHIP OF TARGETED AREAS

The Big Woods

The Big Woods is comprised of 230 acres of undeveloped property, all of which is in disparate private ownership. Access to the larger parcels in the rear is restricted by a number of smaller parcels with frontage on Victory Boulevard. Due to Big Woods rezoning criteria, access to new commercial development in this area will have to be from a new public street that must be constructed into the interior of the site from Victory Boulevard. This disparate ownership may require the City to play some role in bringing these property owners together. The Research and Development district is also under disparate ownership, however, the City owns a significant 18-acre parcel with extensive frontage on Victory Boulevard. While the City may choose to play a role in bringing the other private property owners together in this area, the City's existing holdings do, in and of themselves, represent significant development opportunity.

Messick Point

Unlike the Big Woods, the City of Poquoson already owns the vast majority of the developable land at Messick Point, 14 acres in all. The ownership gives the City maximum flexibility and leverage to attract only the type of development to this area that serves the public purpose. The Messick Point area is located at the end of Messick Road, a two-lane road approximately 10 miles from Interstate 64. Messick Road is a two-lane roadway that is not suited to heavy truck traffic. Messick Point is served with both an 8-inch water line and an 8-inch sewer line. These



lines are sized sufficiently to service the low intensity types of commercial and recreational uses envisioned for Messick Point.

City Owned Property

In 1995, the City of Poquoson purchased several parcels of land in the Big Woods to foster additional economic development. One piece was used primarily for the construction of a new Municipal Building/Library complex but this development had dramatic impacts on potential future commercial development as all needed infrastructure improvements were made available to the Big Woods for the first time.

The City also owns an eighteen-acre parcel of land along the northside of Victory Boulevard. This property will be used primarily to create roadway access and to extend utilities into the General Commercial District of the Big Woods. City Council also purchased an 18.5-acre tract in the Research and Development District of the Big Woods with the idea of attracting a light industrial or office park type business.

TELECOMMUNICATIONS INFRASTRUCTURE

A necessity for economic development in the United States is the need for new businesses to have an adequate communication infrastructure. The following communication needs are most often cited by new businesses:

- High bandwidth communication capabilities.
- Strong alliances with local communication service providers in connectivity to global networks. (ISDA service, Cellular service, fiber optics networks).
- Research and Development/Office Parks with ample capacity for office utilization and communication connectivity.

With the above needs in mind, the City of Poquoson should develop strategies to foster a robust communication infrastructure, both at the commercial and residential level. These strategies should be incorporated in the Infrastructure Improvements Master Plan.

MARKETING PLAN

If the City of Poquoson is to attract any significant commercial real estate initiatives, it is critical that a specific, marketing plan be developed. Such a plan should consider the factors outlined above in the economic development profile; the results of the 1996 market survey; while remaining conscious of the financial constraints upon the Poquoson municipal government. In addition, the final plan must have input from local officials, regional economic development agencies and successful real estate developers.



ECONOMIC DEVELOPMENT INITIATIVES & INCENTIVES

Economic Development Fund

As part of its 1995-2000 Capital Improvements Program, the City of Poquoson created its first Economic Development Fund. This fund will be used to enhance economic development initiatives in the City via land purchase and infrastructure improvements.

Economic Development Enterprise Fund

One of the greatest impediments to commercial developments is the enormous start-up cost related to infrastructure, specifically: roadways, parking and stormwater management facilities. Many commercial development initiatives do not get started due to the staggering cost of providing such improvements. Considering this constraint, the City of Poquoson should consider creating an “economic development enterprise fund” in order to construct needed commercial development improvements in the Big Woods such as parking lots, plazas and stormwater management facilities. The City of Poquoson could finance the construction of these projects with low interest loans and repay the debt using developer contributions that would pay for the right to use such facilities. Such provision of infrastructure is clearly a more economical and efficient method when compared to relying solely on each individual developer to provide their improvements.

Existing Business Promotion

While promoting new economic development initiatives; the City should also promote and enhance existing businesses. The City should consider developing policies and a tax incentive program that will incentivize business owners and property owners that improve or redevelop existing commercially zoned properties. The program could providing tax breaks for the newly improved values of the site or structure of commercially zoned properties, especially those located along Wythe Creek Road.

ECONOMIC DEVELOPMENT CONCLUSIONS

The City of Poquoson has a number of locational advantages, specifically its exceptional quality of life, immediate proximity to NASA/Langley, outstanding public school system and high level of disposable income with its market area, which includes the Tabb area of York County. However, Poquoson’s location also poses a disadvantage as the City’s primary obstacle is its distance from Interstate 64. The challenge is how to capitalize on the City’s natural advantages by attracting those commercial and research and development companies that realize the benefits of an attractive, affluent, low-crime environment. Inter-jurisdictional competition for economic development is intense, and for the City to be a viable player it must make conscious commitment to what is necessarily a long-term effort. City Council and Administration must build consensus regarding the specific types of firms that the City wants to target and to develop specific strategies to best ensure the success of this most important effort.



GOALS, OBJECTIVES, AND STRATEGIES

Goals

1. Promote economic development in order to enhance the quality of life for all citizens of Poquoson.
2. Capitalize on the City's reputation for an excellent quality of life, including education, security, and suburban atmosphere.
3. Capitalize on Poquoson's natural advantages by attracting those commercial businesses that realize the benefits of an attractive, affluent, low-crime environment.

Objectives

1. Provide additional white collar and technical employment in order for our highly educated and trained citizens, including recent graduates, to find employment in the City.
2. Ensure that all new business activity in the City is environmentally sensitive.
3. Ensure commercial and professional business developments are consistent with the City's Comprehensive Plan.
4. Provide increased shopping opportunities for City residents.
5. Enhance Poquoson's commercial development image throughout the region.
6. Foster a business friendly climate.
7. Continue to enhance the City's economic environment by ensuring that sufficient land and infrastructure exists, or can be provided, and that public actions support and promote desirable commercial and professional services development.

Strategies

1. Create a marketing plan effective at attracting the following businesses to the City of Poquoson: architectural and engineering firms, banking, hotels and conference facilities, NASA support contractors, family entertainment, personal services, restaurants, medical and professional offices, specialty retail, communications facilities, insurance and finance companies, and an upscale grocery market.



2. At Messick Point, encourage the development of local seafood industry and support services including the possible development of specialty retail, aqua-culture, fish markets, marine support services, restaurants, pleasure craft facilities, wildlife refuge tours, general store, watercraft rentals and charters, and other compatible recreational uses.
3. Utilize the City's Industrial Development Authority to purchase land for additional economic development.
4. Encourage property owners in the Big Woods to jointly market their property for commercial and professional development opportunities.
5. Encourage shared land development needs among developers including shared roadway entrances, parking facilities, signs and stormwater management facilities.
6. Support the development of necessary telecommunications facilities in the City to serve both the educational and professional/commercial communities.
7. Continue to participate and assist the Poquoson Industrial Development Authority in jointly marketing and developing privately owned, non-residential properties.
8. Consider widening and improving access and infrastructure along Victory Boulevard (from Wythe Creek Road to Yorktown Rd/Cary's Chapel Rd intersection) to encourage economic development in the Big Woods.
9. Consider a tax incentive program to encourage improvements to current businesses and redevelopment of commercially zoned properties.



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INTRODUCTION

The City of Poquoson is defined by its location on a peninsula on the western side of the Chesapeake Bay. The City is characterized by extensive wetlands and wooded areas, as well as by pervasive hydric soils and a high water table. The natural environment is one of the City's greatest assets, but it also makes Poquoson vulnerable to the effects of development, pollution, and flooding.

In addition to the Comprehensive Plan, the City of Poquoson has recently completed an update to the AMEC, 2004 Multi-Hazard Mitigation Plan (Sept. 2009). The study indicates that a number of natural hazards, including hurricanes and northeasters, tend to cause flood and wind damage in Poquoson. The study notes that the majority of the City is located within the 100-year floodplain, and identifies repetitive loss areas as well as the number of structures located in flood prone areas. This information is incorporated in the recommendations identified in this plan.

GENERAL PHYSICAL SETTING

Location and Area

Poquoson is located on the eastern side of the Virginia Peninsula, between the York and James Rivers and the Chesapeake Bay. The city is bounded by the Poquoson River to the north, by the City of Hampton and the northwestern branch of the Back River to the south, by the Chesapeake Bay to the east, and York County to the west. The City has a total land area of approximately 10,000 acres, or 15.6 square miles, and approximately 168.5 miles of shoreline. Poquoson is noted for its extensive wetlands, which make up about 51% of the total land area in the City. This includes the 4,100-acre Plum Tree Island Marsh, which is the largest salt marsh in the lower Chesapeake Bay.

The City of Poquoson also contains natural heritage resources, according to data available from the Virginia Department of Conservation and Recreation's Division of Natural Heritage. Natural heritage resources are defined as habitats of rare, threatened, or endangered plant and animal species, rare or significant communities or geologic sites, and similar features of scientific



interest. Two approximate locations with documented occurrences of these resources are identified in Poquoson, generally near the Messick Point and Hunts Neck areas.

Climate

Poquoson’s climate is influenced by its proximity to the Atlantic Ocean, and the City typically enjoys mild winters and warm, humid summers. The nearest National Weather Station monitoring station is located on Langley Air Force Base in the adjacent City of Hampton. Table 5-1 shows average annual and monthly climate data made available by the National Climatic Data Center (NCDC). The average annual temperature in the Poquoson area is 59 degrees Fahrenheit. January is the coldest month on average, while July is the hottest. The average annual rainfall is about 44 inches and is well distributed throughout the year, with the wettest months typically coming in the summer.

In addition to summer thunderstorms, major producers of rainfall in Poquoson include northeasters and tropical storms. According to the NCDC, the most frequently reported weather events in the City are thunderstorms, severe lightning, high winds, heavy rains and tidal flooding. Hurricanes occasionally bring heavy rain, high winds, and tidal flooding. The most significant weather event in recent years was Hurricane Isabel, which struck on September 18, 2003. Flooding from storm surge caused extensive property damage in Poquoson and many trees were uprooted.

Table 5-1: Climate Data

LANGLEY AIR FORCE BASE, VIRGINIA													
Period of Record Monthly Climate Summary: 1/1/1930 to 3/31/2003													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	48	50	57.2	66.6	75	82.8	86.5	84.9	79.2	69.4	60.2	51.1	67.6
Average Min. Temperature (F)	32.2	33.4	39.9	48.3	57.9	66.7	71.2	70.3	64.9	53.1	43	35	51.3
Average Total Precipitation (in.)	3.56	3.33	3.95	3.04	3.67	3.52	4.86	4.73	4.3	2.93	2.91	3.1	43.89
Average Total SnowFall (in.)	3	2.3	0.8	0.1	0	0	0	0	0	0	0	1.2	7.5

Sources: NOAA, NCDC, 1971-2000 Monthly Normals, Langley Air Force Base, VA.

Climate Change

Governor Timothy M. Kaine established the Governor's Commission on Climate Change in December 2007 and tasked the Commission with identifying measures to reduce Virginia’s greenhouse gas emissions by 30% by the year 2025. The Commission completed its work in December of 2008 and issued a final report titled A Climate Change Action Plan. The Plan



contains a set of findings on the impact of climate change on Virginia and recommendations on actions to achieve the 30% reduction goal. The Plan calls for action at both the state and local level to mitigate and adapt to climate change. Among the most troubling issues for Hampton Roads is sea level rise. Sea level rise rates are predicted to accelerate over the next 100 years, inundating low-lying areas and increasing the land area that is vulnerable to storm surge flooding. In particular, Section III.A. contains a discussion of the effects on the built environment and states the following:

“Sea level rise is a major concern for coastal Virginia, particularly the highly populated Hampton Roads region. The Chesapeake Bay Program’s Scientific and Technical Advisory Committee projects that sea levels in the Chesapeake Bay region will be 0.7-1.6 meters (2.3-5.2 feet) higher by 2100. Specific impacts will vary by location, depending on changes in land elevation.”

Section 14.C. of the Plan calls on local governments to include climate change in local planning efforts:

“Local governments in the coastal area of Virginia should include projected climate change impacts, especially sea level rise and storm surge, in all planning efforts, including local government comprehensive plans and land use plans. Local governments should revise zoning and permitting ordinances to require projected climate change impacts be addressed in order to minimize threats to life, property, and public infrastructure and to ensure consistency with state and local climate change adaptation plans.”

Given Poquoson’s vulnerability to flooding, sea level rise rates should be monitored closely and incorporated in future planning efforts. The City’s Multi-Hazard Mitigation Plan was updated in September 2009 and includes revised information on climate change and sea level rise. In addition to local planning efforts, work at the regional and state level will provide a framework for local actions. Section 14.K. of the Climate Change Commission’s Plan contains the following recommendation:

“The Secretary of Natural Resources should lead an inter-agency and intergovernmental effort to develop a Sea Level Rise Adaptation Strategy by January 1, 2011. The Sea Level Rise Adaptation Strategy should encompass the full range of policies, programs, and initiatives that will be required to adapt in the areas of natural resources, economy, and infrastructure and any other area impacted by sea level rise.”

At the regional level the HRPDC is working with the Virginia Coastal Zone Management Program to develop a framework for climate change response in Hampton Roads. These efforts, combined with the development of enhanced storm surge modeling for the Virginia coast, will help to inform response to sea level rise in Poquoson.



AIR QUALITY

Clean Air Act

As a requirement of the Clean Air Act, the Environmental Protection Agency (EPA) maintains National Ambient Air Quality Standards (NAAQS) for certain criteria pollutants including ozone, carbon monoxide, and particulate matter (40 CFR 50). These standards are designed to protect the health of all Americans and to prevent harm to the environment. When a geographic area meets these standards, the area is known as an attainment area, however if an area fails to meet these standards, then the EPA designates the area as maintenance.

A designated nonattainment area must develop a plan to bring the region into compliance with the NAAQS, which it is failing to meet. In addition to developing this plan, known as a State Implementation Plan (SIP), the area must also implement transportation conformity requirements. Transportation conformity requires all regional transportation plans, programs and projects to be analyzed to ensure conformity with the EPA's Transportation Conformity Rule (40 CFR 93). The EPA must review and concur with this analysis before the Federal Highway Administration can approve it. Any changes to the regional transportation plans, programs and projects after a conformity approval is received, must be re-analyzed and approved before the change can occur. Transportation conformity is required for 20 years after an area is able to demonstrate compliance with the NAAQS. During this 20-year maintenance period, the maintenance area, as classified by the EPA, must maintain a SIP to ensure continued compliance with the NAAQS.

The Commonwealth of Virginia currently has two (2) ozone 8-hour nonattainment areas, one (1) particulate matter nonattainment area and one (1) carbon monoxide maintenance area. As of June 15, 2004, Hampton Roads is classified as a marginal 8-hour ozone nonattainment area (69 FR 23951). This reclassification occurred as a result of the EPA promulgating a new 8-hour ozone standard (62 FR 38856). The Hampton Roads ozone non-attainment area includes the counties of Gloucester, Isle of Wight, James City, and York, along with the cities of Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg (Source: Amy A. Costello, Virginia Department of Transportation, March 15, 2005).

According to the Virginia Department of Environmental Quality (DEQ), there are no known air quality problems originating in the City of Poquoson and there is no air monitoring station located within the city limits. As reported in DEQ's 2001 Virginia Ambient Air Monitoring Report, all stations in the Tidewater Monitoring Network (to which Poquoson belongs) were below the U.S. Environmental Protection Agency's (EPA's) National Ambient Air Quality Standards for carbon monoxide, nitrogen dioxide, sulfur dioxide, and particulate matter. Poquoson's Elementary School recently undertook a joint project with NASA's Department of Atmospheric Sciences in the GLOBE program (Global Learning and Observations to Benefit the Environment).



Open Burning

Open burning is regulated in all the Hampton Roads localities, including Poquoson, because the by-products of open burning include air pollutants such as carbon monoxide and hydrocarbons. Hydrocarbons indirectly contribute to the surface ozone problem; however, the State Air Pollution Control Board has indicated that open burning is a small contributor to the hydrocarbon problem. Depending on the extent of the burning, the State Air Pollution Control Board and/or the City's Fire Department may issue the permit for open burning. Most permits are for the burning of land clearing refuse such as brush, stumps, treetops, etc. It is less expensive to burn this refuse than to pay a subcontractor to chip the wood or haul it away.

Volatile Organic Compounds (VOCs)

Ozone is a poisonous form of oxygen that can damage animal and plant tissues, and cause coughing and wheezing, and may aggravate asthma and other breathing disorders. Ozone is created in the atmosphere by a chemical reaction between volatile organic compounds (VOCs), such as gas fumes, nitrogen oxides from fuel combustion, and other VOCs. Oil-based paints are commonly used by individual homeowners and painting contractors; however, oil-based paints emit volatile organic compounds (VOCs) into the atmosphere through evaporation during the drying process. In addition, equipment used in oil painting is cleaned with solvents, which also emit VOCs into the atmosphere, indirectly contributing to the surface ozone problem. Discouraging the use of oil-based paint and encouraging the appropriate disposal of household cleaners, paints, thinners and glues, all of which emit VOCs, would be a positive contribution to the surface ozone (or "smog") problem. Encouraging gasoline stations to attach fume connectors to the fuel nozzles will also reduce some VOCs.

WATER QUALITY

Water quality is a critical issue to all communities, but is particularly so for Poquoson because of its location and topography. Not only is water an important resource in terms of providing drinking water, it also provides important recreational, aesthetic, and economic benefits to the City. As with the other resources considered in this element, regulation of water quality involves a significant number of programs and initiatives at the federal, state, and local levels. These regulations and requirements are primarily directed at three targets:

- *Point sources* - i.e., "end-of-the-pipe" discharges and leaking underground storage tanks.
- *Non-point sources* - agriculture, stormwater runoff, and land development activities.
- *Wetlands* - which serve as natural filters and groundwater recharge areas.

All of these sources, together with the natural forces acting on the City's shoreline, contribute directly and indirectly to the level of water quality in the Chesapeake Bay, Poquoson River, Back River, and all of their tributaries.



Point Sources

In adopting the Federal Water Pollution Control Act in 1972, Congress made it a federal government responsibility to establish and enforce water quality standards as a means of controlling pollution of the nation’s waterways. The goal of this act, which later became the Clean Water Act, is to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters”. In order to achieve this goal, the Act originally only considered point source discharges. Specific standards are incorporated into the permits for these types of discharges. Referred to as the National Pollutant Discharge Elimination System (NPDES) permits, the State has assumed responsibility for issuing these permits through the State Water Control Board. Permits are now referred to as Virginia Pollutant Discharge Elimination System (VPDES) permits.

The Clean Water Act prohibits the discharge of a pollutant into State waters without a VPDES permit. Such permits often limit the amount and manner in which the pollutant can be discharged. Industrial wastes and wastes from sewage treatment plants are uses that typically require a VPDES permit prior to any discharge.

The Water Quality Standards established by the State Water Control Board require maintaining the levels of dissolved oxygen and pH for waters in and around Poquoson. Other standards have been established for mercury, chlorine, and other substances. In areas where shellfish are present, fecal coliform levels are established. In meeting established standards, new industries or modifications to existing industries must use the “best available control technology” in order to comply with the water quality standards.

Non-Point Sources

In 1987, the Clean Water Act was amended to include “non-point” sources (i.e., pollution from an indirect source such as stormwater runoff). Non-point source pollution in waters surrounding Poquoson comes from several sources: residential, urban, and/or agricultural runoff, failing/inadequate septic systems, natural conditions and drainage, and boat pollution from public and private boat slips. Loss of protective vegetation and the increase in impervious surfaces (buildings, roads, and parking lots) increases the amount of stormwater runoff and also the runoff levels of pollution and nutrients. Besides the sediment and nutrients, toxins that may be discharged add to the overall stress on the finfish and shellfish population. Land use activities contribute directly to a decrease in water quality through the various activities shown in Table 5-2.

Table 5-2 - Land Use Activity Pollutants

Land Use Activities	Pollutant
Land clearing, tilling	Phosphorous bound to sediment
Parking lots and streets	Petroleum products
Heavy application of plant fertilizers	Nitrogen and phosphorus
Malfunctioning septic tanks	Nitrogen, phosphorus, and fecal coliform



Total Maximum Daily Load (TMDL)

The City of Poquoson has been collaborating with the Virginia Department of Environmental Quality (DEQ) and Hampton Roads Planning District Commission (HRPDC) on the development of a Total Maximum Daily Load (TMDL) Implementation Plan. A Total Maximum Daily Load (TMDL) is the maximum amount of a pollutant that a waterbody can receive and still maintain its designated use. The Clean Water Act requires that TMDL studies be completed for all waters not meeting appropriate water quality standards. In Virginia, the Department of Environmental Quality (DEQ) is rapidly developing TMDL's for various pollutants throughout the state.

A TMDL Study identifies sources of pollution and reductions needed from the identified pollutants to attain water quality standards. Pollution from both point sources such as residential, commercial, or industrial discharges and non-point sources such as residential, urban, or agricultural runoff are included in the TMDL study. Although not a federal requirement, Virginia state law does require the development of an Implementation Plan. Poquoson has completed both of its studies, one each for Poquoson and Back Rivers, which determined the waterbodies to be impaired by bacteria for the purposes of shellfish harvesting. Currently, the Environmental/Physical Planning Department of the Hampton Roads Planning District Commission (HRPDC) is in process of developing implementation plans for each waterbody for the cities of Poquoson and Hampton and York County.

Wetlands

Wetlands, commonly referred to as swamps and marshes, combine the characteristics of both aquatic and terrestrial areas. They are typically found along the flood plain, behind dams of various types, and in sheltered areas along inter-tidal coasts. However, they can occur wherever there is, for at least part of the year, shallow stagnant water in which higher order plants can grow. Of its total land area 9,395 acres, Poquoson has 5,089 acres of wetlands according to Virginia Institute of Marine Science (VIMS). This includes the 4,100 acre Plum Tree Island Marsh, the largest saline marsh in the lower Chesapeake Bay and 213 acres of Cow Island.

Wetlands have traditionally been thought of as being undesirable features because they can be breeding grounds for mosquitoes. Consequently, wetlands have been the object of a large number of drainage projects and land filling efforts in an attempt to convert them to farmland or development sites. Since the early 1970's, however, the scientific community has obtained significant information regarding the function and importance of wetlands. Wetlands, including both tidal wetlands and non-tidal wetlands, are a unique and important form of habitat occupying both coastal and inland sites. In particular, wetlands can absorb floodwaters, dampen wave action on the shoreline, provide nutrients and an aquatic and wildlife habitat/refuge for important marine life, filter sediment from upland runoff, and impart to adjacent land extra value by virtue of water frontage.



Tidal wetlands consist of saltwater marshes, freshwater marshes, and non-vegetated areas such as beaches and mudflats. The marshes are typified by anaerobic mineral soils vegetated principally by grasses. They exist in areas with little topographic relief, poor drainage, and sufficient water supply to keep the ground waterlogged. Mudflats and beaches are formed of soils, which for one reason or another do not support either aquatic or terrestrial vegetation. Frequently, these soils do not have a high enough supply of minerals to stimulate decay of organisms and prevent the accumulation of organic materials. Both vegetated and non-vegetated tidal wetlands support a multitude of animal species.

Why are wetlands important resources?

- Wetlands lie in depressions, holding vast quantities of stormwater by retarding the rate at which it can run off. This allows water to percolate into the ground, recharging groundwater supplies while, at the same time, filtering stormwater runoff.
- Wetlands retain runoff, which helps reduce or prevent flooding. Wetlands located adjacent to streams also allow floodwaters to dissipate across areas which should cause relatively little damage to manmade structures. In most cases, salt marshes along coastal areas also provide self-regenerating protection from storm waves and reduce the risk of shoreline erosion.
- Wetlands furnish the primary nesting and feeding areas for waterfowl.
- Wetlands support a number of species of animals and plants, as well as a number of game fish.
- Wetlands furnish the primary nesting and feeding areas for waterfowl.
- Wetlands support a number of species of animals and plants that cannot survive elsewhere.

The Virginia Marine Resources Commission (VMRC) has classified wetlands into twelve types. Each type has different characteristics such as:

- The amount of plant material produced by marsh plants.
- The kinds of waterfowl and wildlife.
- The prevention of erosion.
- The control of water quality.
- The prevention of floods.

For wetland management purposes, VMRC has classified the twelve types into five groups. Marsh groups, one through four, are present in Poquoson. VMRC describes each group as follows:

1. Group One Marshes have the highest value in productivity and wildfowl and wildlife utility, and are closely associated with fish spawning and nursery areas. They also have high value as erosion inhibitors, are important to the shellfish industry and are valued as



nature shoreline stabilizers. Group One marshes should be preserved. These are typically saltwater marshes located adjacent to a water body.

2. Group Two Marshes are of only slightly lesser value than Group One marshes. The major difference is that detritus (disintegrated plant material) produced in these marshes is less readily available to the marine environment due to higher elevations. Consequently there is less tidal action to flush material into adjacent waterways. Group Two marshes have very high values in protecting water quality and acting as buffers against coastal flooding. These marshes should be preserved, but if development in wetlands is considered to be justified, it would be better to alter Group Two marshes than Group One marshes. These are typically salt, brackish, or freshwater tidal marshes, occasionally inundated, and located adjacent to upland areas or non-tidal marshes or wetlands.
3. Group Three Marshes are quite dissimilar in properties. Some Group Three marshes have high values to wildlife and waterfowl, while others have little wildlife value but rank high as an erosion and flood buffer. Group Three marshes are important though their total values are less than Group One and Two marshes. These marshes are typically not inundated by water but are characterized by tall grass and scrub-shrub conditions.
4. Group Four Marshes are valued primarily for their diversity and bird nesting area they add to the marsh ecosystem. To a lesser extent they also act as an erosion buffer. Group Four marshes should not be unnecessarily disturbed, but it would be better to concentrate on necessary development in these marshes rather than disturb any of the marshes in the preceding groups. These marshes support tall grass, shrubs, and small trees. These wetlands can be found in the interior portions of Plum Tree Island and Cow Island National Wildlife Refuge. Nearly all of Poquoson's wetlands are in Group One; Group Two wetlands are the next most common.

Non-Tidal Wetlands

There are also a number of non-tidal wetland areas in Poquoson. Non-tidal wetlands do not receive daily tidal inundation, but exhibit the characteristics of wet soils (i.e. hydric soils), a high water table, and have vegetation that is tolerant of wet conditions. Due to seasonal and yearly variations, some non-tidal wetlands may be dry in the summer and fall, making identification difficult. However, because of the rich variety of species supported by such seasonal wetlands, many scientists believe them to be at least as valuable to the environment as the tidal and perennial wetlands. Similar to tidal wetlands, non-tidal wetlands function as groundwater recharge areas by trapping runoff and storing nutrients. Non-tidal wetlands also act to hold water during floods and can lessen a storm's impact. Characteristic vegetation includes Willow Oak, White Oak, and a variety of sedges and certain ferns.

Specifically, delineating non-tidal wetland areas in Poquoson is challenging. Some areas of the city have been identified as having non-tidal wetlands primarily because of the presence of hydric soils. Unlike tidal wetlands, which are relatively easy to identify, the delineation of non-tidal wetlands in the field is more difficult. The United States Army Corps of Engineers (ACOE) conducts specific non-tidal wetland delineations. Pending Federal legislation, regarding the



definition and regulatory measures affecting non-tidal wetlands, may have a dramatic effect on the potential of development of lands in the City that have tidal wetlands characteristics. The City of Poquoson has adopted maps showing the general locations of suspected non-tidal wetlands. However, development in these areas must first be preceded by a wetlands delineation confirmed by the ACOE. All other necessary permits must be secured as required.

Estuary Condemnation

Poquoson soils are known for their high water table and inability to percolate properly. This may allow pollutants to enter the water table without being properly filtrated through the soil. At the present time, parts of five of the City's estuaries have been condemned by the State Health Department for the taking of commercial shellfish as a result of fecal coliform bacteria. As a result of this contamination, many questions have arisen as to the exact cause(s) and source(s) of this contaminant. In an effort to answer these questions, the City collaborates with the Hampton Roads Planning District Commission in an attempt to identify the source and methods to eliminate such bacteria utilizing a regional approach.

Fishing Grounds & Condemned Shellfish Areas

Nearly all waters around Poquoson are public or leased commercial shell fishing grounds. The Virginia Marine Resources Commission has granted many private offshore shellfish leases in Poquoson. Other areas have been set aside for public shellfish harvest. All areas are open to the public for hook and line fishing. All commercial fish, crabbing, and shell fish processing at the Messick Point Marina and Poquoson Marina are monitored by the Virginia Department of Health.

The following bodies of water have been closed to the taking of shellfish:

- Lambs Creek
- White House Cove
- Cedar Creek
- Topping Creek
- Northwest Branch of the Back River

Impacts from Shoreline Access

Part I: Guidance Manual, Section IV.B. and Appendix N of the Regional Shoreline Element of Comprehensive Plans (HRPDC, 1997) contains detailed information on potential environmental impacts of water access facilities. In summary, any form of shoreline access may potentially impact water quality in some way. The magnitude of the impact will depend on the type of access. The type of shoreline access that presents the greatest impact to water quality is a marina. Marinas can potentially impact water quality in the following ways:

- Re-suspension of bottom sediments by associated dredging and boating activities, increasing turbidity levels and releasing pollutants, such as bacteria, viruses, nutrients, heavy metals, oil and grease, and oxygen depleting substances;



- Discharge of sanitary wastes from shoreside facilities and boats, which results in increased fecal bacteria levels and decreased dissolved oxygen levels;
- Stormwater runoff from impervious surfaces associated with marina development can transport nonpoint source pollutants directly into receiving waters. These pollutants include sediment, bacteria, oil and grease, heavy metals, nutrients, detergents, and oxygen depleting substances;
- Oil and fuel discharges associated with two-cycle boat engines;
- Pollutants associated with boat maintenance activities. Pollutants include toxic substances associated with antifouling paints, oil contained in the bilge water, and runoff associated with boat washing activities; and
- Associated piers, docks, and bulkheads may decrease water circulation and decrease aquatic habitat by blocking available light. Metals associated with the toxic substances used to treat timbers may leach into the surrounding waters.

The construction and operation of boat ramps will have many of the same impacts on water quality as marinas; however, they are usually much less significant. Boat ramp facilities are generally smaller in scale, accommodate less noxious uses, and usually require less encroachment on subaqueous land. Compared to marinas and boat ramps, non-motorized boating access, such as canoe/kayak access, presents few adverse impacts to water quality. Potential impacts from pier and bank fishing access are minimal, except perhaps for the installation and use of docks and piers and fish cleaning activities. Similarly, pedestrian shoreline access presents minimal impacts to water quality. A potential concern associated with pedestrian access may be stormwater runoff due to an increase in impervious surface associated with access facilities, such as buildings and parking lots.

Impacts of Land Development

Land uses adjacent to the shoreline, both existing and proposed, are required by the Chesapeake Bay Preservation Act to be considered in comprehensive planning studies. In this regard, conflicts between land/water use and water quality can be analyzed. Activities on the land and water invariably impact upon the utilization and quality of water resources. Potential impacts include increased nutrient, sediment, and pesticides carried in urban runoff and increased flows, which can cause streambank erosion.

In a developing locality, through the comprehensive planning process, local governments have the opportunity to direct conflicting land and water uses from sensitive natural resources. In Poquoson, however, where much of the shoreline is already developed or subdivided, this is possible only in limited areas. In areas subdivided or developed prior to passage of the Chesapeake Bay Preservation Act, redevelopment efforts serve as the primary means for addressing existing water quality conditions. Redevelopment provides an opportunity to bring waterfront areas into compliance with state and local stormwater management programs by



utilizing higher densities, mixed uses, and other stormwater techniques and technology to reduce negative impacts to the Bay.

PHYSICAL CONSTRAINTS TO DEVELOPMENT

The regulations of the Chesapeake Bay Preservation Act (CBPA) and the Department of Conservation and Recreation – Division of Chesapeake Bay Local Assistance (formerly CBLAD) Checklist for Evaluation of Comprehensive Plans require that local comprehensive plans address existing natural limitations of the land that can act as physical constraints to development. These may include flood prone areas, highly erodible soils, highly permeable soils, wetlands, steep slopes, hydric soils, seasonally high water table, groundwater recharge areas, significant wildlife habitat areas, prime agricultural lands, and protected lands. An assessment of soils for septic tank suitability is also required.

The physical constraints identified by the DCR-DCBLA (CBLAD) Checklist that are applicable to long-term planning in the City of Poquoson include the following: flood prone areas, wetlands, hydric soils, and a seasonally high water table. These are considered to be important physical constraints to development in the City. However, because development patterns have been well established and sanitary sewer service is now available to all homes within 1,000 feet of the public right-of-way or with access to the right-of-way, soil constraints may not preclude additional development in the City. Moreover, the City does not have any steep slopes or areas underlain by highly permeable soils. Physical constraints that are not applicable to Poquoson are not addressed here.

Flood Prone Areas

Flood prone areas are those sites in the City that are predictably subject to overflows from nearby water bodies. Development in flood prone areas is potentially costly and hazardous. Several factors can determine the amount of damage caused by flooding, such as topography, rate of water rise, depth and duration of flooding, geographic orientation of the shoreline, and the amount of threatened development. Development in flood prone areas can worsen flooding by increasing the amount of impervious cover, which prevents the natural infiltration and absorption of water into the soil. The Chesapeake Bay Local Assistance Department (now DCR-DCBLA) notes that the benefits of preserving floodplains include enhancing water quality, allowing recharge of groundwater aquifers, reducing flooding, providing fisheries and wildlife habitat, providing recreational opportunities, and protecting historic lands (1989). The flood prone areas in the City were developed before they were identified as “special flood hazard areas” and before the creation of federal and state floodplain protection programs. This historical development limits the opportunity to realize the full benefits of floodplain preservation. The City’s floodplain management effort will continue to focus on the identification, reduction, and mitigation of flood hazards within developed areas. There may also be some opportunities for targeted restoration of floodplains through buy-out and relocation programs.

The Federal Emergency Management Agency (FEMA) identifies flood prone areas in the City of Poquoson via hard copy Flood Insurance Rate Maps (FIRM) issued on August 3, 1992.



However, these maps are currently being revised by FEMA and are anticipated to be released soon with updated. Elevations in the City range from 0-10 feet above mean sea level, and approximately 86% of Poquoson is within the 100-year flood plain. All new structures within these areas are required to be built with their finished floors at least 1-foot above the FEMA determined 100-year floodplain Base Flood Elevation (BFE). Any elevating of structures must also meet this requirement. It is recommended that homeowners possess some form of flood insurance coverage for their home.

Map 5-1 illustrates the flood prone areas as indicated on the FIRM maps. According to FEMA, Zone AE is the flood insurance rate zone that corresponds to the 1-percent annual chance floodplains. In most instances, Base Flood Elevations are determined within this zone and mandatory flood insurance purchase requirements apply. Zone VE is the flood insurance rate zone that corresponds to areas within the 1-percent annual chance coastal floodplain that have additional hazards associated with storm waves. Mandatory flood insurance purchase requirements also apply here.

Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 (DMA 2000) is a key component of the Federal government's attempt to reduce the rising cost of disasters. The Act establishes the Pre-Disaster Hazard Mitigation Program (PDM) and new requirements for the Post-Disaster Hazard Mitigation Grant Program (HMGP). It emphasizes the importance of mitigation planning in communities. DMA 2000 requires local governments to develop and submit mitigation plans to qualify for PDM and HMGP funds. The plan must demonstrate a jurisdiction's commitment to reduce risk from natural hazards. The final plan must be adopted by the jurisdiction and then approved by FEMA. These approvals have now been obtained and the City's final plan is presented on-line for public review with a most recent update of 2009.

Tidal Wetlands

Wetlands are defined in Chapter 13 of Title 28.2 of the Code of Virginia and are classified as nonvegetated or vegetated wetlands. Nonvegetated wetlands are lands without vegetation lying contiguous to mean low water and between mean low water and mean high water, including unvegetated areas subject to flooding by normal and wind tides but not hurricane or tropical storm tides. Vegetated wetlands are defined as lands lying between and contiguous to mean low water and an elevation above mean low water equal to the factor one and one-half times the mean tide range and consist of more visible marshes and swamps. The type and extent of wetlands in Poquoson are shown on Map 5-2.

According to the Virginia Wetlands Management Handbook (1996), there are five major benefits of wetlands. First, wetlands are important sites of food and energy production for the marine ecosystem. Second, they provide important waterfowl and fish and wildlife habitat. Third, wetlands provide natural protection from shoreline erosion. Fourth, wetlands help to filter pollutants, such as sediment and nutrients, from urban runoff, minimizing impacts to local water



quality. Finally, wetlands help to reduce flooding through their capacity to absorb large amounts of water.

The total land area in the City of Poquoson is 10,000 acres, of which 5,089 acres are wetlands according to the Virginia Institute of Marine Science (VIMS). The 4,100-acre Plum Tree Island Marsh, the largest saline marsh in the lower Chesapeake Bay, makes up the eastern half of the City bordering on the Bay. Cow Island contains another 213 acres of marsh on the Poquoson River adjacent to Plum Tree Island. Plum Tree Island National Wildlife Refuge was created in 1972 when the former bombing range became excess to the needs of the U.S. Air Force. Due to the presence of unexploded ordnance, the U.S. Fish and Wildlife Service (USFWS) have been unable to expand management of the site and do not allow public access to it. However, the Refuge is part of the Atlantic Flyway, and provides important feeding and nesting habitat for a variety of birds and other wetland-dependent wildlife. Likewise, Cow Island was acquired by the Department of the Interior in 1997 and became part of the USFWS inventory. It was not part of the former bombing range and is not part of the Federal Government Superfund Cleanup Program. However, the United States Army Corps of Engineers (USACE) started a remedial investigation for ordnance cleanup on Plum Tree Island in June of 2008, and conducted the first phase of field work from January through March 2009.

Non-Tidal Wetlands

There are also a number of non-tidal wetland areas in Poquoson. Non-tidal wetlands function as groundwater recharge areas and can mitigate the effects of floods. Delineation of these areas occurs on a case-by-case basis because of the difficulty associated with determining their locations. The City has adopted maps showing the general location of suspected non-tidal wetlands; however, an on-site delineation is required to be confirmed by the U. S. Army Corps of Engineers before development can occur. In order to fill non-tidal wetlands, one must obtain all of the necessary federal, state and local permits to do so.

Wetland Protection Policies

Chesapeake Bay Preservation Act (CBPA)

In accordance with the State of Virginia's Chesapeake Bay Preservation Act, the City of Poquoson protects tidal wetlands through its Environmental Management Area (EMA) Overlay District of the Zoning Ordinance. Under the Ordinance, any proposal to develop any vegetated or nonvegetated tidal wetland must obtain a permit from the City of Poquoson Wetlands Board. The Board works in conjunction with the Virginia Marine Resources Commission and the U.S. Army Corps of Engineers' Section 404 permit program in reviewing applications. In addition, tidal wetlands are protected as Resource Protection Area (RPA) features by the City's EMA Overlay District. The EMA District protects tidal wetlands by requiring a buffer between development and the RPA feature. The EMA District also protects non-tidal wetlands and other areas not included in the RPA by designating them as Resource Management Areas. Some shoreline projects may include impacts under both the EMA Ordinance and the Chesapeake Bay



Preservation Act and may require coordinated reviews to address the requirements of both programs. Map 5-3 depicts Chesapeake Bay Preservation Areas in the City of Poquoson.

The Chesapeake Bay Local Assistance Board (CBLAB) is currently in the process of developing the review program for Phase III that will assess the extent to which Bay Act localities are in compliance with this requirement. Once the criteria of review have been established, localities like Poquoson will use these criteria to evaluate land development ordinances and policies and revise if necessary. Phase III of local government implementation of the Chesapeake Bay Preservation Act (Chesapeake Bay Preservation Act) requires the City of Poquoson to review local land development ordinances, and revise if necessary, in order to ensure these ordinances adequately address the protection of the quality of state waters. The Chesapeake Bay Preservation Area Designation and Management Regulations require local governments to have provisions in their ordinances to ensure, that as land development occurs, three performance criteria are addressed: 1) land disturbance is minimized, 2) indigenous vegetation is preserved and, 3) impervious cover is minimized.

Virginia Nontidal Wetlands Act of 2000

The Virginia Nontidal Wetlands Act of 2000 governs activities affecting non-tidal wetlands within the state, and includes the following items:

- Requires permittees first to avoid, then minimize and, if wetlands must be destroyed, to replace their acreage and function.
- Adopts the scientifically accepted definition of wetlands currently used by the federal government and the State Water Control Board.
- Requires permits and mitigation from those proposing to drain, dredge, excavate, ditch, flood or impound, fill or discharge into nontidal wetlands.
- Requires the State to seek a Corps of Engineers' State Programmatic General Permit for most activities, thereby streamlining the permitting process.
- Exempts normal agricultural and silvicultural activities and homeowner landscaping and maintenance.
- Requires general permits for a variety of activities, including sand, coal and gas mining activities, linear easements for public utilities and transportation projects, and activities affecting less than one-half acre.

The U.S. Fish and Wildlife Service (USFWS) did not identify any “priority wetland areas” in the City of Poquoson in the Regional Wetlands Concept Plan (USFWS, 1990). In addition, the Chesapeake Bay Local Assistance Manual (CBLAD, 1989) did not identify any wetland areas in the City that have priority for protection.



Soil

Type & Slope

The Natural Resources Conservation Service completed a survey of Poquoson soils in 1996, and subsequently published its findings as part of the Soil Survey Geographical Database (SSURGO). Maps 5-4 and 5-5 illustrate soil composition and slope in the City, according to the National Resources Conservation Service. Poquoson's soils consist primarily of the Tomotley Udorthents Munden-Axis-Nimmo composition. They are deep and poorly drained to moderately well drained soils, with loamy subsoil. Slopes are generally less than 3%.

Map 5-6 shows that the majority of Poquoson's soils are classified as hydric, meaning that inundation occurs for periods of time that are sufficient to create anaerobic conditions. Although not all areas with hydric soils are classified as wetlands, these areas generally have a high water table and are susceptible to poor drainage and flooding.

Effect on Land Uses

According to the Soil Conservation Service, Tomotley and Nimmo soils are characterized by high seasonal water tables and slow percolation. Moderate limitations for commercial and residential buildings and roads are associated with these soil types, and they are unsuitable for permanent subsurface structures like basements or septic tanks. Axis soils are also found in large areas of the city, particularly in the Plum Tree Island area. These soils are primarily marsh and are unsuitable for building. Map 5-7 identifies the limited areas with potential for having highly erodible soils. These include Messick Point, White House Cove, Floyds Bay, and Topping Creek.

Soil Suitability for Septic Systems

Most of the soils in the City of Poquoson have a high seasonal water table and are, therefore, unsuitable for septic systems. As of 1999, sanitary sewer service was extended making all homes within 1,000 feet of the public right-of-way or with access to the right-of-way available to sanitary sewer. Property owners with existing septic systems that were available to sanitary sewer were given one year from enactment of the ordinance to connect to the system or one year from payment in full of the sewer availability fee. Property owners were allowed to enter into contracts with the City for payment of the availability fee over a 36-month period with connection to the system required within one year thereafter. The City currently requires all abandoned septic tank(s) to be pumped out and filled or demolished (Poquoson City Code Sec. 82.35 (n), October 2003).



Forest and Farmland

Vegetation serves important functions in maintaining the land and supporting development by stabilizing the soil, preventing erosion, increasing soil permeability, and decreasing stormwater runoff. Vegetation also serves as a buffer for adjacent land uses, lessens the impact of noise, wind and heat, improves air quality, and provides habitat for wildlife.

Poquoson contains mixed pine and hardwood tree stands in upland areas, which are generally characterized by the following species: American Beech, Loblolly Pine, Virginia Pine, Tulip Poplar, Oak, and Dogwood. The City also has several wooded ridgelines located within tidal marsh areas. These areas, including Black Walnut Ridge, not only provide significant wildlife habitat but also help to protect developed areas from tidal flooding. Deforestation associated with residential and commercial development is a significant environmental and aesthetic concern for the City. Development could impact Poquoson's wooded character and reduce the benefits derived from vegetated land.

There are few active farms remaining in Poquoson. Most of the farms that do exist are actually large gardens producing corn, tomatoes, pumpkins, and berries that are sold at local produce stands. Of the vacant land remaining in Poquoson, about 21% is comprised of agricultural, woodland, or open areas. The conservation of these open spaces, particularly of the garden farms and small pine forest groves, are influential characteristics of Poquoson's agricultural heritage and small town atmosphere.

Stormwater Management

Stormwater Management practices have evolved over the years from providing proper drainage for prevention of flooding, to controlling quantity and quality of stormwater runoff, to that of pre-development conditions. This is done through a variety of Best Management Practices (BMPs), including wet ponds, dry ponds, infiltration systems, porous pavement, and grass swales. The qualitative aspects of drainage are especially important to the Chesapeake Bay Preservation and Watershed Management areas.

Stormwater management systems must fulfill the following basic objectives:

- Prevent flooding and subsequent property damage from runoff during rainfall events.
- Control post-development flow from a property to the pre-developed rate unless the site discharges to an adequate and proven system.
- Release water that is as free from sediment and normal water-borne pollutants as possible.
- Be maintainable so that they continue to function as designed.

All of these objectives should be accommodated in the initial design process since it is both difficult and expensive to retrofit systems that fail to accommodate one or more of the objectives.



HISTORICAL & ARCHAEOLOGICAL RESOURCES

The Poquoson Historical Commission has developed a “Historic Trail” that identifies and describes many of the significant historic buildings and properties in Poquoson. Many of these places have been noted through the placement of a historical marker. The Virginia Landmarks Register or the National Register of Historic Places can formally recognize historic resources. In 1995, the State Historic Preservation Office identified Amory’s Wharf as being included on the register. Listing in either register does not affect property rights nor insure protection. The City of Poquoson should consider working with the Poquoson Historic Commission and the State Historic Preservation Office on the development of a detailed historic resources inventory and protection plan. Poquoson’s rich heritage should be preserved.

Poquoson is also very rich in archaeological resources. Archaeological excavation projects conducted in the City in 1995 recovered many artifacts from the 16th and 17th century. These artifacts, some of which date back to prehistoric times, provide an excellent glimpse into Poquoson’s long history. Unfortunately, development pressures in the city threaten these land areas and archaeological surveys should be encouraged prior to development on certain properties. In addition, the City should consider preserving some of these archaeologically significant land areas as parks and open space lands. The City of Poquoson has contributed to the development of Poquoson Museum that documents the City’s past and displays the artifacts found in the area and proves to be a source of great community pride.

NOISE POLLUTION

General

While previously never really acknowledged as a form of environmental pollution, noise has become an increasing problem with the widening of roadways, the increase in all forms of traffic (vehicle/air), and various other motor noises. In 1972, Congress passed the Noise Control Act as a means of establishing noise emission standards for new products. EPA coordinates federal noise and research programs and determines whether noise emission standards protect the public health. Although state and local governments do not set standards, noise can be controlled through local regulations and licensing requirements.

Property Uses & Location

Recreation areas and commercial uses may present minor noise concerns to adjacent residential areas. Fortunately, most of the noise generated at the City’s parkland (generally crowd noise at sporting events) is abated from affecting residential developments by landscaped areas and/or transitional uses. Future siting of recreational facilities, both public and private, should include the development of appropriate sound barriers, walls, and/or vegetation that effectively diffuse or silence decibel levels while remaining aesthetically pleasing. Noise generated by commercial uses is also an issue, particularly when such uses are immediately adjacent to residentially zoned properties. Typically, this is a factor with legal non-conforming uses since future land proposals



must be appropriately located and the effects on adjacent properties minimized satisfactorily. Current City Site Plan Ordinance regulations require that vegetated buffer areas be developed between the commercial and residentially zoned properties. Future light industrial land uses should also be sited and developed to limit the amount of noise and impact that these uses will have on adjacent land uses.

Traffic

Roadways

Noise generated by roadways in Poquoson is not generally a problem, since most heavily traveled roadway sections in the City are within commercial districts. The majority of the commercial uses are located within the center of the Central voting district. As roadways are widened along residential areas, attention should be given to encourage greater setbacks or establishing buffer areas for undeveloped parcels, and to ensure that landscaped areas are included as part of roadway construction.

Watercraft

At this time there are not any industrial ports, shipyards or extremely large watercraft mooring located within the City of Poquoson to contribute significantly to noise pollution. Due to Poquoson's proximity to larger ports that currently promote this use, the probability is low that Poquoson would be able to attract these types of uses. However, sites that may possess this potential, such as Amory's Wharf or Messick Point, are located far enough away from residential uses not to affect nearby residences. Still, since sound tends to be noticeable at longer distances across water, any feasible means to attenuate the sound before it reaches the residences would be prudent.

Aircraft

Living in the Hampton Roads area, one must develop a fondness to jet noise. The Hampton Roads area is the largest inventory of military bases on the east coast and Poquoson's location is directly adjacent to Langley Air Force Base (LAFB). While LAFB's proximity to Poquoson has many advantages, it also presents some inconveniences with noise pollution.

Jet noise is the major contributor to noise pollution for Poquoson. Although this use is not within the City's control; the City of Poquoson can control the types of uses and building requirements near LAFB. According to Langley Air Force Base Air Installation Compatible Use Zone (AICUZ) update, Final Report July 2007, none of Poquoson's land is located within a designated Accident Potential Zone (APZ); please see Map 5-14. Map 5-14 also depicts only the Amory's Wharf and Messick Point areas of Poquoson within the 65-70 decibel level of noise, which is the lowest amount measured in the study. Fortunately, both these areas are designated as commercial on both the current & future land use maps. If residential uses are ever proposed for these areas; modifying the building requirements to attenuate the residences would be prudent and beneficial to the property owner and their clients.



LIGHT POLLUTION

Just as Noise Pollution years ago, Light Pollution is a relatively recent issue that poses health and environmental hazards. Many localities have regulations that attempt to deter light pollution such as requiring downward facing light fixtures, requiring horizontally shielded light fixtures, limiting light usage to peak hours, and regulating the intensity and type of light. The cause of light pollution is directly connected to the population and their behavior since the more a population grows the more light is used.

Dark-Sky Initiative

Current initiatives to bring awareness to light pollution include the International Dark-Sky Association (IDA). International Dark-Sky Association first formed due to interference to astronomical research. It was later determined that light pollution also impacts nearby wildlife habitats and human health. The International Dark-Sky Association developed guidelines to assist localities to reduce light pollution and achieve “dark sky community” designation. According to the International Dark-Sky Association, the four major effects of light pollution are:

1. Loss of visibility of night-time skies;
2. Negative health effects on humans and animals;
3. Detrimental effects on the environment; and
4. Huge economic loss on wasteful expenditures.

Some the advantages of reducing light pollution are obviously to counter the negative environmental and economic effects, but reducing light pollution has other aesthetically pleasing qualities, such as maintaining a community’s rural character or small town charm. Light pollution not only brightens the sky unnecessarily, but it also brightens neighborhoods and adjacent properties unnecessarily. Reducing the amount of glare and scattered light enhances public safety along roadways and reduces costs of energy resources. The City of Williamsburg strictly regulates and emphasizes this notion in its historic district to emphasize the colonial heritage and capitalize on its character. Some other localities in the State of Virginia that are aware of IDA and their purpose are the counties of Albemarle, Fauquier, Loudoun, Botetourt, Warren and the Town of Blacksburg.

While light pollution is limited in Poquoson and has not detracted from Poquoson’s small town character, future growth may potentially bring this effect about, especially commercial development. Therefore, the City of Poquoson should revisit City codes and ordinances, particularly the Site Plan Ordinance, and adopt provisions that will reduce light pollution and emphasize the community’s desired appearance. Small provisions that can be implemented in the Zoning Ordinance are requirements of horizontally shielded lighting, downward facing fixtures, and restricting light use of businesses to operational hours.



GOALS, OBJECTIVES, AND STRATEGIES

Goals

1. Preserve and enhance both the natural and manmade environment of Poquoson, while permitting development to occur in accordance with the Comprehensive Plan.
2. Maintain and keep current all Federal and State regulations and ordinances relevant to the restoration, preservation, and maintenance of Poquoson's natural environment.
3. Reduce hazards to persons, property, and the environment caused by stormwater runoff from developed areas.
4. Protect coastal wetlands, marshes, rivers, inlets, and other bodies of water from degradation associated with land development.
5. With cooperation and assistance from the Department of Interior, attempt to enhance wildlife habitat in and adjacent to the Plum Tree Island Refuge.
6. Improve the high level of environmental quality in Poquoson.
7. Enhance the public awareness and understanding of the importance of environmental conservation and preservation.
8. Improve the quality of life by limiting noise and light trespass associated with non-residential development.
9. Achieve and maintain regional attainment with the National Ambient Air Quality Standards.

Objectives

1. Improve and protect water quality of all water bodies in and around Poquoson.
2. Ensure enforcement of erosion and sedimentation control regulations during land development.
3. Assure that new development minimizes adverse impacts on the natural environment.
4. Preserve scenic, cultural, historic and archaeological resources essential to the City's small town and historic character, economic vitality, and overall quality of life.
5. Protect the availability, quantity, and quality of all surface and groundwater resources.



6. Promote site design and land development that blends appropriately with natural features and terrain.
7. Strictly enforce appropriate methods of construction in the development process to control sedimentation, pollutant loading and stormwater run-off, especially where development takes place in proximity to rivers, inlets and other bodies of water.
8. Protect coastal wetlands, marshes, rivers, inlets and other bodies of water from destruction, disturbance, pollution and siltation associated with land development.
9. Protect life and property in Poquoson by taking appropriate measures to prevent flood and storm surge damage.
10. Require that development plans identify environmental elements to be impacted and what necessary mitigation measures will be needed to satisfy Federal and State requirements.
11. Continue to effectively enforce the Environmental Management Area Overlay District and State Stormwater Regulations to satisfy the requirements of the Chesapeake Bay Preservation Act and Regulations.
12. Control the impact of noise generated by roadways, recreational areas, and commercial development.
13. Encourage programs and articles, through various media, and business practices, which educate and inform the public concerning environmental protection programs and/or potential environmental hazards.
14. Pursue the preservation of historic and archeological sites in the City.
15. Achieve a recycle rate of 90% according to Virginia Peninsulas Public Service Authority (VPPSA) reporting.
16. Preserve and protect important habitat for migratory bird species including shorebirds, wading birds, waterfowl, the Bald Eagle, and several species that are within the State of Virginia by limiting habitat destruction that could occur through extensive harvesting of timber and filling of wetlands by supporting State and federal agencies goals to improve and preserve Plum Tree Island Refuge.

Strategies

1. Develop and implement a Transportation Demand Management (TDM) Plan, in concert with other Hampton Roads localities that provide for increased public transit, pedestrian facilities, ride sharing and other “non-single occupant” transportation modes.



2. Continue to regulate open burning, and consider eliminating open burning of land clearing refuse for major subdivision projects.
3. Continue to work with the Virginia Peninsulas Public Service Authority to provide recycling opportunities for the proper disposal of automotive and machine fluids, household cleaners, paints, thinners, glues and other fluids and chemicals that emit volatile organic compounds.
4. Include landscaping as part of roadway widening projects to reduce the impacts of transportation related noise, beautify streetscapes and improve water quality.
5. Encourage innovative environmental designs achieving “best” stormwater management practices.
6. Encourage land use patterns that do not rely so heavily on intensive automobile use. e.g., provision for bike paths and sidewalks to/from business district, schools, library, and recreational facilities.
7. Encourage the use of conservation easements as a means to protect and preserve areas with desirable or sensitive environmental or aesthetic qualities.
8. Continue participation under the Federal Flood Insurance Program and Community Rating System which enable flood insurance participants to become eligible for certain reductions in premiums.
9. Strictly regulate permitted activities and development in wetlands, through the enforcement of local, state and federal wetlands regulations.
10. Ensure that all shoreline improvement and renovation projects are consistent with the Shoreline Erosion Control Guidelines developed by the City of Poquoson Wetlands Board.
11. Continue to develop and enforce zoning and use regulations and other City ordinances that ensure the preservation, to the maximum extent possible, of rare and threatened plant and animal species, wetlands, fragile shorelines, critical wildlife habitats, natural areas, and other environmentally sensitive areas and resources.
12. Ensure that water dependent activities, such as marinas and docks, are located and conducted in an environmentally sensitive manner and include adequate marine sanitation facilities.
13. Encourage the development of educational and passive recreational access to special environmental and historical areas.
14. Work cooperatively with the U.S. Fish and Wildlife Service and the United States Army Corps of Engineers to enhance wildlife habitat in and adjacent to the Plum Tree Island Refuge.



15. Encourage the development and use of regional retention/detention ponds in residential and commercial developments wherever possible.
16. Encourage low impact development and conservation development to reduce the need for structural stormwater management.
17. Provide training in the proper maintenance and operation of private retention and detention ponds to civic leagues, homeowners' associations, and other owners of such ponds.
18. Require the construction of vegetated buffer areas to reduce the noise impacts between commercial, recreational, and residential zoning districts.
19. Improve air quality by promoting reduction of automotive dependency and trip distances, the construction of fuel-efficient homes and businesses, and the attraction and development of clean air businesses.
20. Continue to support regional air quality initiatives through the active participation in the Hampton Roads Air Quality Committee and the Interagency Consultation Group for Hampton Roads.
21. Network using contacts with organizations involved in the encouragement of environment and resource protection in an attempt to enhance Poquoson's natural and built environment.
22. Preserve historic sites by registering all eligible sites in Poquoson in the Virginia Landmarks Register of Historic Places and promoting voluntary techniques for the preservation of these properties.
23. Enhance site plan regulations pertaining to photometrics to eliminate light pollution and reduce light trespass onto adjacent properties.





INTRODUCTION

Shoreline erosion is a naturally occurring process whereby forces, such as storms and the movement of the tides, cause the boundary between land and water to recede and move inland. Erosion can contribute to the sedimentation and pollution of streams, rivers and the Chesapeake Bay. This results in loss of wildlife habitat and reduced water quality and, when severe, can threaten property. The increased rate and volume of stormwater runoff associated with development can accelerate the natural process of erosion. The City's commitment to the strict application of stormwater management regulations through the Erosion and Sediment Control Ordinance assists in diverting erosive runoff from steep slopes and bluffs. Further, the City's adherence to the setback provisions of the Chesapeake Bay Preservation Act minimizes the need for structural erosion controls by ensuring that a one- hundred foot vegetated buffer is established between new development and the shoreline.

There are many factors and variables that determine whether a shoreline erodes and the rate of erosion. The rise in sea level, wave action, fetch, shore orientation, near shore bathymetry, land use, soil and substrate composition, etc. are variables that must be considered by all concerned and involved with shoreline management. The typical response to erosion is to protect private property through structural erosion control measures such as beach nourishment, grading and vegetation, are less costly than structural measures, minimize impacts on adjacent properties, and provide habitat. However, on certain high-energy eroding shorelines, structural erosion control may be warranted. Since the use of bulkheads, groins and revetments can actually exacerbate the rate of erosion downdrift of the structure, it is necessary to balance the needs of the property owner with the need of the environment. With the potential for impacts so high, it is important that shoreline erosion control be considered from a comprehensive approach to meet the goals of the waterfront property owner, the goals of the public and the goals of the Chesapeake Bay Preservation Act.

SHORELINE EROSION AND EROSION RATES

The City of Poquoson Shoreline Situation Report (VIMS, 2001), which was prepared as part of the Comprehensive Coastal Inventory Program in February 2001, identified the shoreline features in the City using Global Positioning System technology and water-based visual surveys. This allows for an accurate assessment of shoreline conditions in the City, reported by shoreline



reach. According to VIMS, the City contains eighty-one shoreline reaches, here grouped within three major shoreline reaches. They are as follows:

1. Brick Kiln Creek to Tin Shell Point;
2. Tin Shell Point to Bennett Creek; and
3. Bennett Creek to Lambs Creek.

Severely eroding shorelines are defined by the Chesapeake Bay Local Assistance Manual as eroding at a rate greater than 3 feet per year. The City of Poquoson Shoreline Situation Report noted areas of high erosion in isolated areas within the City of Poquoson. These include Hunts Point, Griffins Beach, and the area of Plum Tree Island located immediately to the east of Messick Point (Map 5-8). Although rates are reported as low, marsh erosion is also noted throughout Plum Tree and Cow Islands (Map 5-9). The remainder of the City's shoreline appears to be generally stable.

SHORELINE STABILIZATION

A recommended hierarchy of possible shoreline stabilization measures for low, moderate, and severely eroding shorelines is provided below. The following ranking is consistent with the goals of the Chesapeake Bay Preservation Act and may help to guide recommendations on applications for installing new stabilization structures or replacing existing structures. It is important to note that although erosion control options are ranked individually, often a combination of erosion control methods is necessary. It is recommended that homeowners be encouraged to contact the Shoreline Erosion Advisory Service (SEAS) for a free consultation on an appropriate shoreline stabilization method for a site. The local SEAS Shoreline Engineer can be reached at 804-443-3803.

Areas with a Low Erosion Rate (< 1 ft/year)

1 = most preferable

1. Vegetative stabilization with/without bank regrading (if applicable)
2. Revetment
3. Bulkhead

Areas with a Moderate Erosion Rate (1 – 3 ft/year)

1 = most preferable

1. Vegetative stabilization (depending on site-specific conditions)
2. Beach nourishment
3. Revetment
4. Breakwaters
5. Groins
6. Bulkheads (depending on site-specific conditions)



Areas with a Severe Erosion Rate (> 3 ft/year)

1 = most preferable

1. Relocation
2. Beach nourishment
3. Revetments
4. Breakwaters
5. Groins
6. Seawall

Where shoreline stabilization is necessary, a unified area approach, rather than an individual site-by-site approach, is recommended. When such an approach is taken, individual costs can be lessened and worsening erosion problems for neighboring properties can be avoided. For more information on erosion control options, refer to Section V - Shoreline Erosion Control and Access Policy Options of the HRPDC Regional Shoreline Element of Comprehensive Plans, Part I: Guidance Manual. An additional source of information on shoreline erosion control options is Shoreline Management in Chesapeake Bay (Hardaway and Byrne, 1999). This publication is written in a format that is easy to understand, making it suitable for distribution to homeowners.

In a series of in-house studies titled Shoreline Erosion Control Guidelines by the Virginia Department of Conservation and Recreation (1993), it is stated that maintenance and establishment of marsh grasses should be considered as the first choice for shoreline erosion control in low energy areas with adequate site conditions.

Generally speaking, for enhancing water quality and aquatic habitat, vegetative and non-structural forms of erosion control are preferred over other forms of shoreline stabilization. However, non-structural forms of erosion control are not effective at shoreline stabilization as wave energy increases and erosion becomes more severe. Along shorelines with less than 0.5 nautical miles of fetch, such as those on the City's interior creeks, marsh planting may be a viable form of shoreline erosion control. Along interior creeks where erosion is more severe, marsh plantings may be protected by a breakwater type of structure, such as a submerged sill, to protect the marsh toe. This approach has been shown to be successful throughout the Chesapeake Bay and may be a good approach to encourage in the City.

NATURAL AND ALTERED SHORELINE FEATURES

The City of Poquoson Shoreline Situation Report indicates that the natural shoreline consists primarily of marsh, estimated to be approximately one hundred sixty eight and one-half (168.5) miles in length. Over 5,000 acres of tidal wetlands exist within Poquoson's 9,395 acres of total land area. Of these wetlands, 4,213 acres are located in Plum Tree and Cow Island National Wildlife Refuges. The salt marshes of Plum Tree and Cow Island represent the largest saline marsh in the lower Chesapeake Bay and accounts for approximately 66%, one hundred and twelve (112) miles, of the City's shoreline. There are some areas of beach located on the islands. Additionally, the majority of the shoreline on the Back River is fringe marsh – shoreline structures are limited to Messick Point and Cedar Landing. Small areas of forested shoreline are



also noted along the Back River and in parts of Floyds Bay, White House Cove, and Roberts Creek.

Map 5-10 shows that bulkheads and riprap revetments protect much of the northern shoreline in Poquoson, particularly around Lyons Creek and White House Cove.

Bathymetry

Information on bathymetry around Poquoson can be obtained from the National Ocean Service (NOS) charts compiled in ADC's Waterproof Chartbook of the Chesapeake Bay, Maps #14, #15, and #30.

Generally speaking, the bathymetry of the Poquoson and Back Rivers can be described as being relatively shallow. Reported depths at mean low tide in the nearshore areas of the River range from 1 – 5 feet in the Back River and from 1 – 6 feet in the Poquoson River. Bathymetry in Bennett Creek shows a narrow channel with depths of 7 – 8 feet, which allows for boat access to marinas.

Flushing Characteristics and Patterns

The Small Coastal Basins portion of Hampton Roads, as defined in the Hampton Roads Water Quality Management Plan, includes the Back and Poquoson Rivers. For the lower portion of the Chesapeake Bay, the mean tidal range is approximately 29.5 inches and the spring tidal range is roughly 35.4 inches. While these are not large ranges, they are sufficient to promote mixing. However, a water body that is well mixed is not necessarily well flushed.

Neither of the basins in Poquoson is large in drainage area. Because the sediments of the Coastal Plain are unconsolidated, they erode easily. Therefore, the coastal rivers have dendritic patterns and the tidal influence extends to reaches that are far upriver. In addition, the Big Bethel Reservoir on the Back River and the Harwood's Mill Reservoir on the Poquoson River impound water and prevent freshwater flows except during periods of abundant rainfall. Thus, freshwater flow may be non-existent during parts of the year. At these times, the concentration of salt will increase as the small volume of freshwater is mixed with the saltier Bay-derived water (Neilson, 1976).

Submerged Aquatic Vegetation

Studies by VIMS chart the occurrence of SAV in Poquoson by USGS Quadrangle (Poquoson West, Poquoson East, Hampton) from 1971 to 2003. Surveys have consistently documented SAV in the Hunts Neck, Pasture Neck, and Cow Island areas of Poquoson West, and in the Plum Tree Island area of Poquoson East. Persistent areas of SAV have also been documented around Tin Shell Point and Messick Point. These surveys indicate that the quantity of SAV around Poquoson generally declined through the 1970s and 1980s, but rebounded in the 1990s. Many areas show an overall increase in the amount of SAV over the period; however, another period of decline has been noted in the Poquoson East Quadrangle containing Plum Tree Island. This



Quadrangle reached a high of 1,185.9 hectares of SAV in 1997, but has lost over 504 hectares or about 43% of its area since then.

The waters in the City of Poquoson were included in the Chesapeake Bay Program’s Tier I SAV target restoration areas. The Chesapeake Bay Program is a unique regional partnership that has led and directed the restoration of the Chesapeake Bay since 1983. The Chesapeake Bay Program partners include the states of Maryland, Pennsylvania and Virginia; the District of Columbia; the Chesapeake Bay Commission (a tri-state legislative body); the Environmental Protection Agency (federal government representative); and participating citizen advisory groups. The Tier I target is restoration of SAV to areas currently or previously inhabited by SAV as mapped through regional and Bay-wide aerial surveys from 1971 through 1990. Table 5-2 shows the existing amount of SAV in each Quadrangle in relation to Tier I restoration goals. As of 2003, none of the targets have been reached. Map 5-11 illustrates the locations of existing SAV beds around Poquoson.

Table 5-3: SAV in Poquoson

Quadrangle Name	Tier 1 Target	2003 SAV (Hectares)	% of Goal
Poquoson West, Va.	848.58	571.8	67.4%
Poquoson East, Va.	1,425.53	681.44	47.8%
Hampton, Va.	540.82	323.06	59.7%

Source: VIMS, SAV Mapping Lab, 02/21/03

Adjacent Land Use Designations

Map 5-12 illustrates riparian land use in the City of Poquoson. Nearly all of the shoreline in Poquoson not controlled by the Department of the Interior is designated for single-family residential. Exceptions include five marinas and the seafood handling and processing facilities in Messick Point and on Brick Kiln Creek. In recognized high erosion areas (Griffins Beach, Hunts Point, and Plum Tree National Wildlife Refuge, including Cow Island), the primary adjacent land uses are residential and conservation. Residential development occurred at Hunts Point and Griffins Beach both before and after the passage of the Chesapeake Bay Preservation Act in 1989, resulting in varying building setback lines along the shoreline in these areas.



SHORELINE ACCESS

Shoreline Access Siting Considerations

Appendix N of Part I: Guidance Manual, Section V.B.1. of Regional Shoreline Element of Comprehensive Plans (HRPDC, 1997) contains information on potential environmental impacts of water access facilities and siting considerations. Siting guidelines are provided for marinas, boat ramps, canoe put-in/take-out facilities, shoreline pedestrian access sites, and fishing facilities. An additional source of siting guidelines is the Chesapeake Bay Areas Public Access Technical Assistance Report (Chesapeake Bay Program, 1999). Shoreline Development BMP's by the Virginia Marine Resources Commission (1994) provides siting considerations and recommended best management practices (BMPs) for boating facilities. These should be considered in evaluating proposed boat ramps or marinas.

Any activity that encroaches upon state-owned submerged land that lies below the mean low tide line requires a permit from VMRC and the Army Corps of Engineers. In granting or denying the permit, the Commission is required by State statute to consider the effects of the proposed project upon:

- Other reasonable and permissible uses of State waters and State-owned bottomlands, such as shellfish cultivation, fishing, navigation, and swimming
- Marine and fisheries resources
- Tidal wetlands
- Adjacent or nearby properties
- Water quality

Any proposed marina must also have a sewage treatment facilities plan approved by the Virginia Department of Health. The City of Poquoson Wetlands Board may also consider cumulative impacts to tidal wetlands associated with any proposed marina including pier shading, shoreline hardening, dredging, slumping, and boat wake induced erosion of adjoining wetlands.

General siting considerations recommended by VMRC include:

- The physical dimensions of the waterbody should be compatible with the size of the marina and type of vessel it is designed to accommodate.
- Marinas must have sufficient upland area to provide all necessary parking, stormwater management BMPs, fuel, and sanitary facilities without filling wetlands or subaqueous bottom.
- All marinas should be located in areas with good natural flushing.
- Marinas should not be sited close to areas of high natural resource value such as shellfish beds, SAV, and areas frequented by endangered species.



- The transfer or control of shellfish leases for the sole purpose of accommodating marina development is unacceptable.
- Projects that will result in a dense concentration of boats must be critically evaluated as to their impacts on natural resources; however, in densely populated areas, concentration of slips in a single facility may be justified to prevent disturbance of undeveloped shorelines.
- The Commission will require the applicant to demonstrate how best management practices will be incorporated into both the upland development plan associated with the facility as well as the required Erosion and Sediment Control Plan during and post construction.
- The Commission may require that BMP structures be completed before any slips can be occupied.

VMRC also provides specific siting considerations:

- The number of slips is not predicated on the total number of units on the property.
- Required dredging for access channels should be limited to the minimum dimensions necessary for navigation and should avoid sensitive areas such as wetlands, shellfish grounds and submerged aquatic vegetation.
- Dredge material disposal areas for initial, as well as future maintenance needs, should be clearly defined and designated.
- Site specific stormwater management BMPs are required to minimize runoff from buildings and impervious surfaces.
- A solid waste disposal and recovery plan must accompany marina development plans.
- Sanitary facilities and pump-out facilities convenient to marina users should accompany development plans.
- Facilities incorporating boat maintenance operations shall include plans for collection and removal of maintenance by-products (sand blasting material, paint chips, etc.) before effluent enters adjoining waterways. Plans shall also make provisions for regular maintenance of these operations.

The Chesapeake Bay Area Public Access Technical Assistance Report (Chesapeake Bay Program, 1999) provides siting guidelines for boating access, beach and swimming access, pier and bank fishing, and natural area access. Desirable and undesirable site characteristics for each are summarized in Table 5-3.



Table 5-4. Shoreline Access Siting Guidelines (Chesapeake Bay Program, 1999)

Access Type	Undesirable Site Characteristics	Desirable Site Characteristics
Boat Ramp	<ul style="list-style-type: none"> • Too shallow or with inadequate area for intended use, requiring extensive dredging or filling • Low tidal range or flow and low flushing rates, such as dead end canals or upper reaches of tidal creeks • Location with poor water quality • Location at mouth of tidal creeks and other tributaries due to lower water quality and higher sedimentation rates • Location near designated fish or wildlife protection areas, shellfish beds, or SAV • Location which inhibits public access to navigable waters or hinders safe navigation by requiring structures that would extend into existing channels • Location near areas of heavy boating traffic. 	<ul style="list-style-type: none"> • Easy access to open water, population centers, and necessary utilities • Accessible from existing roads and waterways • Adequate turn-around and parking facilities • Location near existing state or federally maintained channels • High tidal range or flow and high flushing rates along the cutting side of the water body • Location in areas free of severe shoreline erosion or steep slopes • Compatibility with existing land and water uses • Location away from shellfish beds used for harvesting for human consumption • Access road that meets Department of Transportation secondary road standards • Variable turn-around area (size determined by design but must be able to accommodate a combined vehicle and trailer length of 40') • Buffer zone at shoreline for facilities which are not water dependent • 4 foot minimum width for walkways located apart from vehicular routes • Compatibility with local comprehensive plans
Swimming Beaches	<ul style="list-style-type: none"> • Slopes >15% and areas receiving heavy drainage • Areas with highly erodible soils and shorelines which erode >2 ft/year • Beaches requiring shoreline erosion control structures may cause downstream impacts • Wind and wave patterns which cause erosion and/or hazardous swimming conditions 	<ul style="list-style-type: none"> • Good transportation network and secondary road system to the site location • Location near the population need • Location near public water supply, sewage treatment, and other utilities • Accessibility from on-site to the beach resource • Beach areas receiving sand deposition



Table 5-4. Shoreline Access Siting Guidelines (Chesapeake Bay Program, 1999)		
Access Type	Undesirable Site Characteristics	Desirable Site Characteristics
	<ul style="list-style-type: none"> • Areas which historically receive intense storm activity • Locations near land uses or other conditions which have adverse effects on water quality • Location adjacent to SAV and shellfish beds • Beaches which have underwater hazards which cannot be corrected without grading or dredging 	<ul style="list-style-type: none"> • Natural protection for the beach resource such as a site protected by existing sand dunes or a location in a cove • Tidal and water currents safe for swimming • Locations that have not historically received severe storm activity • Good water circulation and flushing
Pier/Bank Fishing	<ul style="list-style-type: none"> • Too shallow or with inadequate area for intended use, requiring extensive dredging or filling • Low tidal range or flow and low flushing rates, such as dead end canals or upper reaches of tidal creeks • Slopes >15% and areas receiving heavy drainage • Areas with highly erodible soils and shorelines which erode >2 ft/year • Wind and wave patterns which cause erosion and/or unacceptable fishing conditions • Locations near land uses or other conditions which have adverse effects on water quality • Areas with underwater hazards that cannot be corrected without grading or dredging 	<ul style="list-style-type: none"> • Good transportation network and secondary road system to the site location • Location near the population need • Location near public water supply, sewage treatment, and other utilities • Accessibility from on-site to the fishing resource • Natural protection for the fishing resource such as a site protected by existing vegetation or a location in a cove • Tidal and water current conditions which are acceptable for fishing • Locations that have not historically received severe storm activity • Good water circulation and flushing • Location free of severe shoreline erosion or steep slopes • Natural buffer zone along shoreline for facilities which are not water dependent
Natural Area Access	<ul style="list-style-type: none"> • Sensitive plant and animal habitats which would be disturbed by passive recreation activity • Natural areas which are extremely remote, and if developed as access points, would unnecessarily introduce human influences 	<ul style="list-style-type: none"> • Natural areas which can provide educational and interpretive opportunities • Natural areas already coexisting with some level of human influence



Inventory of Shoreline Access

Existing Private Docks and Boathouses

The Virginia Institute of Marine Science updated the Shoreline Situation Report for the City of Poquoson in 2001. The Report indicates that there are 448 private docks and boathouses located in the residential areas of the City, as well as 39 boat ramps. Map 5-13 shows the locations of docks, boathouses, and ramps on the Poquoson shoreline.

There are a limited number of scientific studies available that document direct significant impacts of private piers and docks on water quality and the aquatic ecosystem. Potential environmental impacts include shading and displacement of aquatic life, leaching of wood preservatives that are toxic to aquatic life, increased turbidity and other short-term impacts during construction, and other environmental impacts associated with boating activities. While the individual impact of private piers and docks may be minimal, the cumulative and collective impacts of individual piers and docks to the surrounding aquatic ecosystem may be significant, particularly in high densities.

The long recognized common law riparian right to wharf out is recognized in Title 28.2-1203(a) of the Code of Virginia (1950), as amended which allows owners of riparian or waterfront property to construct a non-commercial pier to access navigable water without obtaining a permit. While piers are not subject to permit regulations, the Virginia Marine Resources Commission does require an application to determine qualification for an exemption. While riparian property owners have the legally recognized right to construct a pier or dock to access navigable water, their impacts can be managed through siting and design requirements. Local governments can work with State permitting agencies to educate waterfront property owners about pier and dock design that will minimize environmental impacts. In a study entitled Dock Design with the Environment in Mind: Minimizing Dock Impacts to Eelgrass Habitats by Burdick and Short (1998), it was found that height above the water was the most significant factor in dock design affecting the health of submerged aquatic vegetation communities. The study found that ideally a pier or dock should be at least 3 meters above the submerged bottom, with a north to south orientation, and no more than 1 meter wide to minimize shading impacts to submerged aquatic vegetation. In addition to physical dimensions, alternative materials to chemically treated wood can be encouraged.

Historically, local governments have been reluctant to regulate individual private piers and docks because the existence of enabling authority to do so is unclear. In general, local governments can manage pier and dock density indirectly in two ways. Through zoning or subdivision ordinances, a local government can cluster development away from shorelines and retain the waterfront area as community open space and provide a community pier. In doing so, it is thought that any environmental impacts are easier to identify and control if activity is concentrated at one location. In addition, a local government can require a minimum lot size for waterfront lots, thereby reducing the concentration of piers and docks and dispersing their impact (Source: HRPDC, 1988).



Existing Water Access Facilities and Water-Enhanced Recreation Areas

During the study period, a total of 12 marina facilities and shoreline access points were identified in the City. Of these, five (5) are available for public use. Table 5-4 lists these facilities, including the location of pump-out facilities. Poquoson Marina and Poquoson Pier, which are located at the end of Rens Road in White House Cove, contain the only pump-out facility and pier in deep water. The pump-out station is on the 190-foot pier, and is available to both pleasure boats and workboats. It is generally utilized by about 3 boats per month and is capable of serving many more.

Table 5-5: Public and Private Water Access Facilities

<i>Access Facility</i>	<i>Reach</i>	<i>Parking</i>	<i>Ramp</i>	<i>Pump Out</i>	<i>Fuel</i>	<i>Bathroom</i>	<i>Public/Private</i>
<i>Topping Landing</i>	1	Gravel					Private
<i>Cedar Point Landing</i>	1	Gravel	X				Public
<i>Amory's Wharf</i>	2	Gravel					Public
<i>Messick Point Pier</i>	2	Surfaced	X			X	Public
<i>Messick Point Marina</i>	2	Surfaced				X	Private
<i>Bennetts Creek</i>	3	Gravel					Private
<i>York Haven Marina</i>	3	Gravel			X	X	Private
<i>Owen's Marina</i>	3	Gravel	X		X	X	Private
<i>Poquoson Marina</i>	3	Surfaced	X			X	Private
<i>Poquoson Pier</i>	3	Surfaced		X		X	Public
<i>Islander Marina</i>	3	Gravel				X	Private
<i>Hunts Neck Landing</i>	3	Gravel	X				Public

Source: City of Poquoson

Demand for Shoreline Access

Recent surveys, conducted in 2004 and 2006, indicate that the greatest access needs for Poquoson are for beach recreation and public water access. The surveys identified citizen priorities for additional recreational facilities needed in Poquoson. The 2004 survey identified responses of fishing piers/ponds and bay access as receiving the 1st and 3rd most responses, respectively, out of ten choices. When ranked numerically by the number of responses each selection earned, no more than 53 votes separated the choices. The 2006 survey utilized the same choices for this question; however, a higher number of surveys were returned for calculation producing a marked difference in response tallies. The top 2 choices from the 2004 survey, fishing piers/ponds and trails respectively, were the same in the 2006 survey but reversed in order nominated. These two selections combined received 3 times more nominations as the bay



access choice and nearly doubled that number individually. The Bay access selection was in the middle of the list of needed facilities, ranking 5th. However, the City is cognizant of the importance of Bay access to its citizens and community character, and will continue to focus on enhancing existing access sites, many of which require improvement. Currently, the City lacks a sand beach, and would need to use artificial means to create one. The City recognizes this as a recreational need for its residents, and sees it as a goal for future development. The Parks and Recreation Department will address these issues and plans additional water access at several sites. This is explained in greater detail in the Parks and Recreation chapter of this plan.

Boating Constraints

Shallow Channels

Because the channels around Poquoson are generally shallow, powerboat access is limited. Marinas are concentrated in the White House Cove area, which has channel depths of 7 – 9 feet. The Army Corps maintains a 6-foot channel in the Messick Point area, which allows for some commercial fishing access. Most other access points are informal and restricted to canoes, kayaks, and small jon boats.

Lack of Pump-Out Facilities for Watercraft

One threat to the waters in and around the City of Poquoson is the lack of pump-out facilities for watercraft. Discharge of wastes from commercial and recreational vessels pose the greatest threat to water quality where marinas are most heavily concentrated. Many of these boating centers are located in quiet, protected waters that are more susceptible to pollution. Small, protected streams and waters are often ecologically fragile and slow to flush themselves of pollutants. Most of the marinas in the City do not provide adequate sewage disposal facilities for workboats and recreational watercraft. Therefore, any redevelopment of existing sites must place pump-out facilities for watercraft on-site as well as meet all other federal, state and local requirements.

REDEVELOPMENT

Runoff from developed areas, due to large amounts of impervious coverage, can potentially degrade local water quality. Paved areas cannot absorb rainwater and the resultant runoff can transport pollutants and toxic substances into local waterways. Some of the older areas of the City were developed prior to the enactment of environmental regulations that require water quality protection measures in their design. In this situation, redevelopment provides the primary means of making significant water quality improvements by implementing water quality improvement measures, such as stormwater best management practices (BMPs), and incorporating shoreline restoration. Redevelopment activities must also comply with impervious area limitations, preserve existing vegetation, and connect to city sewer service.



Intensely Developed Areas (IDAs)

According to Chapter 20, section 9 VAC 10-20-100, **Intensely Developed Areas** of the Chesapeake Bay Preservation Act; local governments, at their option, may designate Intensely Developed Areas (IDAs) as an overlay of Chesapeake Bay Preservation Areas within their jurisdictions. Intensely Developed Areas shall serve as redevelopment areas in which development is concentrated as of the local program adoption date. Areas so designated must comply with the performance criteria for redevelopment in Part IV (9 VAC 10-20-110 et seq.) of the Chesapeake Bay Preservation Act. Areas of existing development and infill sites where little of the natural environment remains may be designated as Intensely Developed Areas provided at least one of the following conditions existed at the time the local program was originally adopted:

1. Development has severely altered the natural state of the area such that it has more than 50% impervious surface;
2. Public sewer and water systems, or a constructed stormwater drainage system, or both, have been constructed and served the area by the original local program adoption date. This condition does not include areas planned for public sewer and water or constructed stormwater drainage systems;
3. Housing density is equal to or greater than four dwelling units per acre.

Certain sites within Poquoson possess the characteristics of an IDA and could be considered as such an area if its designation is found compliant by the Chesapeake Bay Local Assistance Program. Such sites have a Future Land Use designation of Waterfront Commercial and/or Waterfront Mixed Use since these categories promote redevelopment and revitalization of waterfront areas (Please see Future Land Use Map 8-4 in Chapter 8). IDA designations can greatly benefit redevelopment efforts and improve water quality due the development criteria applied to these areas. Examples of sites found in nearby localities which the entire locality is not considered an IDA are Riverwalk Landing in nearby Yorktown and redeveloped areas of Downtown Smithfield, including Smithfield Station and Smithfield Foods Headquarters and Corporate offices. The City of Poquoson should consider adopting IDA's as part of the Environmental Management Overlay ordinance in effort to foster redevelopment and revitalization of waterfront properties while improving water quality.

Potential Shoreline Redevelopment Sites

There are some shoreline sites that have been studied for redevelopment. While IDA designation may not apply to the following sites, these sites have been identified by the City as having redevelopment potential. Any sites designated as IDAs must follow the regulations of the Chesapeake Bay Preservation Act.



Reach I- Brick Kiln Creek to Tin Shell Point

Captain Harrell's Seafood

Captain Harrell's Seafood retail outlet is located at the entrance of Poquoson on the north side of Brick Kiln Creek. The site is situated on a leased two-tenths (0.2) of an acre of land zoned B-1 Commercial. The site operation is privately owned and has approximately three hundred (300) feet of water frontage. The fastland approach is very steep with channel depths in Brick Kiln Creek that average four (4) feet at this point. Only two (2) workboat slips are available for water delivery. The twelve hundred (1,200) sq. foot facility occupying the site provides retail and wholesale fresh seafood along with growing and harvesting soft shell crabs. The operation is already fully developed on the site.

Topping Landing

This is a 37-acre privately owned property that is presently zoned R-1 Residential and has approximately one mile of shoreline. The shore is relatively low and is surrounded by extensive shallow marshes. The Back River has a shallow channel depth at this point that would not be conducive to any form of recreational use requiring deep-water access.

Reach II- Tin Shell Point to Bennett Creek C.L.E (Centerline of Estuary)

This shoreline reach is currently zoned R-2 Residential with the exception of Amory's Wharf and Messick Point, which are zoned B-2 Commercial, with both having a shoreline reach of approximately nine (9) miles.

Amory's Wharf

This is a .03-acre privately owned site on the northwest branch of the Back River. When combined with the neighboring property, which is owned by the City, the shoreline is approximately one (1) mile. The property is zoned R-2 Residential. There is a low shore at this point with extensive marsh and some fringe beaches. The existing pier wharf structure is dilapidated.

The City hopes to rebuild the historic pier at this site, and improve recreational boating and fishing opportunities. This project would include removal of the existing structure and the construction of a new pier. The new pier would include an eight (8) foot wide gangway and an eighty (80) foot T-head. The pier is to be specifically designed for recreational hook-and-line fishing and crabbing. The informal launch area adjacent to the existing wharf would continue to provide access to the water for small car-top watercraft.



Messick Point

This site is currently developed with five structures and six primary wooden piers ranging from ninety (90) feet to three hundred (300) feet in length. The structures are used for seafood processing, and the Poquoson Yacht Club is also located here. In 1993, the City purchased fourteen (14) acres of property at the site using a Virginia Port Authority grant. The Army Corps maintains a six-foot channel for access to the harbor.

In 2003, the City of Poquoson contracted with LandMark Design Group to produce a feasibility study for development in Messick Point. The study, entitled "Messick Point Revitalization," was completed in February 2004. It provides a site analysis, fiscal impact analysis, and recommendations for site development.

Reach III- Bennett Creek to Lambs Creek C.L.E (Centerline of Estuary)

Reach III shoreline extends from the centerline of the headwaters of Bennett Creek Estuary to the centerline of the headwaters of Lambs Creek Estuary which enters into the Poquoson River. This reach meanders for approximately sixty-nine (69) miles and includes four (4) estuaries: White House Cove, Lyons Creek, Roberts Creek and Lambs Creek. It ends at the headwaters of Lambs Creek where the York County and Poquoson corporate limits join.

The foregoing identified estuaries have navigable channel depths, ranging from three (3) to five (5) feet, with the exception of Roberts Creek which typically will allow for pleasure or work crafts only at high tide.

All of this reach is identified as low-shore with intermediate nearshore. It is Reach III shoreline that contains all of the City's private marinas, with the exception of Messick Point, as well as the bulk of its private piers or docks.

Poquoson Marina

Poquoson Marina is a six (6) acre tract of land zoned B-2 Commercial. It is located at the western terminus of Rens Road and has one-third of a mile of frontage on White House Cove. This is the largest public marina in the City, with two boat shelters, three open piers, and one hundred forty-one boat slips.

The City recently completed a 190-foot public pier at this site, which now provides the only public boat pump-out facility in Poquoson. This is part of the City's White House Cove Water Quality Improvement Program. Additional improvements may be made as part of that program. A pay for use public boat ramp is also located near the entrance to the pier.



Islander Marina

Islander Marina and Charter Boats is a one (1) acre tract of land situated on the northwest side of White House Cove, directly across from Poquoson Marina. This is a legal non-conforming use located in an R-1 Residential District. Two (2) wooden piers containing twenty-five (25) boat slips serve the marina. Boat pump-out facilities are provided by the City's public pump-out immediately across the Cove.

Owens Marina

Owens Marina is a one and three-tenths (1.3) of an acre site located at the mouth of White House Cove at its confluence with Bennett Creek. The property is zoned B-2 Commercial and contains a six thousand (6,000) sq. foot restaurant with an adjoining bait/tackle and associated marine supply shop. The waterfront has a sixty (60) foot pier with an eighty-three (83) foot T-head pier. A second single strand pier, with a sixty-four (64) foot length, is adjacent to the primary pier. The shoreline serving the facility is bulkheaded by three hundred and fifty (350) feet of rip-rap. The fastland is low-shore with extensive marshes and occasional fringe beaches. There are no boat slips provided by the marina.

York Haven Marina

York Haven Marina is located on a one and three quarter (1.75) acre tract of land located immediately behind, or east of, Owen's Marina and is exposed to White House Cove. There are two (2) service buildings devoted to marine services for the seventy-nine (79) boat slips. The small cove harboring the pier and boat slips is protected by five hundred and eighty (580) feet of wood bulkhead. The fastland is defined as low with scattered marsh grass. Here again, like Owens Marina, York Haven Marina is zoned B-2 Commercial.

In summary, it will be incumbent on the City to ensure that redevelopment of existing waterfront facilities will reduce non point source pollution and proposed shoreline access will address water quality issues consistent with the Chesapeake Bay Preservation Act, and more specifically, the Environmental Management Overlay District of the Zoning Ordinance.

Waterfront Redevelopment Master Plan

As previously discussed, the City of Poquoson possesses some rare waterfront property that was developed prior to current Federal, State, and Local regulations and ordinances. It would be most beneficial, both to the environment and economy, to have the aforementioned sites redeveloped in compliance with these regulations in ordinances to enhance the quality of life of Poquoson's citizens as well as our neighbors.



Currently these properties are underutilized and have attained minimal maintenance by the property owners which has led to lower quality facilities and pose environmental impacts due to the age of such sites. The City should prepare a *Waterfront Redevelopment Master Plan* that would include these waterfront areas in dire need of redevelopment, address the needs and services of the community on a whole, and provide property owners a prosperous return on their investment. Such a plan will require collaboration on the part of many parties, to include the property owners, real estate professionals, City staff, State agency staff, and citizens within the community. Once prepared and adopted, the Comprehensive Plan should be amended to include the *Waterfront Redevelopment Master Plan*.

GOALS, OBJECTIVES, AND STRATEGIES

Goals

1. Protect shoreline property in a manner that is cost-efficient and that preserves and enhances shoreline recreational resources, wetlands, fish and wildlife habitat and water quality including the following:
 - a. Encourage applicants for shoreline erosion control projects to seek assistance from Shoreline Erosion Advisory Service.
 - b. Encourage property owners to utilize nonstructural erosion control projects to seek assistance from the Shoreline Erosion Advisory Service (SEAS).
 - c. Encourage the coordination of shoreline erosion control measures among adjacent property owners.
2. Develop a shoreline management plan to ensure proper shoreline protection and create a framework for incentive based on programs to encourage less intrusive means of shoreline protection. Some key elements should be:
 - a. 2001 VIMS Shoreline Study;
 - b. Assessment of shoreline processes on a shoreline segment basis;
 - c. Comparison of the existing and planned land use and shoreline protection project; and
 - d. In areas identified as likely areas for shoreline stabilization, the City should encourage a coordinated effort among landowners to construct a uniform means of protection to reduce additional erosion at the extremities of the shoreline protection project.
3. Ensure existing and proposed public and private access facilities (docks and piers) do not have a negative impact on water quality.



Objectives

1. Minimize the amount of property and infrastructure threatened by shoreline erosion.
2. Minimize shoreline erosion caused by increased stormwater runoff associated with development including the following:
 - a. Ensure that vegetative buffers are retained, enhanced, or established.
 - b. Ensure that drainage patterns are not altered to center stormwater flow in erodible streams.
 - c. Encourage Low Impact Development and conservation design to reduce impacts to receiving downstream resources where applicable.
3. Develop an administrative policy that guides City staff in reviewing and monitoring shoreline stabilization proposals.
4. Develop a “No Wake” policy and enforcement thereof.

Strategies

1. Encourage vegetated bank stabilization (replanting of appropriate vegetation) and/or bank re-grading. These methods should be given first consideration and are preferred over structural shoreline stabilization while realizing that they are not the best options in all circumstances
2. Where vegetated bank stabilization is not a practical alternative, encourage riprap revetments over bulkheading, due to the advantages that riprap revetments have. Revetments can reduce wave reflection, wave run-up, wave energy, and provide habitat for marine organisms. Revetments are generally less costly than bulkheads and are easier to repair in case of failure or weakening.
3. Bulkheads should be constructed where the physical forces are such that vegetative bank stabilization, riprap revetments, or other means of shoreline stabilization are impractical. If bulkheading is undertaken, every effort should be made to tie the structure into existing structures or construct the bulkhead on a community scale.
4. Encourage applicants to obtain free assistance on shoreline erosion from the Shoreline Erosion Advisory Service or the Virginia Institute of Marine Science (VIMS).
5. Encourage coordination of shoreline efforts between adjoining property owners to achieve more successful and cost-effective shoreline management.



6. Coordinate with the Police and Fire Departments, as well as VMRC, for enforcement of “No Wake” zones.
7. Require shoreline stabilization proposals to be reviewed by the Shoreline Engineer of the Department of Conservation and Recreation, Shoreline Advisory Service or by VIMS.
8. Consider moving buoys out 100’ to protect “No Wake” zones.
9. Work to include a pump out facility at each marina in the City of Poquoson.
10. Require that all new or redeveloped marinas provide pump-out facilities on site.
11. Encourage community piers in new waterfront housing developments.
12. Implement guidelines in the Virginia Marine Resources Commission Shoreline Development BMPs Handbook for construction methods and siting criteria.
13. Consult the Marina Technical Advisory Program (MTAP), available through the VIMS, on marina siting and design issues related to best management practices, water quality, and technical support for marinas.
14. Encourage & promote nonstructural erosion control measures, such as re-grading and re-vegetation, to address slight to moderate erosion and to utilize structural measures when erosion is severe and threatens property.
15. Increase awareness of water quality impacts to citizens and to boaters.
16. Increase public awareness of erosion and sediment control measures.





INTRODUCTION

The Ground Water sub-element of the comprehensive plan describes the uses and distribution of local water resources. Present water use patterns are a product of local geography, water needs, transportation patterns and requirements, social and economic forces, and residential development preferences, past and future. It is important to view the present use since water is a finite resource. Water resources are critical to the physical and economic health of the community as well as the natural environment. Many practices have the potential to severely degrade the water quality and quantity.

SOURCES OF POTABLE WATER

The City of Poquoson receives potable water for domestic uses from the Newport News Waterworks. The Waterworks maintains several surface water impoundments and groundwater wells that provide water to more than 400,000 people in the cities of Hampton, Newport News and Poquoson and portions of the counties of James City and York. The system draws water from the Chickahominy River, located primarily between James City and Charles City Counties, as well as from brackish groundwater wells located near the Lee Hall Reservoir in Newport News. The Waterworks reservoir system currently includes five facilities located in Newport News and in New Kent, James City, and York Counties. Total storage capacity at these facilities is approximately 9,460 million gallons (Newport News Waterworks, “Annual Report FY 2004”). On November 16, 2005, the U.S. Army Corps of Engineers announced the issuance of the Section 404 permit for the proposed 12.2 billion gallon King William Reservoir. This is the final permit necessary to begin the design and implementation phase for the reservoir, which will be located on Cohoke Creek in King William County and draw water from the Mattaponi River. However, on April 30, 2009 the U.S. Army Corps of Engineers suspended the permit due to a recent U.S. District Court decision.

Newport News Waterworks is required to monitor drinking water quality on a regular basis in accordance with regulations of the Environmental Protection Agency’s (EPA) Safe Drinking Water Act regulations. According to the Consumer Confidence Reports for 2002 and 2003, there was not any drinking water violations cited for the Newport News Waterworks system. To protect the quality of the drinking water supply, the Waterworks must work with a number of host localities to enact water protection measures. Some of the activities pursued by the Waterworks include tree planting, insect monitoring, and maintenance of road access. In 2004,



the Waterworks also added 44 acres of property along the headwaters of the Harwood's Mill Reservoir in York County to its watershed land holdings.

GROUND WATER

Ground Water Framework

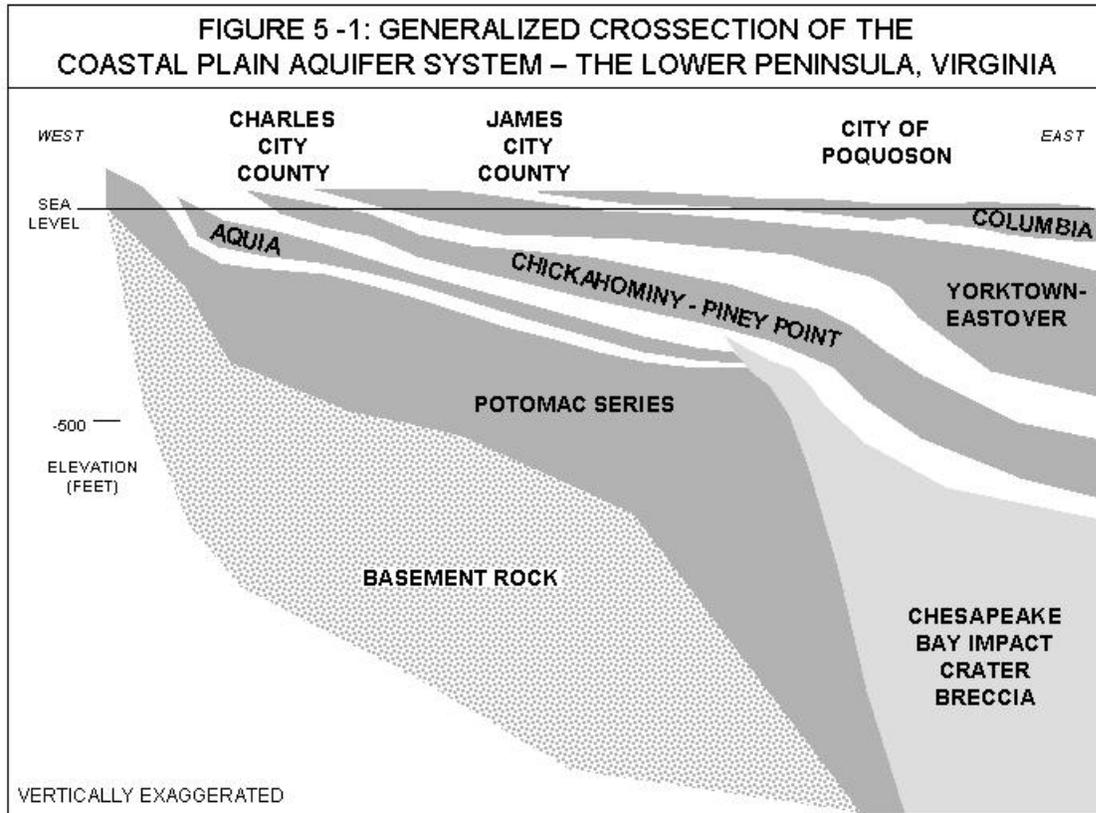
The City of Poquoson is located within the Virginia Coastal Plain Physiographic Province, which extends from the Fall Line in the west to the Atlantic Ocean in the east, to the Maryland border in the north, and to the North Carolina border in the south. The surface of the Virginia Coastal Plain consists of a series of broad gently sloping, highly dissected north-south trending terraces bounded by seaward facing, ocean cut escarpments. The subsurface is characterized by wedge shaped unconsolidated sedimentary deposits that, in general, slope (dip), and thicken towards the east. These deposits consist of clay, silt, sand, and gravel, with variable amounts of shell material. In some localized areas, cementation of shell beds can form thin lithified (rock) strata. The unconsolidated sediments overlay a crystalline bedrock basement that also slopes gently to the east.

Many different depositional environments existed during the formation of the Virginia Coastal Plain deposits. In general, the stratigraphic section (vertical profile) consists of a thick sequence of nonmarine (riverine and alluvial) sedimentary deposits overlain by a thinner sequence of marine (near shore beach, estuarine, and delta) sedimentary deposits. Beneath the City of Poquoson there are breccia type sedimentary deposits associated with the Chesapeake Bay Impact Crater.

The ground water flow system in the Coastal Plain of Virginia is a multiaquifer system as mentioned above. Studies have identified at least nine major water bearing hydrogeologic units (aquifers) in the Virginia Coastal Plain (Hamilton and Larson, 1988; Lacznia and Meng, 1988; Harsh and Lacznia, 1990). Over the years, the USGS has continued to collect data to refine the geologic framework and improve upon the understating of the Coastal Plain Aquifer System. The most recent discovery is the Chesapeake Bay Impact Structure (CBIC). The CBIC was formed over 35 million years ago when a bolide (meteor or asteroid) hit the earth near modern day Cape Charles, Virginia. The impact of the bolide obliterated the deepest three aquifers beneath the Chesapeake Bay, the Eastern Shore, and portions of the Lower and Middle Peninsula. The impact crater filled with a mixture of various depositional materials (breccia). The USGS is also in the process of building a new Coastal Plain ground water flow model to be used to assist state regulators and local water utilities to manage the ground water resources.

As illustrated in Figure 5-1, the ground water framework beneath the City of Poquoson is comprised of one unconfined aquifer and two major confined aquifers. The three deeper Potomac aquifers and the Aquia aquifer are truncated by the breccia within the Chesapeake Impact Crater. The confined aquifers are separated from aquifers above and below by confining beds. The following paragraphs provide a general description of the aquifers identified beneath the City of Poquoson from youngest to oldest (top to bottom):





Columbia Aquifer

The Columbia Aquifer is the uppermost aquifer and is unconfined throughout its extent. The Columbia Aquifer consists of the sandy surficial deposits above the Yorktown Confining Unit. This aquifer is characterized by interbedded very coarse gravel channel deposits that fine upwards into silts and clays. The Columbia aquifer is used primarily for domestic water supplies (drinking water and irrigation), especially in the eastern region of the Virginia Coastal Plain.

Yorktown-Eastover Aquifer

The sediments of the Yorktown-Eastover Aquifer are characterized by interlayered, thick to massively-bedded shelly sands separated by thinner clay beds. The Yorktown-Eastover Aquifer is separated from the Columbia aquifer by the Yorktown Confining Unit. In cross section, the Yorktown-Eastover Aquifer is wedge shaped sloping (dipping) and thickening to the east.

Numerous wells penetrate the Yorktown-Eastover Aquifer throughout the Virginia Coastal Plain. Some light industries and many domestic users use this water-supply source. Well yields have been reported ranging from 20 to 250 gallon per minute (gpm) (Harsh and Lacznia, 1990).



Chickahominy-Piney Point Aquifer

The Chickahominy-Piney Point Aquifer is characterized by black and white sands containing glauconite, shells, and dark silty clay interspersed throughout the sands (Meng and Harsh, 1988). The Chickahominy-Piney Point Aquifer overlies the Nanjemoy-Marlboro Confining Unit and is overlain by the Calvert Confining Unit.

Numerous wells penetrate the Chickahominy-Piney Point Aquifer in the Virginia Coastal Plain. Many light industries, small municipalities, and domestic users use this water-supply source. Reported well yields for the Chickahominy-Piney Point Aquifer range from 20 to 250 gpm (Harsh and Lacznik, 1990).

Ground Water Recharge Areas

To date, specific studies documenting significant ground water recharge areas have not been conducted in the City of Poquoson. However, based on the physical nature of the hydrologic cycle and the geomorphology (or the shape of the land surface), some basic principles of ground water hydrology can be used to identify potential areas of ground water recharge.

Ground water recharge occurs when rainwater that percolates into the ground enters the unconfined (water table) aquifer. In the City of Poquoson, the unconfined aquifer is the Columbia Aquifer. In the context of potable drinking water supplies, the Columbia Aquifer is not the aquifer of choice due to relatively low yields, poor water quality, and the propensity for ground water contamination. Some older homes, however, may still rely on the Columbia aquifer for consumptive use. Ground water contained in the upper confined aquifers is a much better choice for drinking water than the Columbia Aquifer. Because the Coastal Plain aquifer system gently slopes from the west to the east, the major ground water recharge areas for the confined aquifers beneath Poquoson are located to the west of the City of Poquoson in areas where the aquifers are no longer considered confined. Research also suggests that there are some areas of the Coastal Plain where ground water recharge occurs between aquifers (Meng, A.A. III, and Harsh, J.F., 1988). This occurs when the hydraulic pressure of ground water in one aquifer forces water through a leaky confining unit into an adjacent aquifer. This movement can be either up or down based on the hydraulic properties of the aquifers. The location and magnitude of recharge between the aquifers, however, has not been well documented. Groundwater discharge areas are located in low-lying areas and are characterized by rivers, seeps, springs, streams, and wetlands. Discharge areas for the confined aquifers may occur off the coast beneath the Atlantic Ocean or beneath the Chesapeake Bay.

Topographic Analysis of Localized Ground Water Recharge and Discharge

Ground water flow in unconfined aquifers tends to reflect surface water flow. Ground water flows from areas of relatively high elevation to adjacent areas of relatively low elevation. Ground water recharge can occur across almost any upland surface. Land surfaces with a high slope are less effective ground water recharge areas than broad and relatively flat grassy uplands.



Ground water is discharged at the land surface in topographic low areas that intersect the water table. Springs, seeps, swamps and river channels are examples of ground water discharge areas.

The very name of the City, Poquoson (Native American word for marsh or low lying lands), is one of the hydrologic terms used for a ground water discharge area. Based on a topographic analysis of U. S. Geological Survey 7.5 minute quadrangle maps, Poquoson West and Poquoson East, the surface elevation of the City of Poquoson ranges from sea level to approximately ten feet above sea level. There does not appear to be a distinct ground water divide or recharge area. In general however areas of higher elevation will be the areas of ground water recharge and the swampy low-lying regions are the areas of ground water discharge.

GROUND WATER QUALITY

The unconfined Columbia aquifer is susceptible to localized ground water contamination. Based on a review of literature and DEQ records, and interviews with local officials, there are seven high priority threats to ground water in Southeastern Virginia. These are (1) inefficient septic systems; (2) leaky underground storage tanks; (3) spills and improper disposal of hazardous materials; (4) leaky surface waste impoundments; (5) leaky landfills; (6) improper pesticide and fertilizer applications; and (7) pumping induced saltwater encroachment.

Local Ground Water Protection

Decisions made by local governments have the greatest potential to impact ground water quality. For a community to develop an effective ground water protection program, it must prepare a ground water management plan consisting of community-specific goals and objectives, and locally appropriate management techniques. These should reflect local ground water protection needs. Specific management techniques should be combined to maximize effectiveness and minimize costs. The Ground Water Protection Handbook for Southeastern Virginia (1990) (Handbook) prepared by the Hampton Roads Planning District Commission (formally the Southeastern Virginia Planning District Commission) provides local guidance for developing a ground water management plan.

The City has in place a program designed to protect both surface and ground water from pollution and depletion. The City's Chesapeake Bay Preservation Area Ordinance is of particular importance in protecting the quality of the ground water. Poquoson has designated the entire Chesapeake Bay watershed for pollution protection under the Chesapeake Bay Act. Therefore, mitigation measures are required on all development sites, including best management practices, vegetative buffers, protection of sensitive environmental resources, and limitations on impervious cover. These measures help to protect both surface and ground water from pollution, and also better enable water to percolate through the soil to ground water.



Regional Ground Water Programs

The City of Poquoson also participates in various regional programs that have been identified and developed by Regional Advisory Committees to the HRPDC, which are comprised of staff from member localities, HRPDC, state agencies, and the private sector. Current regional ground water projects that benefit the City of Poquoson include:

- Cooperative Regional Ground Water Management Program - Continuing Studies: On behalf of the member localities, the HRPDC administers a cooperative, cost sharing agreement with the USGS to continue to develop and refine the regional ground water model and related ground water data base for Eastern Virginia. Under this program, the USGS is responsible for the collection of field data, computerization of the data, refinement of the existing Coastal Plain Model (CPM) and computer evaluation of the data. This project encompasses four discrete, but mutually supportive, elements:
 - Water Level Network
 - Comprehensive Ground Water Chloride Study
 - Hydrogeologic Framework Study
 - Coastal Plain Model 2000
- Regional Ground Water Management Program - Mitigation Administration and Technical Assistance: The fifteen member localities have provided funding for the HRPDC to support a geologist/planner with ground water hydrology and computer modeling expertise to provide ground water technical support to the member localities. This project includes the following activities:
 - Hampton Roads Regional Mitigation Program.
 - Technical Assistance.
 - Local Ground Water Studies.
 - Ground Water Education.
 - Administrative Support and Coordination for Cooperative Ground Water Programs with the USGS.
- Hampton Roads Planning District Commission's Source Water Assessment Program (SWAP): The HRPDC, under contract to the VDH, evaluated surface water sources of drinking water and potential land-use related threats to the quality of those sources in the Hampton Roads area. This database will be updated as needed and will be used to prioritize surface water and ground water protection activities in the Hampton Roads area.

Potential Groundwater Pollution Sources

Landfills and Superfund Sites

Non-hazardous solid waste is regulated by EPA through the Resource Conservation and Recovery Act (RCRA) and by DEQ through the Virginia Waste Management Act. Presently, Poquoson's municipal solid waste is transferred to the Hampton Steam Generator Plant for disposal. The City indicates that there is an inactive 40-acre landfill located northwest of Ridge



Road in lower Poquoson. The City's information indicates that it was in use from 1965 until its closure in 1985. The DEQ also lists one inactive landfill facility within the City. The Poquoson Sanitary Landfill is located on Ridge Road. It was permitted in 1981, and is now closed.

As noted previously, Plum Tree Island was used extensively in the 1940s and 1950s as a military bombing range. Unexploded ordnance remains on site, thus preventing public access and enjoyment of the area. The EPA lists both Plum Tree Island and Poquoson Landfill as active Superfund sites, but neither is on the National Priorities List for cleanup.

Langley Air Force Base, which is located across the Back River from Poquoson in the adjacent city of Hampton, is designated as a Superfund Site and was formally added to the National Priorities List in 1994. According to the EPA, the conditions at the base are as follows:

Soils at the landfills are contaminated with waste solvents and paints, used batteries, scrap metals, pesticides, municipal wastes, general chemicals, sanitary refuse, photo finishing wastes, and hospital and laboratory wastes. Ground water is contaminated with metals and VOCs. Information indicates this area historically has been predominantly wetlands. Sediments and biota in the Back River and Tabbs Creek are contaminated with PCBs and PCTs. Tabbs Creek has been posted as a "No Fishing" area because of bacteria. Electrical equipment containing PCBs and lubricating oils, hydraulic fluids, mercury, and pesticides have been released on the site. (Source: US EPA, Region 3, HSCD, Virginia, Langley Air Force Base, Current Site Information, June 2004.)

Remedial actions have been taken at the base, including dredging of soils contaminated with PCBs (Polychlorinated Biphenyls) and PCTs (Polychlorinated Terphenyls) along Tabbs Creek. Remedial Action Work Plans are being completed at additional sites.

Leaking Underground Storage Tanks

Leaking above and underground storage tanks can be a significant issue in aging cities such as Poquoson. These storage tanks contain hazardous substances, such as petroleum, gasoline, diesel fuel, acetone, or kerosene. Over time, underground storage tanks can corrode and begin to leak. If a storage tank is leaking, the surrounding soil can become contaminated. In addition, the shallow ground water aquifer may become contaminated. Once contaminants enter the shallow ground water aquifer, they can be transported into local waterways.

The Department of Environmental Quality is charged with regulating underground storage tanks in Virginia. DEQ annually receives federal funds to clean up LUSTs. To prevent leaks from developing in the future, LUST regulations required that after December 22, 1998, all new tanks be made of non-corrodible materials and be equipped with overfill and spill prevention devices.

Tanks in existence prior to that date were required to be replaced or retrofitted to meet the new standards by the deadline. Tanks are also required to possess leak prevention devices and monitoring equipment to help detect leaks. Underground storage tank regulations do not apply to residential underground storage tanks.



Leaking Underground Storage Tank data for the City of Poquoson was obtained from the Department of Environmental Quality. There are 24 registered underground storage tank sites in Poquoson. According to DEQ records, seventeen releases have been reported since 1989. Table 5-5 lists the reported releases along with the date of the incident and the status of the case.

Table 5-6: Leaking Underground Storage Tanks		
Site Name	Release Reported	Status
Miller Dewey Residence	7-May-2004	Closed
Mulkey Bruce Residence	2-Oct-2003	Closed
Dodson Heather and Lyndel Residence	1-Oct-2003	Closed
Sustare Nancy Residence	26-Sep-2003	Closed
Clark Pam Residence	26-Sep-2003	Closed
Insley Bill Property	25-Sep-2003	Closed
Costello Lucy Residence	22-Sep-2003	Closed
Sawyer Robert Residence	11-Jan-2002	Closed
Zooms # 1	6-Sep-2001	Closed
City of Poquoson	27-May-1999	Closed
Jones Property	22-Apr-1999	Closed
Blair Property	22-Apr-1999	Closed
Tinee Giant Store #63	29-Jun-1998	Closed
Akgun Property	13-Feb-1998	Closed
Zooms # 1	20-Dec-1991	Closed
B.C. Smith Co Inc	17-Jan-1990	Closed
Tinee Giant Store #63	4-Jun-1989	Closed

Source: Virginia Department of Environmental Quality

Defective Septic Systems

As previously noted, the City of Poquoson now has a complete public sanitary sewer system and no new septic systems are being approved. As of 2007, approximately 51 residences in the City were not connected to city sewer. This number has been greatly reduced since 2002 from 670 residences. Until all of these residences are connected to public sewer, City staff will continue to enforce the 5-year pump-out schedule required by ordinance.

WATER SUPPLY DEMAND

In 2000, the population of City of Poquoson was 11,566 people (2000 U.S. Census), most of whom receive their drinking water through Newport News Waterworks. Health Department records indicate that eighty-nine (89) individual private wells have been permitted in Poquoson since 1991, but only six (6) of these were reported to supply potable water. Because many of the private wells used for potable water were constructed before documentation was required, the total number, location and depth of private wells within City of Poquoson are unknown.



In order to accommodate future growth and development, a reliable water supply to support anticipated levels of residential, commercial and industrial development must be insured. The City participates in the Regional Raw Water Study Group and is partnering with Newport News Waterworks to secure additional water supplies for future generations.

The City administers the Virginia Uniform Statewide Building Code. The Code requires the installation of low-flow fixtures in buildings built in the City since the mid-1980s. Reduced water use, attributable to these water savings devices, extends the life of the local water supply, on-site septic systems and wells, and reduces wastewater treated and discharged. Poquoson also participates in other water conservation programs, including the Hampton Roads Water Efficiency Team. This is a regional program administered through the HRPDC that promotes water conservation throughout Hampton Roads. All sixteen Hampton Roads jurisdictions participate in this program.

GOALS, OBJECTIVES, AND STRATEGIES

Goals

1. Protect the availability, quantity, and quality of all surface and groundwater resources.
2. Improve and protect water quality of all water bodies in and around Poquoson.
3. Preserve and enhance both the natural and manmade environment of Poquoson, while permitting development to occur in accordance with the Comprehensive Plan.
4. Maintain and keep current all Federal and State regulations and ordinances relevant to the restoration, preservation, and maintenance of Poquoson's natural environment.
5. Reduce hazards to persons, property, and the environment caused by stormwater runoff from developed areas.
6. Protect coastal wetlands, marshes, rivers, inlets, and other bodies of water from degradation associated with land development.
7. Preserve and protect environmentally sensitive areas and natural resources from the avoidable impact of land use activities and development. Areas deserving special attention include coastal areas, tidal and certain non-tidal wetlands, prime forest and agricultural lands, mature trees, highly permeable and erodible soils, and groundwater with particular emphasis given to Poquoson estuaries of the Chesapeake Bay.



Objectives

1. Continue enforcement of erosion and sedimentation control regulations during land development.
2. Assure that new development minimizes adverse impacts on the natural environment.
3. Strictly enforce appropriate methods of construction in the development process to control sedimentation, pollutant loading and stormwater run-off, especially where development takes place in proximity to rivers, inlets and other bodies of water.
4. Continue to strictly enforce State Stormwater Regulations.
5. Continue to effectively enforce the Environmental Management Area Overlay District to satisfy the requirements of the Chesapeake Bay Preservation Act and Regulations.
6. Encourage the provision of open space within the developing areas for purposes of recreation, aesthetics, wildlife habitat, and the preservation of ecologically sensitive areas including groundwater recharge areas.
7. Continue to eliminate the incidences of failing septic systems.
8. Continually update and effectively enforce the Floodplain Management Area Overlay District Regulations.

Strategies

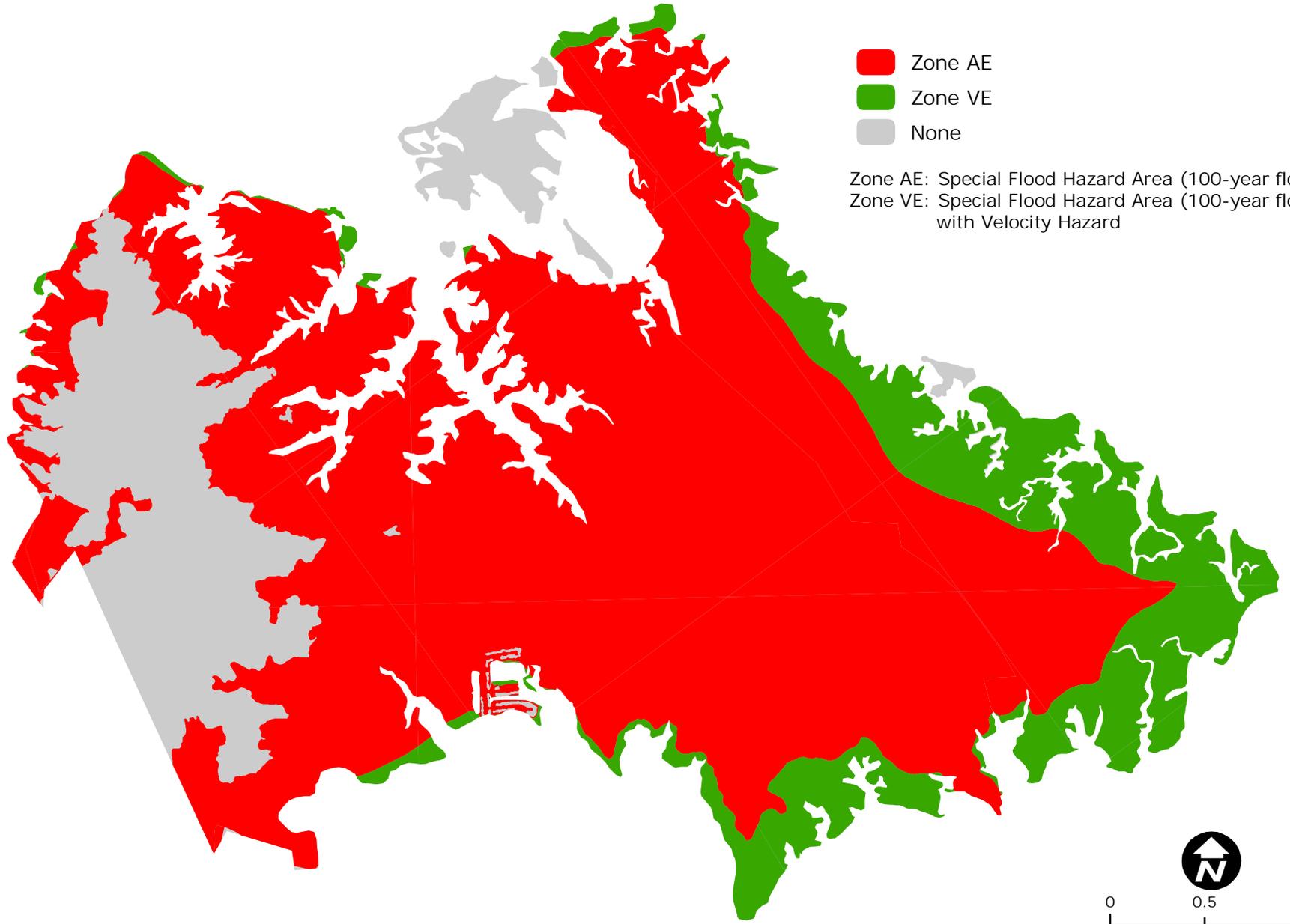
1. Continue to work with the Virginia Peninsulas Public Service Authority to provide recycling opportunities for the proper disposal of automotive and machine fluids, household cleaners, paints, thinners, glues and other fluids and chemicals that emit volatile organic compounds.
2. Encourage innovative environmental designs achieving “best” stormwater management practices.
3. Encourage the installation of street trees along new roads to enhance water quality and streetscaping.
4. Continue to strictly regulate permitted activities and development in wetlands, through the enforcement of the Environmental Management Overlay District Regulations and the Erosion and Sedimentation Control Ordinance.
5. Continue to develop and enforce zoning and use regulations and other City ordinances that ensure the preservation, to the maximum extent possible, of rare and threatened plant and animal species, wetlands, fragile shorelines, critical wildlife habitats, natural areas, and other environmentally sensitive areas and resources.



6. Ensure that water dependent activities, such as marinas and docks, are located and conducted in an environmentally sensitive manner and include adequate marine sanitation facilities.
7. Encourage the development and use of regional retention/detention ponds in residential and commercial developments wherever possible.
8. Encourage low impact development and conservation development to reduce the need for structural stormwater management.
9. Consider requiring verification of the proper maintenance and operation of private retention and detention ponds to civic leagues, homeowners' associations, and other owners of such ponds.
10. Continue to identify existing and potential sources of surface and groundwater pollution and take action to prevent or control the effect of these sources. Continue to enforce all existing regulations to ensure the protection of all water resources and adopt additional protective measures as necessary.
11. Monitor the use of private, wastewater treatment disposal systems and septic tanks and encourage the State Health Department to take immediate corrective action when system failures are not addressed. Pursue criminal penalties for non-compliance.
12. Continue to develop a City stormwater runoff control manual, detailing appropriate techniques that work best for the City of Poquoson, to prevent increases in sediment, pollutant, or toxic loading. Once developed and tested, use of the manual should be required through appropriate amendments to the development ordinances.
13. Develop and adopt a stormwater management ordinance and construction and design standards.
14. Seek grants to assist with location of abandoned private wells and develop a program to require closure in accordance with current Health Department regulations.
15. Develop a strategy for proper removal of abandoned or failing septic tank systems.
16. In preparation for implementation of Phase II of the National Pollution Discharge Elimination System (NPDES) for Small MS4 (municipal separate storm water sewer systems) develop or obtain educational materials and commence required outreach program to inform citizens of impacts polluted stormwater runoff discharges have on water quality in our local creeks and waterways.
17. Monitor and develop clean-up strategies for illicit discharges.
18. Continue the implementation of the re-inspection program of Best Management Practices.

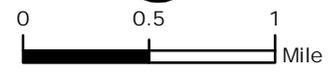


Map 5-1



- Zone AE
- Zone VE
- None

Zone AE: Special Flood Hazard Area (100-year flood)
Zone VE: Special Flood Hazard Area (100-year flood) with Velocity Hazard



Flood Zones

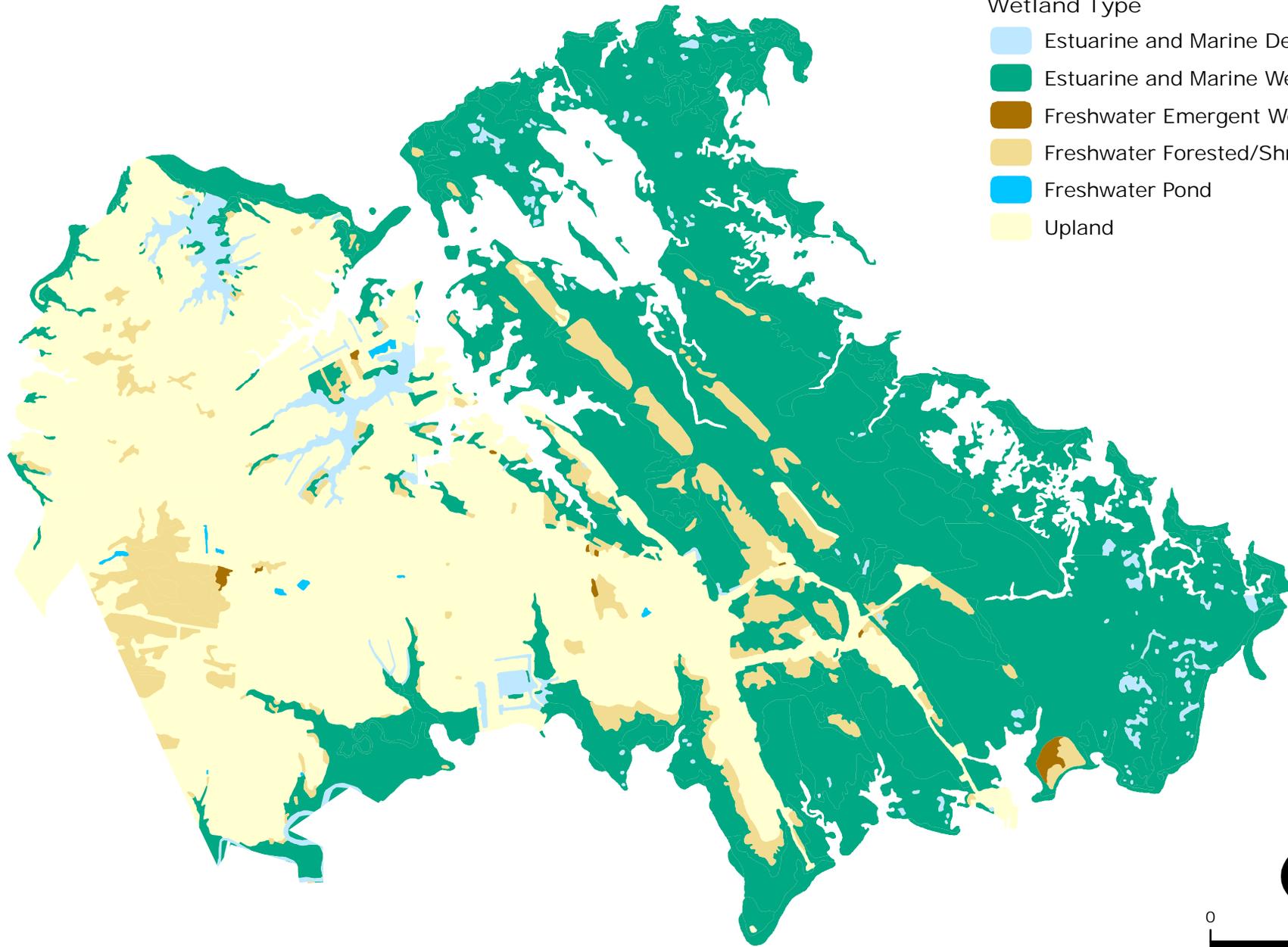
Map Created by HRPDC GIS Staff, May 2005
Data Source: FEMA



Map 5-2

Wetland Type

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Upland



0 0.5 1 Mile

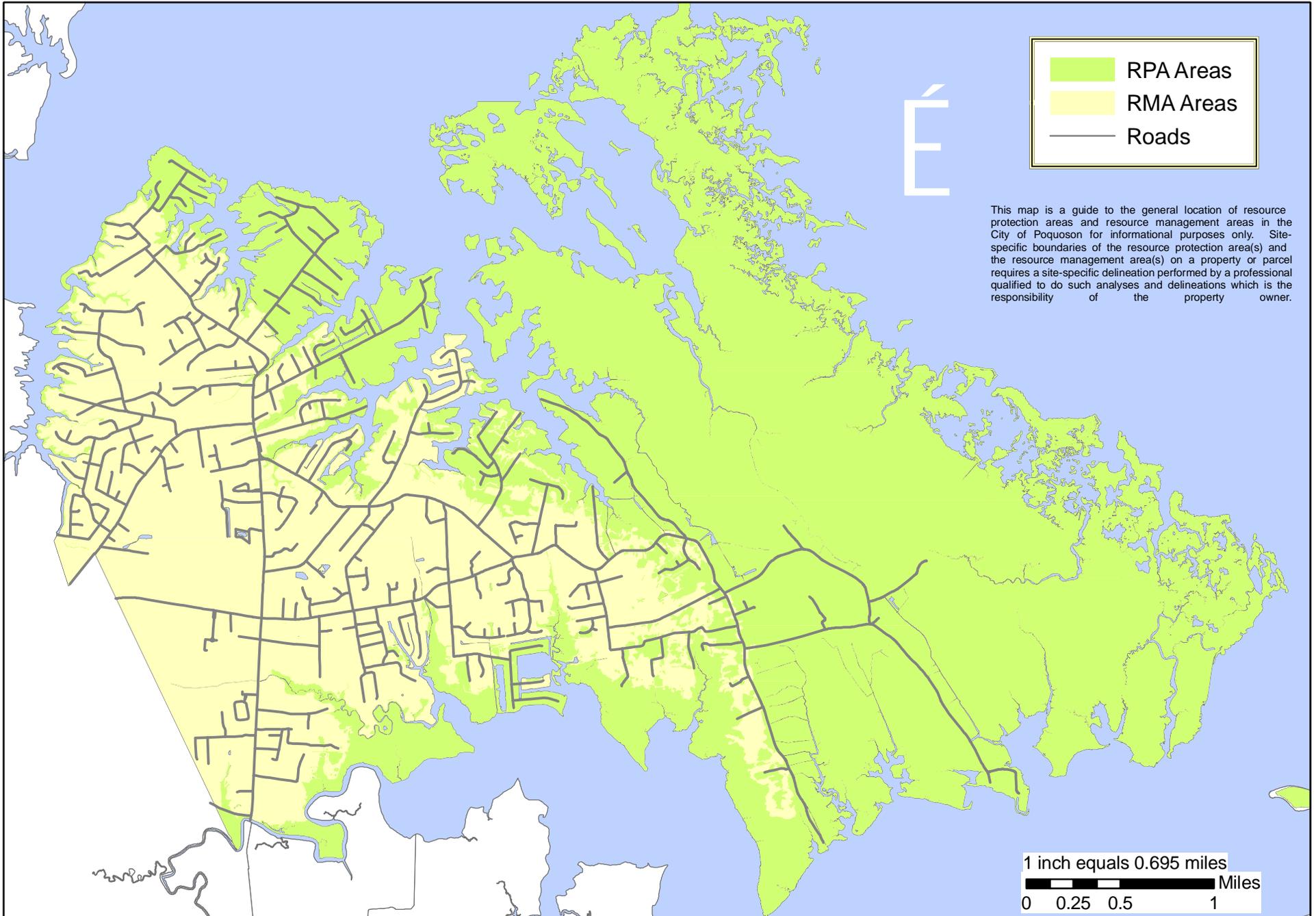


National Wetlands Inventory

Map Created by HRPDC GIS Staff, May 2005
Data Source: US Fish and Wildlife Service



Map 5-3



 RPA Areas
 RMA Areas
 Roads

This map is a guide to the general location of resource protection areas and resource management areas in the City of Poquoson for informational purposes only. Site-specific boundaries of the resource protection area(s) and the resource management area(s) on a property or parcel requires a site-specific delineation performed by a professional qualified to do such analyses and delineations which is the responsibility of the property owner.

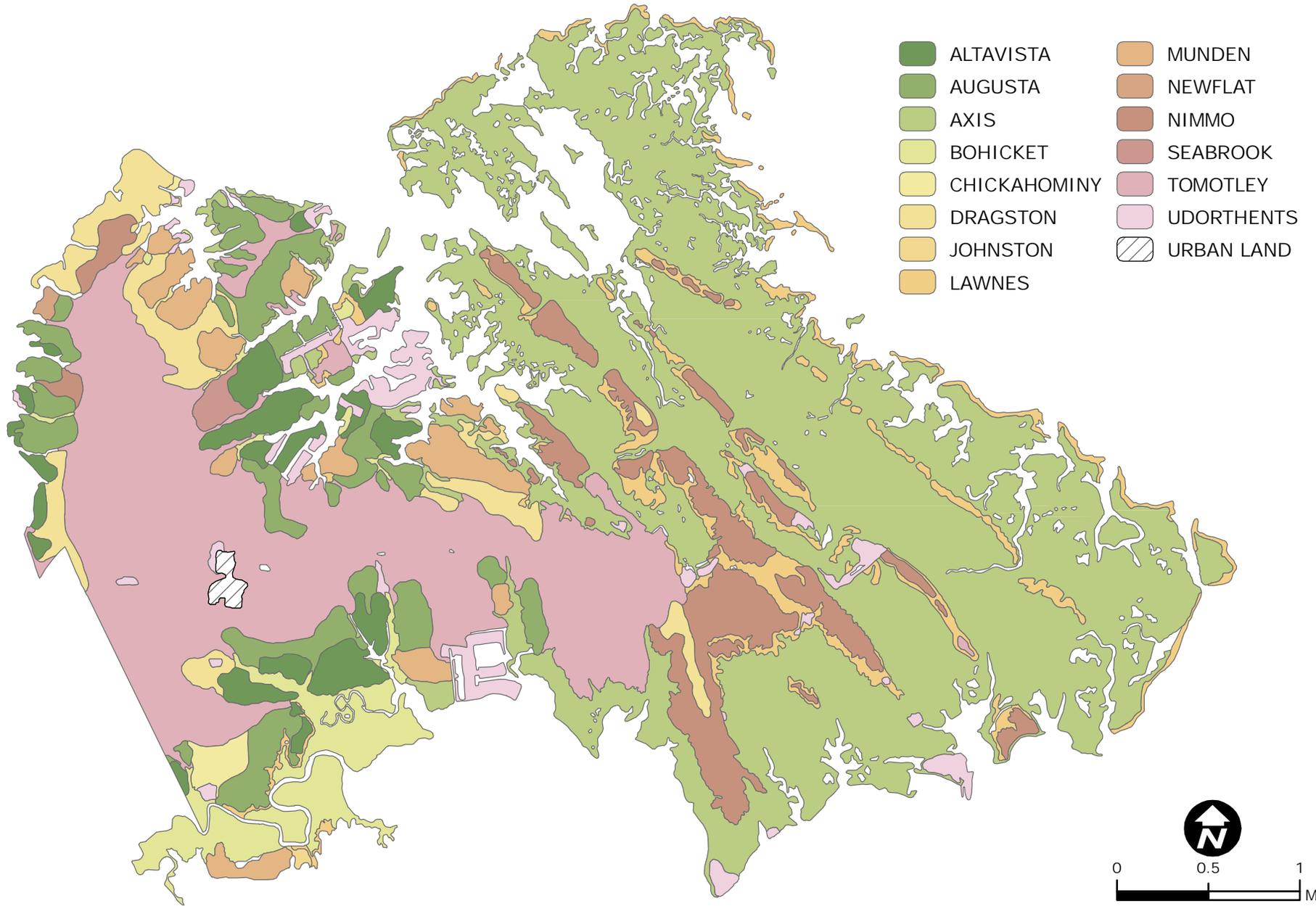
1 inch equals 0.695 miles
 Miles
0 0.25 0.5 1



Chesapeake Bay Preservation Areas

Map Created by City of Poquoson GIS Staff, SEPT 2009
Revised MAR 2010
Data Source: City of Poquoson

Map 5-4

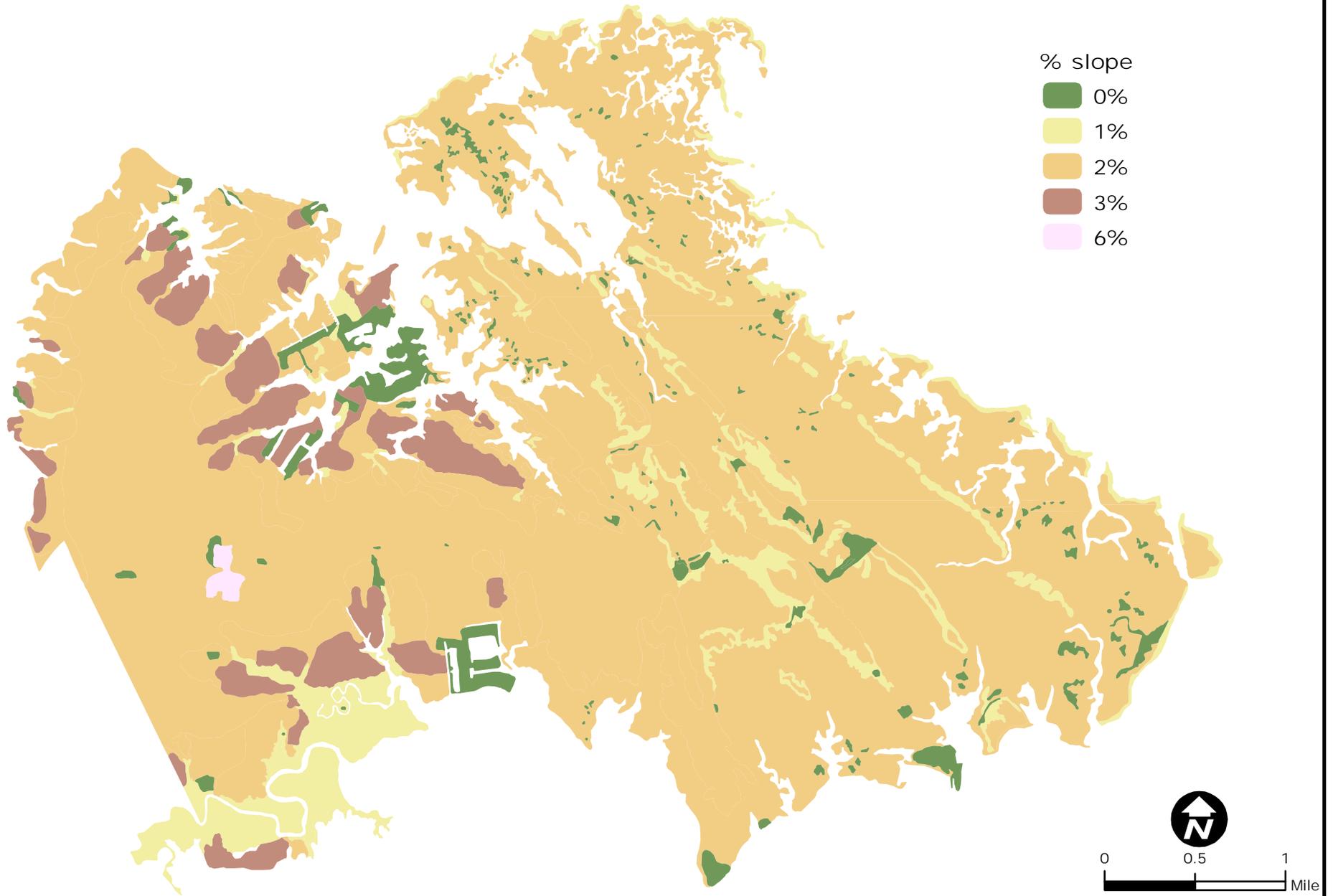


Soil Composition

Map Created by HRPDC GIS Staff, May 2005
Data Source: USDA Natural Resource Conservation Service



Map 5-5



Soil Slope

Map Created by HRPDC GIS Staff, May 2005
Data Source: USDA Natural Resource Conservation Service SSURGO



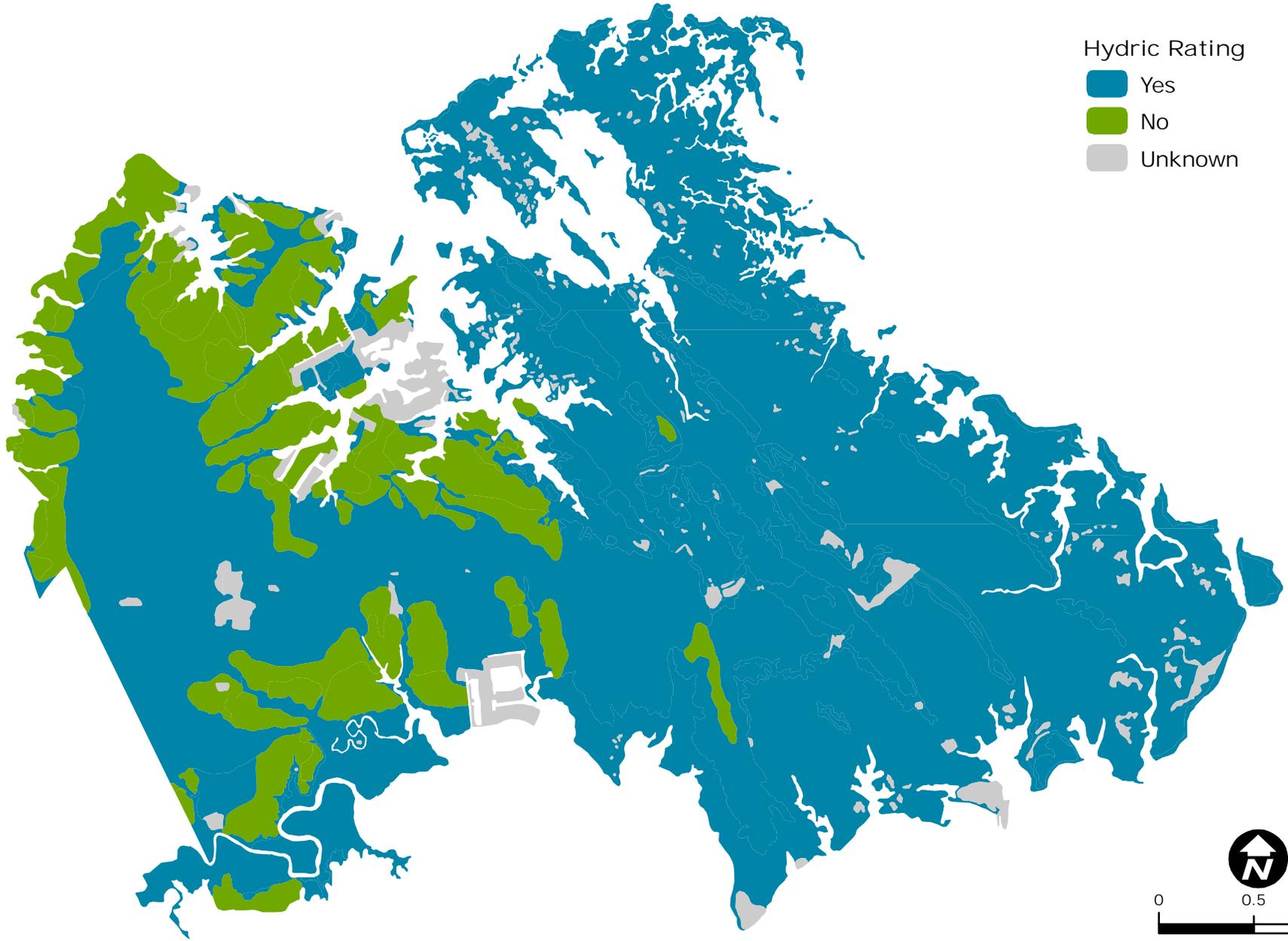
Map 5-6

Hydric Rating

 Yes

 No

 Unknown

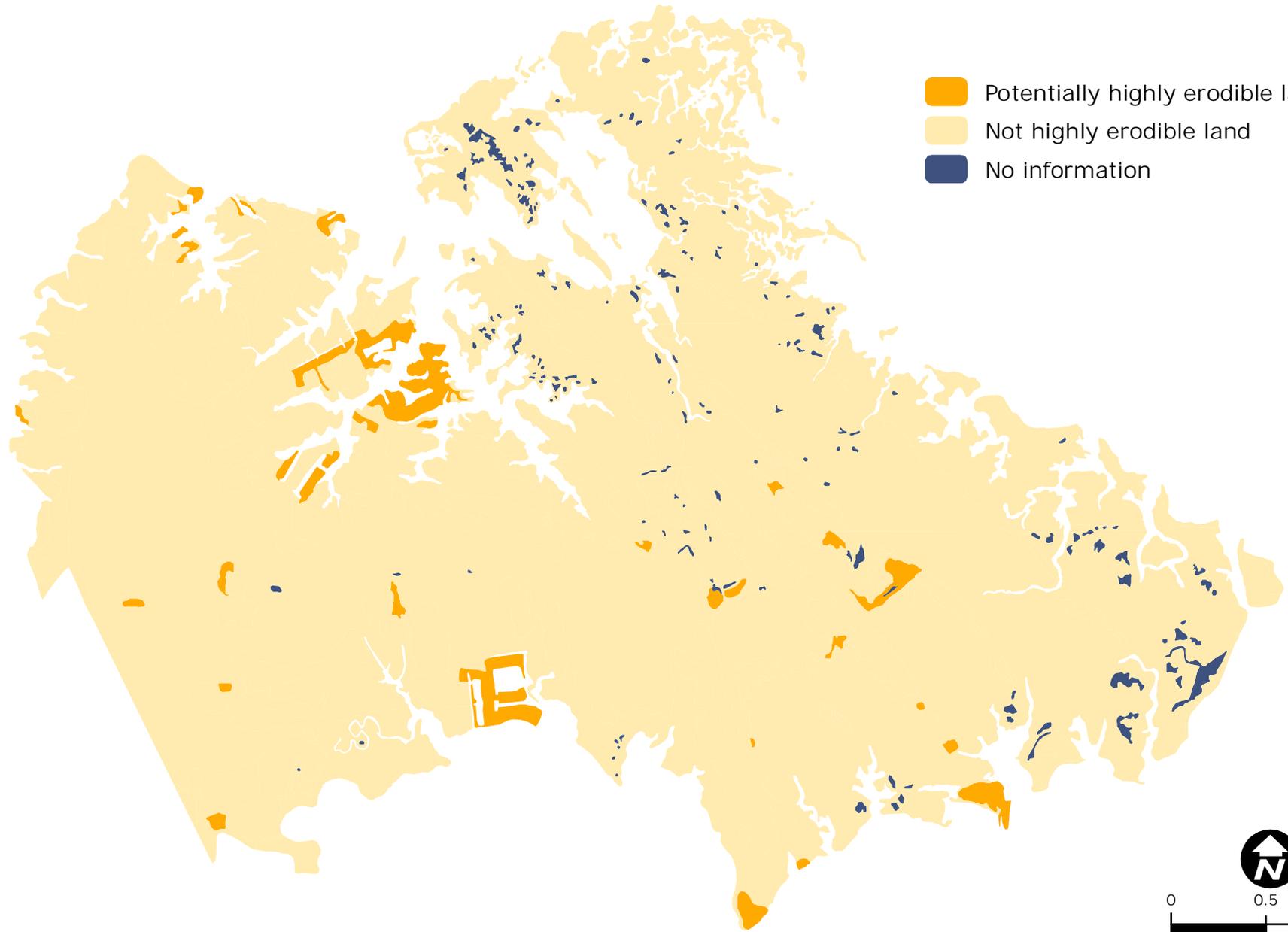


Hydric Soils

Map Created by HRPDC GIS Staff, May 2005
Data Source: USDA Natural Resource Conservation Service SSURGO



Map 5-7



-  Potentially highly erodible land
-  Not highly erodible land
-  No information

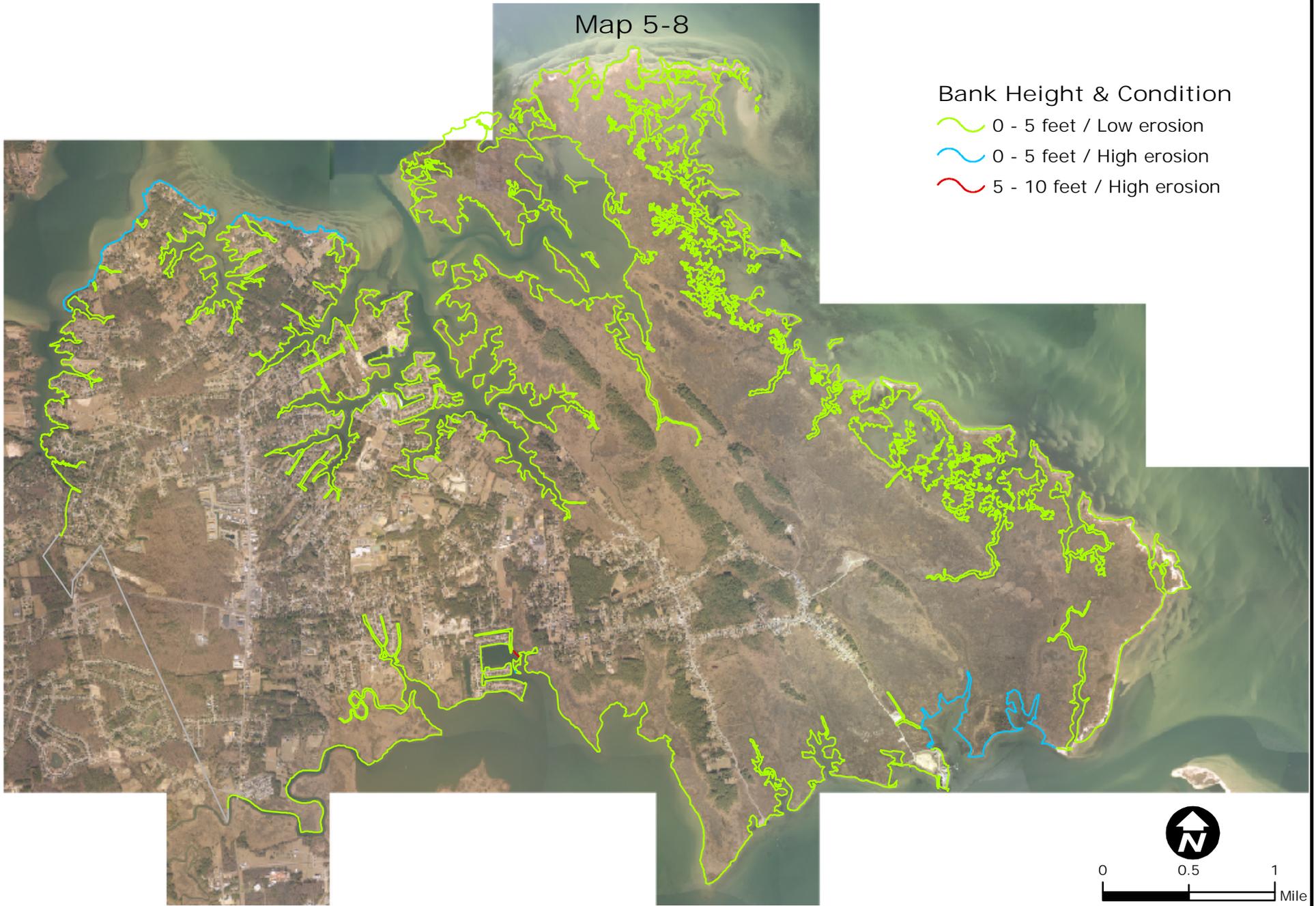


Erodible Soils

Map Created by HRPDC GIS Staff, May 2005
Data Source: USDA Natural Resource Conservation Service



Map 5-8



Bank Height & Condition

- 0 - 5 feet / Low erosion
- 0 - 5 feet / High erosion
- 5 - 10 feet / High erosion



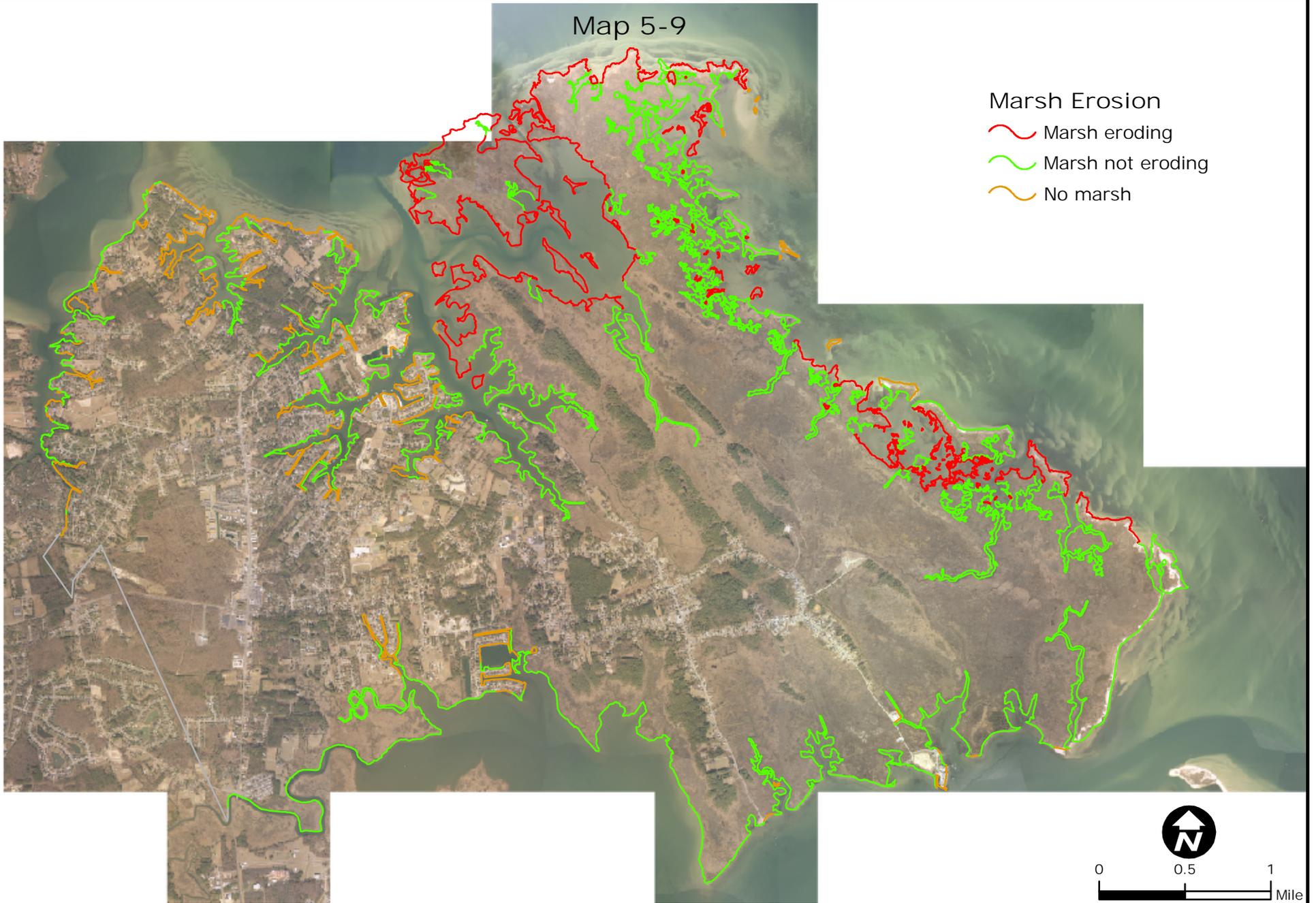
*Shoreline Situation:
Bank Condition*

Map Created by HRPDC GIS Staff, May 2005
Data Source: Virginia Institute of Marine Science, 2001

Comprehensive Coastal Inventory
Center for Coastal Resources Management
Virginia Institute of Marine Science



Map 5-9



Marsh Erosion

-  Marsh eroding
-  Marsh not eroding
-  No marsh

*Shoreline Situation:
Marsh Erosion*

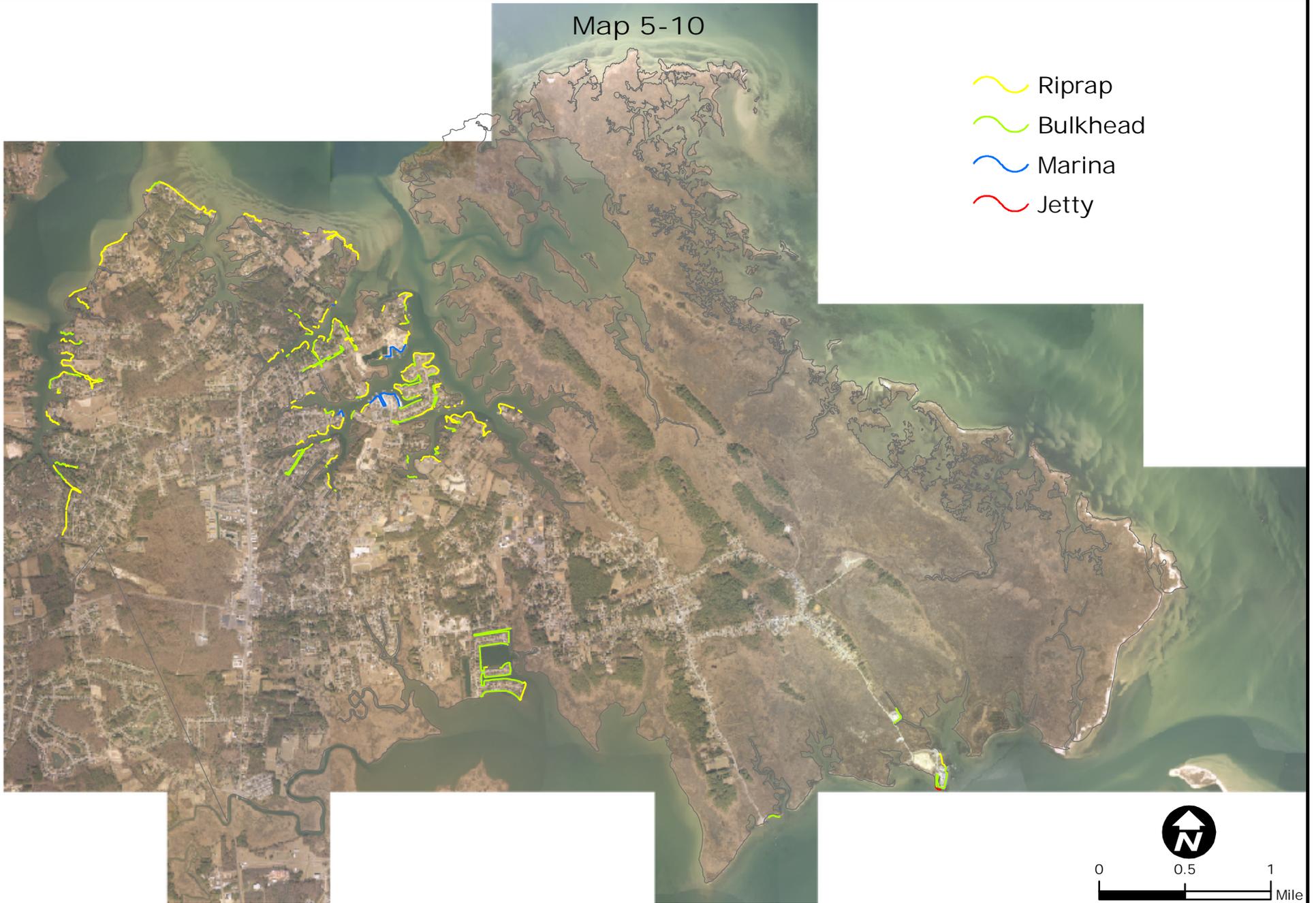
Map Created by HRPDC GIS Staff, May 2005
Data Source: Virginia Institute of Marine Science, 2001



Comprehensive Coastal Inventory
Center for Coastal Resources Management
Virginia Institute of Marine Science



Map 5-10



- Riprap
- Bulkhead
- Marina
- Jetty



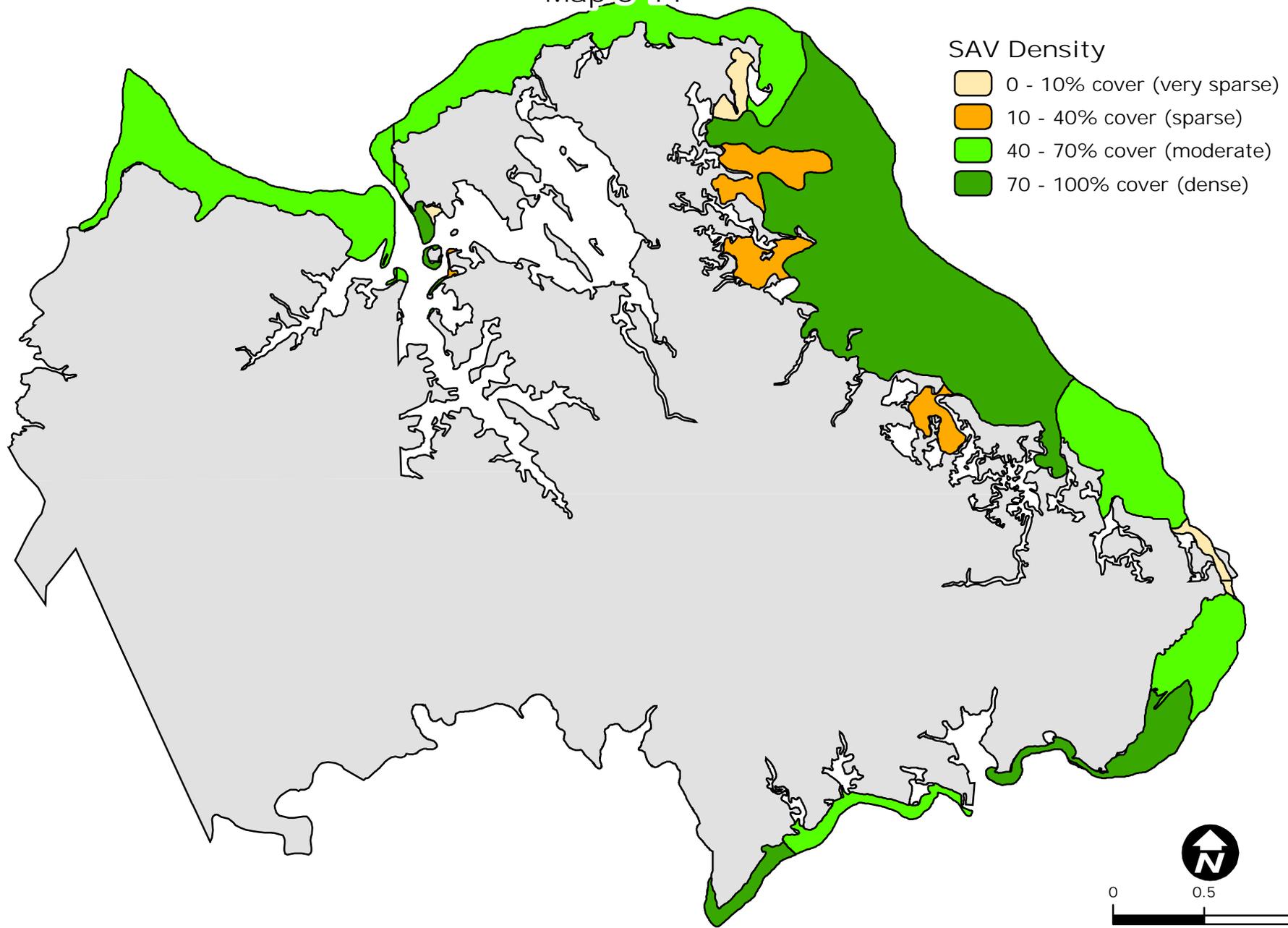
Shoreline Structures

Map Created by HRPDC GIS Staff, May 2005
Data Source: Virginia Institute of Marine Science, 2001

Comprehensive Coastal Inventory
Center for Coastal Resources Management
Virginia Institute of Marine Science



Map 5-11



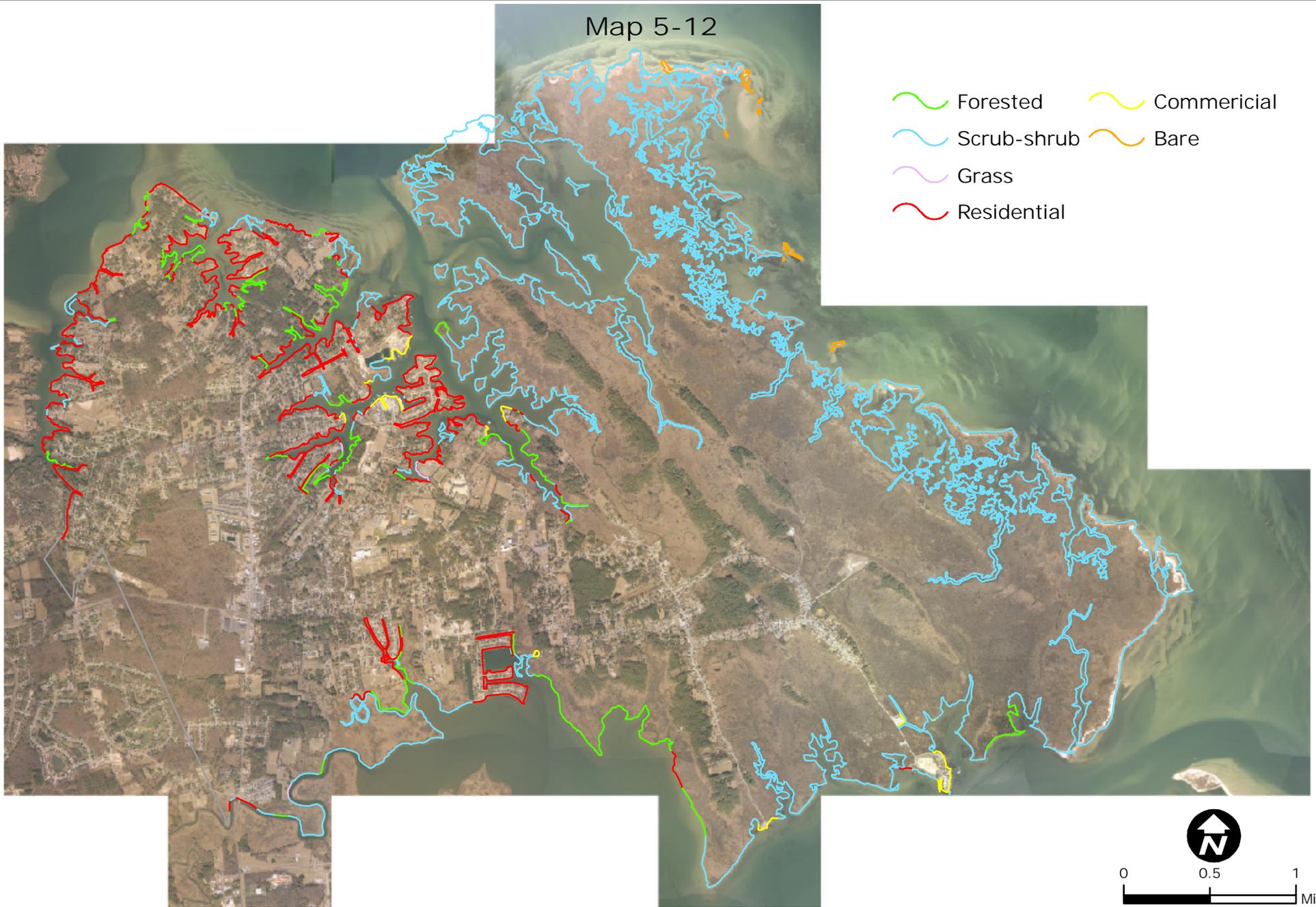
Submerged Aquatic Vegetation Beds

Map Created by HRPDC GIS Staff, May 2005
Data Source: VIMS, 2002

Comprehensive Coastal Inventory
Center for Coastal Resources Management
Virginia Institute of Marine Science



Map 5-12



Shoreline Situation: Riparian Land Use

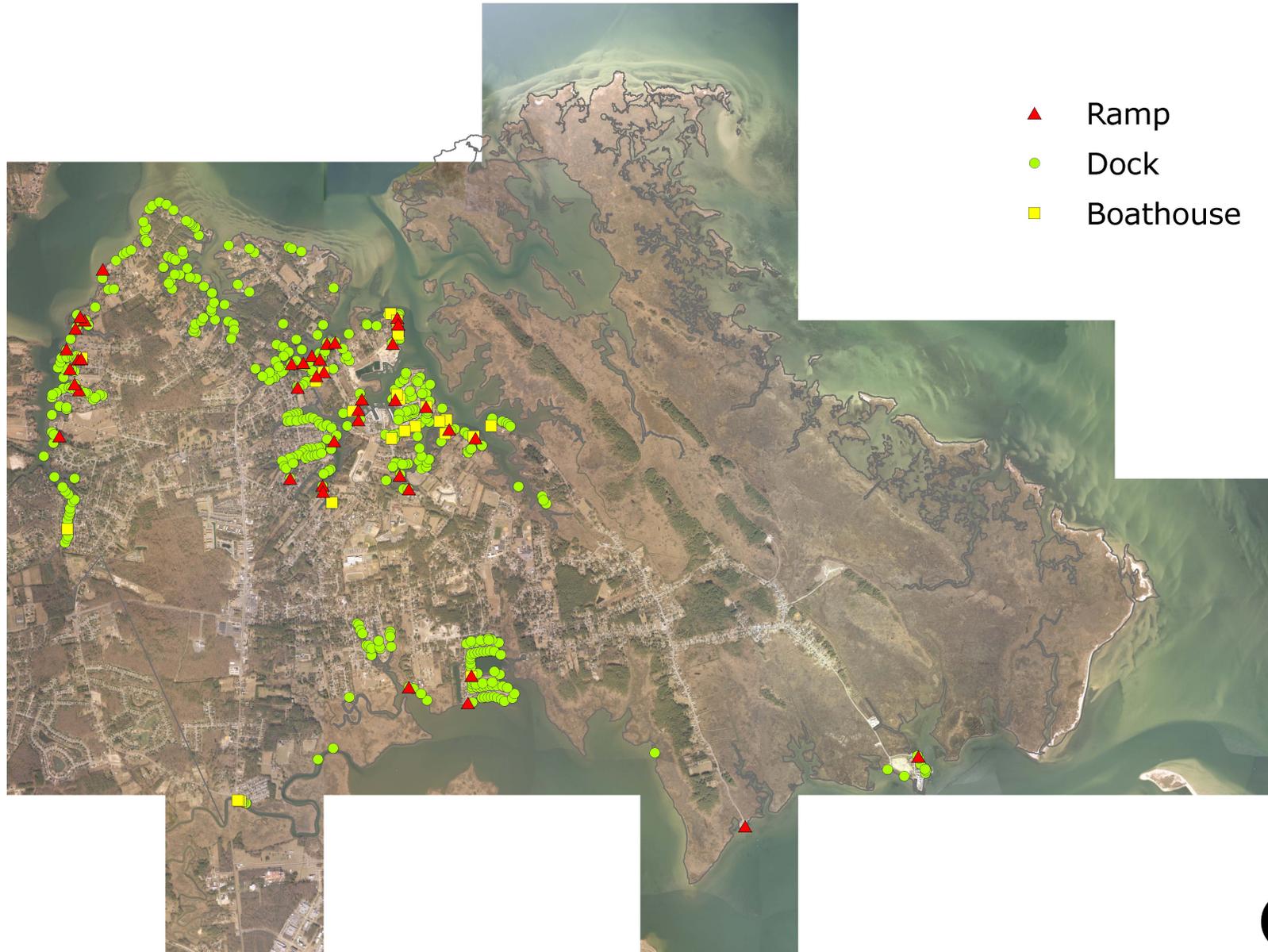
Map Created by HRPDC GIS Staff, May 2005
Data Source: Virginia Institute of Marine Science, 2001



Comprehensive Coastal Inventory
Center for Coastal Resources Management
Virginia Institute of Marine Science



Map 5-13



- ▲ Ramp
- Dock
- Boathouse



0 0.5 1 Mile



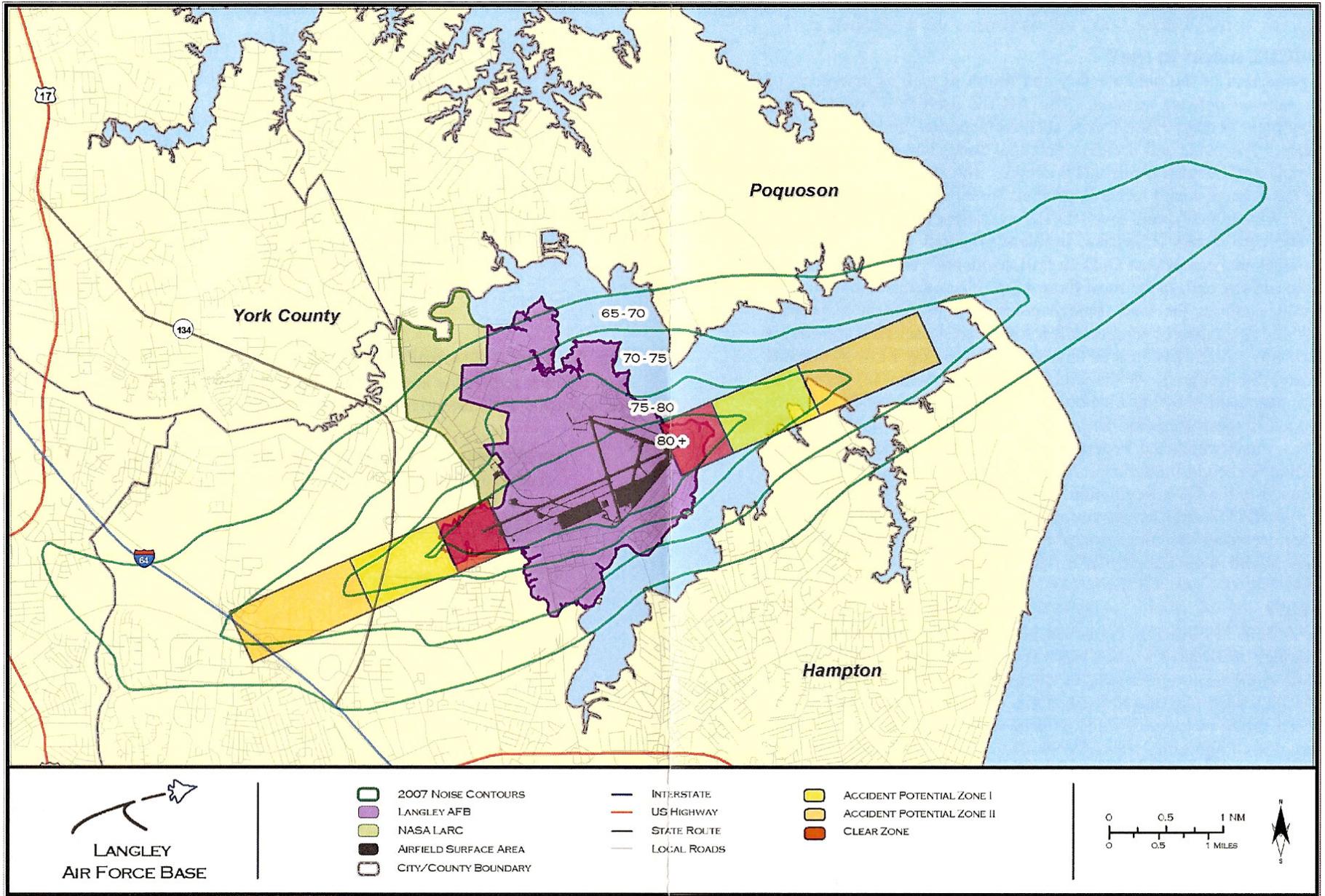
Shoreline Access

Map Created by HRPDC GIS Staff, May 2005
Data Source: Virginia Institute of Marine Science, 2001

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Center for Coastal Resources Management
Virginia Institute of Marine Science



Map 5-14
LAFB Accident Potential Zones, Runway Clear Zones & Noise Contours by Decibels



Source: LAFB AICUZ Update, July 2007

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PUBLIC SAFETY & EMERGENCY MANAGEMENT SUB-ELEMENT

PAGE

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END



OVERVIEW

As the population grows, so does the demand for community services and facilities where these services are provided. Such facilities include schools, parks, fire stations, libraries, jails, landfills, and government offices. In planning for community facilities, it is important to consider not just the size of the City's future population, but also its composition and location. For example, projections indicate dramatic growth in the senior population with more moderate growth in school-aged populations. This will have an impact on the type of facilities that will be needed, since the young and old have different needs and demands. The following section is intended to outline and describe the City of Poquoson's government structure, organization and duties.

GOVERNMENT HISTORY AND STRUCTURE

Poquoson, which had been a part of York County for many years, became a town in 1952 and an independent City in 1975 upon referendum of the citizens. Although cities are independent from counties in the state of Virginia, the City of Poquoson maintains close ties with York County. In fact, some services are shared with York County.

The City's form of government is the council-manager type. Voters cast their ballot for one candidate from each precinct. The City is divided into three precincts (Eastern, Central & Western) with each precinct having two council representatives. One representative is elected at large and serves as City Mayor. Persons elected to City Council take office on the first day of January following the election.

A description of Poquoson's City government follows while Figure 9-1 illustrates Poquoson's City government structure.

CITY HALL/LIBRARY COMPLEX

In June of 1997, a new municipal complex was completed and is located at the end of a recently constructed City Hall Avenue situated on the south side of Victory Boulevard approximately one-quarter mile west of the Wythe Creek Road/Little Florida Road intersection.



This new facility includes a two-story City Hall containing 18,000 square feet and is occupied by the Mayor's Office, Council Chambers, City Manager's office, City Clerk, School Administrative offices, Engineering, Finance and Planning Departments, Building & Codes Compliance, the City Assessor, Virginia Department of Motor Vehicles (DMV), Registrar, Commissioner of Revenue and Treasurer. Adjacent to City Hall, linked by an enclosed breezeway, is the City's 12,000 square foot Library.

SCHOOLS

Poquoson City Schools is comprised of four schools serving a total of 2566 students, with over 300 dedicated staff. Poquoson Primary School opened in 1990 and serves 490 students in grades K-2. The newly constructed Poquoson Elementary School serves 522 students in grades 3-5 and received an award from LEED (Leadership in Energy and Environmental Design) for the design when it opened in Fall of 2008. Poquoson Middle School serves 645 students in grades 6-8 and was built in the 1930's, with additions in the 50's and 60's. An entire section was added to the middle school in 1970, with another addition in the 1990's. Poquoson High School serves 909 students in grades 9-12 and was built in 1975, with additions in 1979 and 1996.

ADMINISTRATION OF JUSTICE

Administration of Justice in Poquoson is vested in the court system in York County, including criminal and civil matters. The York County General District Court and the Circuit Court of York County have jurisdiction over the City of Poquoson.

PERMANENT BOARDS AND COMMISSIONS

Board of Zoning Appeals- A quasi-judicial panel of seven (7) citizens appointed by City Council to serve 5-year terms and consider applications requesting variances or exceptions to the zoning ordinance.

Planning Commission- A panel of seven (7) citizens that serve to guide decisions dealing with land use, property development, and future planning of the City as a whole. The Commission and its actions are advisory to Council. Members are appointed by City Council to serve 4-year terms.

Wetlands Board- A panel of seven (7) citizens appointed by City Council to serve 5-year terms. The panel considers applications requesting waivers and exceptions to regulations concerning State-owned water features and wetlands.

Board of Adjustments and Appeals- A quasi-judicial panel of six (6) citizens appointed by City Council to serve 5-year terms and consider applications requesting action regarding permits, violations or findings made by the Building Official's Office.



Board of Equalization- A quasi-judicial panel of three (3) citizens with one alternate appointed by judge (ad hoc) to consider applications requesting reversal of decisions made in regards to property assessment.

Library Advisory Board- A seven (7) member panel assigned to oversee Library operations. Members serve 3-year terms.

School Board- A seven (7) member panel of citizens charged with administering and managing a general system of free public schools. Members are appointed by Council and serve 3-year terms. The Board has the following duties and powers:

- Enforce laws and rules for the governing of schools;
- Establish the methods of teaching and the length of the school term;
- Employ and dismiss teachers;
- Suspend or expel pupils;
- Supervise the school census required by the Commonwealth;
- Prepare annual school budget estimates; and
- Manage all school funds.

Sister Cities Commission- Poquoson has joined Sister Cities International to partner with a community in France, the City of Le Bar-sur-Loup, to learn more about one another, and to develop friendly meaningful exchanges, the two communities propose a formal affiliation leading to official designation as "sister cities". A six (6) member panel serves as the Poquoson's representatives to Sister Cities International, an international non-profit organization, serving 3-year terms and appointed by Council.

Mission Statement

“Promote peace through mutual respect, understanding, & cooperation - one individual, one community at a time.”

Industrial Development Authority- A seven (7) member panel charged with fostering commercial development, promoting economic viability and preserving economic vitality in the City. The IDA performs such duties within the powers permitted by the Virginia General Assembly and those granted exclusively by Council. Members of the IDA serve 4-year terms. The IDA has the following duties and powers:

- buy and develop land for industrial and business parks, and for other economic development purposes;
- build facilities for sale or lease to private companies;
- issue taxable and tax-exempt Industrial Revenue Bonds either to finance the Authority's projects or to provide financing for facilities and machinery by a private company; and
- provide incentives to attract new companies to Poquoson or to induce existing companies to expand here.



Architectural Review Board- A panel of five (5) citizens that evaluates the design of any commercial development/alteration within the architectural control district located and other areas designated by City Council through Conditional Use Permit. The goal of the ARB is to encourage the construction of attractive commercial development to prevent inappropriate exterior design that could deteriorate the appearance of development and ultimately threaten the integrity of future development and revenue within the City of Poquoson. The panel is appointed by City Council and each member serves 3-year terms.

Parks and Recreation Advisory Board- A seven (7) member panel appointed by the City Council that works with the Parks and Recreation Department on program assessment and development, long range planning, and customer service. The Board advises the Planning Commission and City Council on issues that affect parks and recreation facilities and programs identified in the Comprehensive Plan, Parks and Recreation Master Plan, Capital Improvements Plan and Annual Financial Plan. Members serve 3-year terms.

PLANNING IN POQUOSON

City planning began in Poquoson in 1952 with the appointment of the Poquoson Planning Commission. A Subdivision Ordinance was adopted the same year followed by the Zoning Ordinance in 1953. A Wetlands Ordinance was adopted in 1972. Of course, these ordinances have been modified several times over the years and other development ordinances such as the Site Plan, Subdivision and Chesapeake Bay Preservation Ordinances have been adopted.

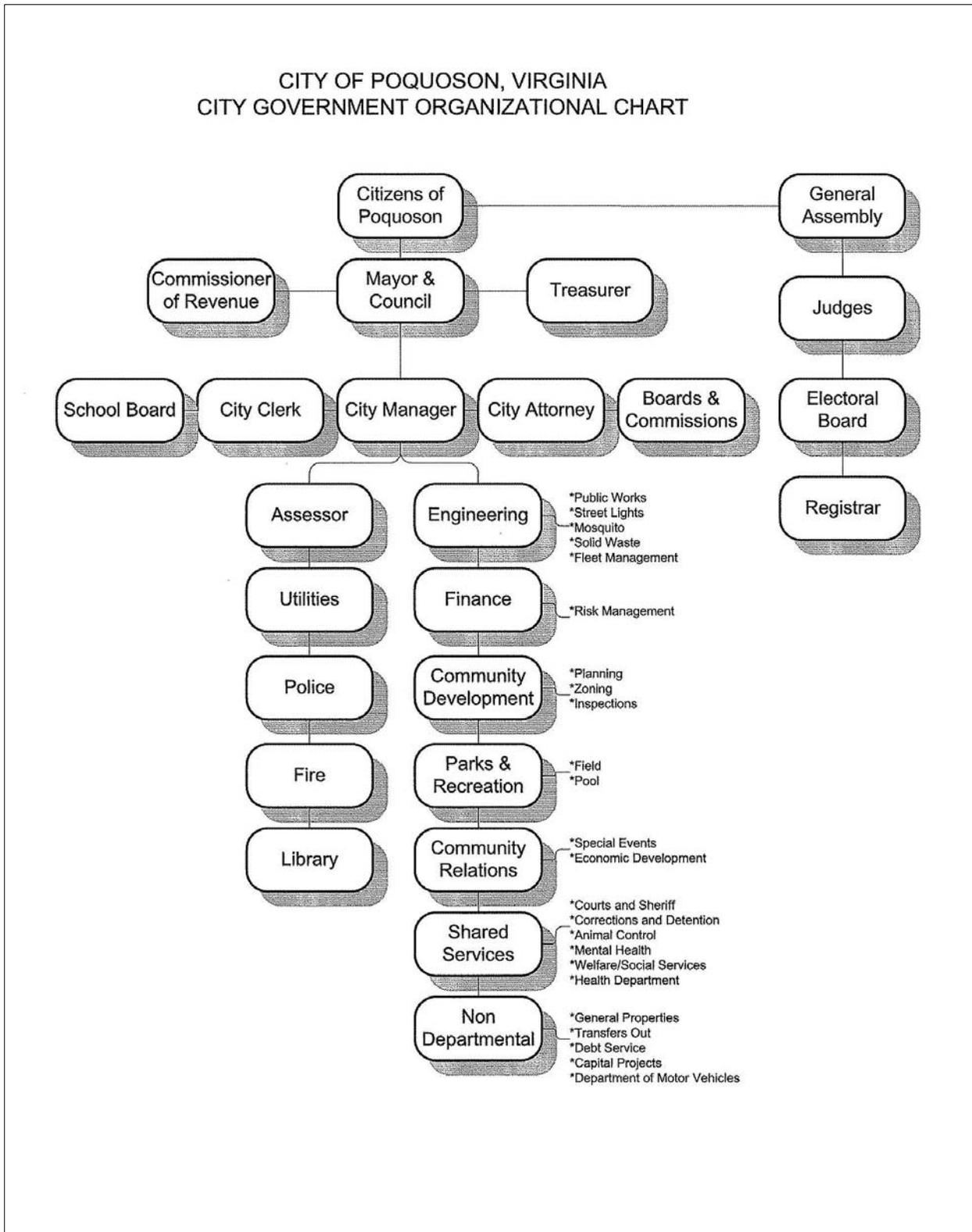
Poquoson adopted its first Comprehensive Plan in 1969 and updated it in 1976, 1985, 1992 and 1999 with specific elements amended in 2002. More specific plans and studies have also been developed. These include:

- Poquoson Master Drainage Study (1975)
- Central Commercial Facility Study (1978)
- Community Center Study (1979)
- Industrial Park Feasibility Study (1980)
- Bike Trails System Study (1980), (updated in 1987-88)
- Capital Improvements Plan (annually)
- Highway and Waterway Feasibility Study for Messick Point and Primary Route 171 (1982)
- Master Sanitary Sewerage Plan (1984)
- Big Woods Development Study (1985)
- Big Woods Drainage Study (1997)

The City is a member of the Hampton Roads Planning District Commission and participates in a number of regional planning programs.



Figure 6-1: City Organizational Chart



ELECTED OFFICIALS

City Council

The City's form of government is the council-manager type. Under this form of government, the administrative and executive powers are vested in the City Manager while the legislative powers are vested in City Council. The City Council of Poquoson has seven members, with two elected from each of the City's three precincts and one elected at large who is the Mayor. In addition to having the authority to levy taxes and enact ordinances, the Council is empowered to:

- Appoint a City Manager;
- Adopt a budget;
- Appoint the members of the City School Board;
- Appoint the various Boards and Commissions and fill vacancies as they occur;
- Investigate any office, department, or agency of the City as to municipal affairs;
- Adopt and modify the City's official map;
- Adopt and modify ordinances pertaining to general and specific operations;
- Create a housing authority;
- Fix salaries and wages of all officers and employees of the City, unless otherwise provided by State law;
- Set bonding requirements for City employees; and
- Keep a journal of its proceedings, which shall be open to the public.

CONSTITUTIONAL OFFICERS

Poquoson has the following elected constitutional officers:

- City Treasurer
- City Commissioner of the Revenue
- Clerk of the Circuit Court (shared with York County)
- Sheriff (shared with York County)
- Commonwealth's Attorney (shared with York County)

Treasurer

The City Treasurer is an elected constitutional officer responsible for collecting, recording and depositing all City revenues. The Treasurer also is responsible for transferring state income taxes to the State Treasury, issuing auto decals and dog tags, investing idle funds and acting as fiscal agent for bond retirement.

Commissioner of the Revenue

The Commissioner of the Revenue is an elected constitutional officer charged with auditing and processing all locally filed state income tax returns, assessing and processing local personal property



tax and issuing all business, professional, peddler's and solicitor's licenses. The Commissioner also oversees the daily operation of the Division of Motor Vehicle (DMV) office located in City Hall.

APPOINTED OFFICIALS

City Manager

The City Manager, appointed by City Council, is the chief administrative officer of Poquoson. He is authorized to:

- Enforce all ordinances and resolutions of the City Council;
- Appoint such officers and employees as are necessary for the proper administration of the City;
- Keep the Council fully advised of the City's financial condition and future financial needs;
- Prepare and submit to the Council a tentative budget each fiscal year;
- Enter into contracts on behalf of the City pursuant to the resolution or any ordinance of the Council; and
- Supervise and control purchasing, expenditures, and disbursement to ensure that appropriations are not over-spent.

City Attorney

The City Attorney is an outside consultant appointed by City Council to serve as legal advisor to the City Council, the City Manager, and all departments and boards and commissions of the City. The City Attorney prepares and reviews ordinances for introduction to Council, drafts and reviews all contracts, licenses, permits, deeds, leases, and other legal documents to which the City is a party, represents the City in all legal proceedings and prosecutes violations of City ordinances.

City Clerk

In addition, City Council appoints a City Clerk, who keeps the corporate seal and records all ordinances and Council proceedings. The City Clerk prepares agendas and minutes for the council meetings and is essentially the keeper of all municipal records and documentation.

Registrar

The General Registrar is a full-time employee appointed by a three member Electoral Board. The Registrar is responsible for registering citizens of Poquoson and Virginia to vote in local, state and federal elections, overseeing all elections, maintaining a local government office, acting as a liaison between Electoral Board and City government while maintaining all voter records and files.



PUBLIC SAFETY & EMERGENCY SERVICES

Police

The Police Department provides 24-hour protection to all Poquoson residents. In addition to patrolling, investigating crime and responding to complaints, the Department offers a variety of other services to Poquoson's residences and businesses. Some of these programs include Neighborhood Watch, home and business security checks, adult and children fingerprinting, etc.

The department also offers a first response program. Under this program, police officers are trained to provide limited medical treatment to citizens while waiting for the arrival of emergency medical technicians.

Fire and Rescue Services

The Fire and Rescue Department offers 24-hour a day professional fire protection and emergency medical services to all residences and businesses within the City. The Department consists of both paid and volunteer members. All paid staff are state trained and certified. Volunteer members receive specialized training and are offered the same training opportunities as the paid staff.

The department also responds to emergency events for boats, hazardous material spills, radiological monitoring and fire prevention education and training to businesses, residences, civic organizations, schools, etc. Department staff also works closely with the Code Official's Office in implementing the uniform safety code requirements. The Department operates from two fire stations located at 1035 Poquoson Avenue and 562 Wythe Creek Road.

Emergency Preparedness & Management

Together with the Emergency Services staff and the City Manager's Office, Poquoson's full-time Deputy Emergency Management Coordinator has developed and implemented hazard mitigation plans to assist the community during its greatest time of need. The adopted Hazard Mitigation Plan is attached as an appendix of the Comprehensive Plan. Resources for Emergency Management have been restructured to include a Director of Emergency Management, Deputy Director of Emergency Management, Emergency Coordinator, and two Co-Deputy Emergency Management Coordinators.

SHARED SERVICES

Courts and Sheriff

Judicial services for the City of Poquoson are shared with and housed in York County. Included are Poquoson's pro-rated costs of the Commonwealth Attorney, Juvenile/Domestic Relations Courts, service provided by the Clerk of Court, and Sheriff services.



Corrections and Detentions

The City of Poquoson shares correctional services with the City of Williamsburg, James City County and York County with Poquoson's share set by the courts. Along with jail costs, other shared rehabilitative and correctional programs include probation officers, family group homes and juvenile detention.

Health Department

The Newport News Health Department, an organizational unit of the Peninsula Health District, offers a wide range of preventative, diagnostic and rehabilitative medical and health services to City residents. Clinics are held regularly for family planning, immunization, pediatrics, and senior medical exams, among others. Nurses provide home care for homebound patients. Sanitarians inspect all eating establishments, train food handlers, supervise the installation and proper operation of septic tanks, inspect housing, and provide rabies surveillance for all animal bites. The Peninsula Health District is funded through a cooperative agreement between its five local governments and the Commonwealth of Virginia.

Mental Health

Mental health programs are provided for the City of Poquoson through the Colonial Services Board. The Board is a regional agency that provides overall administration and coordination of mental health, mental retardation and substance abuse programs for Poquoson, York County and James City County. Services include psychiatric evaluation and treatment, individual and group counseling, drug, and alcohol abuse treatment, vocational workshops for the developmentally disabled, and special education and rehabilitation programs for handicapped children. The headquarters for the Colonial Services Board is located in Williamsburg.

Social Services

The York/Poquoson Department of Social Services serves families and individuals who reside in York County and the City of Poquoson. The programs are funded by a combination of federal, state and local sources. The department is locally administered by a Board of Social Services whose members are appointed by the York County Board of Supervisors and the Poquoson City Council.

The mission of the York/Poquoson Department of Social Services is to:

- Meet the needs of those less fortunate
- Promote self-sufficiency, self support, and self esteem.
- Enhance the competence of individuals dealing with their own problems and
- Protect vulnerable children and adults



CITY DEPARTMENTS & OFFICES

Assessor

The City Assessor appraises all real estate in Poquoson and interprets and administers all laws pertaining to assessments. Properties are assessed biennially at 100% of market value. According to the State Department of Taxation, the City of Poquoson has the best measurement of equity of the 41 cities in the state. The Assessor also monitors property value trends, performs periodic ratio studies, inspects land that is subdivided or improved, inspects new construction to assess values and maintains property identification maps.

The Assessor also assists the Board of Equalization in conducting hearings on appealed assessments following a reassessment occurring.

City Codes Official

The City Codes Official is responsible for code and permit compliance matters. This division issues a variety of land use and construction permits pursuant to National, State and City Code requirements. The division works closely with the City's utilities, planning, engineering and fire department personnel in coordination of all code enforcement matters.

Community Relations & Events Office (CREO)

The Community Relations & Events Office, also known as CREO (pronounced kree-o), works cooperatively with the Parks & Recreation Department to schedule and coordinate community festivities and events, such as the Poquoson Seafood Festival. The Poquoson Seafood Festival has garnered nationally renowned performers, such as "Little Big Town", "Emerson Drive", "Atlanta Rhythm Section", as well as regional and local acts.

Engineering

The City Engineer provides engineering support to all City departments, inspects all public and private site construction projects and reviews all site and subdivision plans for compliance with City ordinances and State regulations. The Engineering Department also enforces all fill, excavation and erosion control and designs and supervises road and drainage maintenance projects.

Finance

The Finance Director manages the City's financial affairs. Responsibilities include: maintaining financial records; preparing and administering the City's Annual Financial Plan; providing projected revenue estimates; overseeing purchases and risk management affairs; and administering City employees' benefits programs.



Fleet Management

The Fleet Maintenance Department operates from the Public Works Compound in the center of the City and maintains all City and School vehicles and equipment. The department performs all levels of maintenance and safety checks on vehicles ranging from fire trucks and school buses to road and grounds maintenance equipment. Department personnel are available 24 hours a day to provide urgent repair to emergency vehicles.

In addition to ensuring vehicle and equipment safety, the department's manager is also responsible for coordinating and implementing safety programs for various departments within the City government.

Department goals include: enhancing current preventative maintenance programs and training of department staff to promote in-house repairs.

Library

The Poquoson Public Library was established in 1976 as part of the Bicentennial Celebration project by a group of dedicated citizens. In July 1980, the Library, after meeting all State requirements, was accredited by the State Library Board. In April 1983, the Library moved into renovated quarters at 774 Poquoson Avenue. Again, in June of 1997, both City Hall and the Library moved to a new facility at 500 City Hall Avenue just off Victory Boulevard.

The Library operates as a public lending facility with a book collection oriented to all ages and interests. In addition to classics and popular reading, the Library provides periodicals and newspapers, videocassettes, audiocassettes, large print books, municipal information, tax forms, public access computer, notary services and passport services. Aside from its primary book lending activities, the Library maintains genealogical files relating to family histories in Poquoson. It also offers interlibrary loan service and sponsors informational and cultural programs and classes and reading incentive activities for both children and adults.

The Library is generally overseen by a Library Advisory Board appointed by the City Council and is actively supported by the Friends of the Library.

The Friends of the Library is a non-profit organization which exists to focus public attention on the Library, stimulate use of the Library's services and resources, support the Library in developing services and facilities and to encourage gifts, endowments and bequests to the Library.

Mission Statement

“The mission of the Poquoson Public Library is to provide and to encourage the use of library resources and services to meet the educational, recreational, and informational needs and interests of the residents of the City of Poquoson, thus enhancing individual and community life.”



Parks & Recreation

The Department of Parks & Recreation operates and maintains the parks and recreational areas for the City as well as coordinates and administers recreational programs. There are many recreational programs for citizens to enjoy, in addition to seven city parks and a nature trail open and available for use by citizens. The Parks & Recreation Department also works cooperatively with the Community Relations & Events Office to coordinate and administer special events and activities for the community.

See the Parks & Recreation Sub-element for a more detailed analysis of present and future school needs.

Planning

The Planning Department is responsible for all aspects of long-range and current planning activities including preparing, administering and updating of the City's Comprehensive and Transportation Plans and land use control ordinances. The department processes and enforces all land use applications and permits, reviews all commercial and residential development plans and attends and serves as staff support to a variety of City and regional boards and commissions. The department also assists the Planning Commission and City Council in evaluating the use of land within the City.

Public Works

The Public Works Department is responsible for City infrastructure maintenance. The services provided include: collection of bulky items, landscaping debris and solid waste; mosquito control; repair and maintenance of City roads and drainage system; installation and maintenance of the sewer system.

The Public Works Department operates from a two-acre compound in the center of the City. It shares the compound area with Fleet Maintenance and Utilities.

The workload of the Public Works Department has increased significantly over the years, as the miles of roadways, ditches, and sewers have increased. The City's recycling and solid waste collection is outsourced to a private company. Poquoson boasts one of the best recycling rates on the peninsula, far surpassing its neighbors by more than 20%. As of December of 2007, Poquoson's average recycling rate was 73% of the total households with each container set out averaging approximately 22 pounds.

The Public Works yard occupies prime property located in the center of the city, surrounded by the high school, parks and swimming pool facilities and provides an unsightly intrusion to all of these areas. At 2.2 acres, the public works yard is too small to safely and efficiently house the city garage and public works equipment, materials and school buses.



GOALS, OBJECTIVES AND STRATEGIES

Goals

1. Provide community facilities and services consistent with citizen needs and orderly community development.
2. Continue to work with the Virginia Peninsula Regional Jail Authority to provide for detention and correctional facilities of sufficient capacity to house securely the City's future inmate population.
3. Continue to provide convenient high-quality library service to every resident of the city.
4. Continue to provide and promote curbside recycling throughout the City.

Objectives

1. Use the Comprehensive Plan to guide the process of budgeting City funds for capital improvement projects.
2. Coordinate the timing and location of community facilities in recognition of existing and anticipated needs and characteristics of present and future populations.
3. Recognize the City's community facility needs that are shared by neighboring localities and the opportunities of meeting these needs more efficiently through regional approaches.
4. Participate in regional approaches to provide facilities for the incarceration of both adult and juvenile inmates.
5. Maintain a library service that meets or exceeds the minimum standards defined by the Virginia State Library Board.
6. Maintain adequate fire and police protection for present and future needs.
7. Provide adequate social and health services for all of the City's residents.
8. Achieve a recycle rate of 90% according to Virginia Peninsulas Public Service Authority (VPPSA) reporting.

Strategies

1. Each year, develop a 5-year Capital Improvements Program to guide the construction of capital improvements in accordance with the Comprehensive Plan.



2. Ensure that architectural and aesthetic standards for community facilities meet or exceed the standards for private facilities so as to provide for public buildings that are attractive and set a positive example for high-quality development in the City.
3. Where feasible and practical, cooperate with neighboring localities in the establishment of regional facilities to provide for greater convenience, efficiency, and economy in the construction and operation of community facilities.
4. Develop a Fire and Rescue Services Master Plan that details present and future EMS capital and operating needs to ensure adequate staff and equipment for each fire and rescue service facility.
5. Replace police and emergency response equipment in a timely fashion.
6. Work with social service agencies to ensure that social and health needs in the community are identified and met.
7. Review fee structure for all government services, especially services involved with property development, and revise accordingly.
8. Consider developing a program that will encourage more citizens to recycle within the community in effort to reach a 90% recycling rate.





Mission Statement

“The mission of the Parks and Recreation Department is to provide facilities, quality services and programs that are affordable, friendly, and open to all citizens. The Department will provide a forum for the community to develop opinions and programs that contribute to the social, economic, and physical quality of life. In addition, the Department will endeavor to communicate information on topical subjects of interest to members, facilitate social contacts among the citizens and promote this community as a good place to live, play, work and visit.”

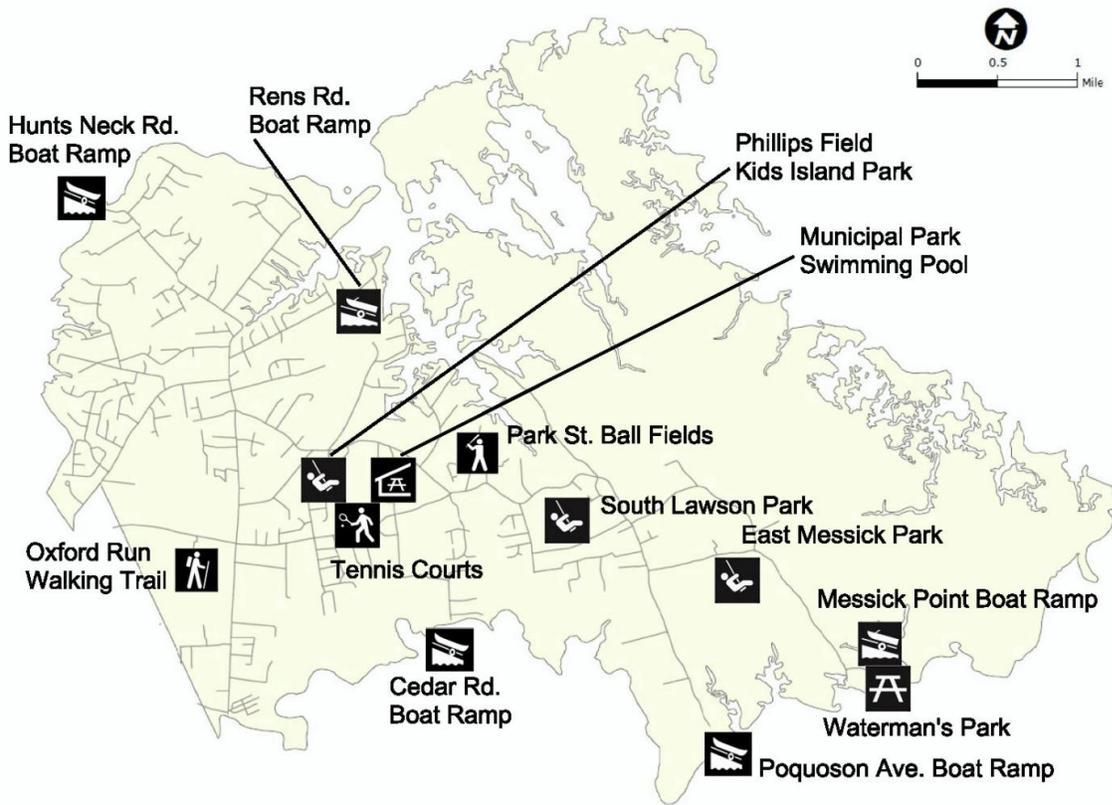
OVERVIEW

Parks and Recreation provides leisure facilities and programs in an effort to enhance and enrich the quality of life of a community. Parks protect and preserve land and other natural resources for a variety of passive and active recreational pursuits. Recreation not only includes leisure activities that occur in parks, but also encompasses athletic, social and educational programs that take place outside of the park setting. The availability of nearby recreational facilities greatly affects the range of leisure activities, and the associated quality of life opportunities of the local population. Because it is beyond the means of most individuals to provide capital intensive recreational facilities for their own use, it is appropriate and necessary for local governments to do so. The provision of parks and recreation facilities and programs also brings a community closer together through increased interaction. Map 6-1 depicts the location of the major facilities managed by the Parks and Recreation Department.

POQUOSON PARKS & RECREATION DEPARTMENT

While many of Poquoson’s recreational facilities were constructed many years ago, the Parks and Recreation Department was not established until 1980. In 1980 the Department included the Director and one Parks Maintenance worker. The Department ran the Municipal Swimming Pool, offered a handful of programs and assisted with the coordination of 10 different leagues for team play. Since then the Department has grown and in 2010 offered 177 different programs, activities, and special functions and currently has a total staff of 5 full-time employees.





MAP 6-1: EXISTING FACILITIES & AMENITIES

Facility	Walkin g	Picnic Tables	Athletic Fields	Boat Launch	Play Equipmen t	Play Area	Fishing Crabbing
Phillips Park, Kids Island Park	X	X	X		X	X	
Municipal Park, Parks and Rec. Building, Swimming Pool	X	X	X		X	X	
Park Street Ball Field Complex		X	X				
South Lawson Park	X	X	X				
East Messick Park					X		
Messick Point Boat Ramp, Waterman's Park		X		X			X
Rens Road Boat Ramp				X			X
Cedar Road, Hunts Neck Road, Poquoson Avenue Small Craft Launch Facilities				X			X
Oxford Run Walking Trail	X						



PROPOSALS AND FACILITY NEEDS

Growing participation in both private and public recreation programs has placed a heavy burden on athletic fields in the City, which are also used for school sports. Not only does this create difficulty in scheduling field use, but makes it almost impossible to establish and implement a turf management program. This contributes to overuse of fields and results in poor field conditions. The continuous, year-round use of PPR athletic fields precludes turf growth and recovery. Consequently, several PPR fields do not presently enjoy an uninterrupted cycle of turf maintenance and never see optimal conditions.

Parks System

The City of Poquoson Parks System features three (3) large facilities. They are South Lawson Park, Phillips Park, and Municipal Park. Although smaller park areas in the City also support recreation these facilities house the majority of the City's recreation activities

South Lawson Park

Existing Conditions

South Lawson, a multi-purpose park constructed in 1983, is located at the end of South Lawson Road. It currently includes two soccer fields and a fresh water fishing pond. The City recently acquired seven acres adjacent to the park for future park expansion and is in the process of adding multi-purpose fields for increased recreational opportunities. The retention pond on site has been re-dredged and will be available for fishing in the future. The additional fields are expected to open in Spring, 2011.

Proposed Actions

For a variety of reasons South Lawson Park has been an under-utilized resource. With the additional land and development, other possible on-site amenities should include a new basketball court, a picnic shelter, permanent restroom facilities and a playground. A walking/jogging/bike path is also projected for the site.

Funding Plan

Funding for this re-development may be available from a variety of sources including the Virginia Outdoors Fund, the Virginia Recreational Access Fund, City capital improvement funds and private contributions.

Phillips Park

Existing Conditions

Phillips Park is adjacent to the Primary School, High School and Municipal Park. This park includes three soccer fields, a baseball diamond, three tennis courts and Kid's Island, an active children's play area with various playground equipment. (Note: Additional athletic facilities located in this general area are provided by the school system and are not addressed in this document).



Proposed Actions

Future improvements to Phillips Park center around maintenance and upkeep of existing facilities. The tennis courts should be re-surfaced in the next few years to combat the fragmentation of the playing surface. Lighting upgrades should also be undertaken at the tennis courts. A new sewer line to the restrooms at Firth Field should be installed to prevent recurring back-ups. The Kid's Island playground was closed for safety concerns in 2010 and the City worked with a Volunteer Committee to refurbish the facility with new equipment. In October, 2010, Phase 1 of the playground was installed and additional phases will be added as the volunteer committee raises funds through private donations for them. Maintenance of the facility is a City priority and function.

Funding Plan

Funding for the tennis court improvements and Firth restroom sewage line should be provided by the City capital improvement funds. Kid's Island renovations are being underwritten through community donations and the City General Fund.

Municipal Park

Existing Conditions

Municipal Park has served the city well since its construction in 1978-79. However, the years have not been kind to the park and the time has come for a facelift and modernization.

Proposed Actions

This project's goal is to transform Municipal Park into an attractive and functional facility that meets the needs of today's families. In addition to maintaining the existing picnic shelter the city should add a pavilion sized shelter to accommodate family reunions and birthday parties, a new modern playground, new light fixtures/poles for the baseball field, restroom facilities, and a measured walking track. Other improvements will include new park signage and more security lighting.

Funding Plan

Capital Improvement funds, private contributions and contributions by user groups should be used to fund these improvements.

Park for Western Planning District

Currently the Western Planning District does not have any sites utilized for public use or park space. The citizens of this area must use facilities located elsewhere in the City. A frequent written comment that accompanied the 2004 survey indicated the desire for a park to be located in the Western District, indicating an underserved population. An 8-15 acre park in the Western Precinct should receive high priority in the Parks & Recreation Long Range Plan.



Neighborhood Parks

Existing Conditions

In survey after survey, the need for accessible playgrounds and open space parks ranks high in opinions regarding Poquoson's park system. There are two basic types of parks that the city should consider. In areas of higher housing density ½ to 1 acre "pocket parks" such as the East Messick Park provide an outdoor area for children to play at a minimal cost incurred by the city. This type of park is designed to serve a neighborhood instead of the entire city.

Larger 8-15 acre parks are intended to support a broader segment of the city's population as well as to provide more options for PPR staff when scheduling games, practices and fields. As the city completes the residential build out process these parks will provide open space and natural settings for families to enjoy the outdoors. They can also serve to provide unlighted playing fields and practice fields for other sports. Examples of these types include Municipal Field, Phillips Field, and the soon to be completed South Lawson Park.

The City should seek proffers from high density developers for smaller parks which should be included in the city park system where possible. In addition to the immediate need for a park in the Western Precinct, the City should acquire land for 2-3 more open space areas which then should be developed into medium size parks, distributed evenly throughout the City. In the long run the recommended goal is to have an open space park within a fifteen minute walk of 90% of the City's residences.

Future Plans

The immediate need is for an 8 to 15 acre park located somewhere west of Yorktown Road. Towards that end the city should, as a minimum enter into one or more first right to refusal purchase agreements for some of the limited amount of open space that is currently available. In the future there will be a need for two or three more large parks distributed geographically around the city. Additionally, the city should consider building two or three pocket parks as land becomes available or as higher density development occurs. It may be advisable to request such parks as part of the proffers associated with the developments.

Funding Plan

Capital Improvement funds, open space grants and community fund raising will be used to finance these parks.

Athletic Fields & Facilities Overview

Existing Conditions

City/School Athletic facilities are shared by both parties and an excellent partnership exists for both school and recreation programs. However, even maximizing facility usage through shared access does not eliminate the need to upkeep and upgrade existing lighting at the facilities. The need for lighting at non-lighted fields will continue to grow. The following table provides an overview of the current PPR Field/Facility inventory and indicates type of use and lighting status.



Facility Location	Facility Type	Lighting	# of Fields	W/ South Lawson completion
Firth Field	Baseball	Yes	1	
Municipal Field	Baseball	Yes	1	
Park Street Complex	Baseball/Softball	Yes	3	
PMS Synthetic Turf Field	Multi-purpose	Yes	1	
PPR Tennis Courts at PHS	Tennis	Yes	3 courts	
South Lawson	Multi-purpose	No	3	4-6 (depending on set up)
*Phillips Park	Soccer	No	3	

**At Phillips Park where facility lighting is not available the City has paid for temporary lighting for a private sports organization for several years. This cost is nearly \$3,000 per year for this facility alone.*

Proposed Actions

The following facilities/fields are in need of lighting:

- Phillips Park Soccer Fields at the High School (adjacent to Kids Island)
- Portions of South Lawson Athletic Complex
- Municipal Park Auxiliary Field (adjacent to Claytor Rollins Funeral Home)
- Ancillary Overflow parking areas between Middle School and Elementary School

Lighting for these facilities should be considered for implementation in the coming years. Additionally, present lighting at Municipal and Firth Field is quickly reaching the limits of functional utility and life expectancy. As part of an overall athletic facility review plan, replacement and new installation of lighting should be considered a priority to ensure maximization of usage of all athletic facilities.

Yearly review of field use will also be helpful in identifying the need for additional facilities for future programming. On-going evaluation of facility usage will be done by PPR to assess near-term and long-term needs.

Funding Plan

Funding for the lighting upgrades should be sought through the CIP Process and other budgetary processes.



Water Related Facilities

Poquoson Municipal Pool

The Municipal Pool is approximately 30+ years old and has reached its useful life expectancy. Recurring maintenance problems, lack of ADA compliant facilities, antiquated pool house, and failing infrastructure make the pool a strong candidate for re-construction. Users are requiring a larger variety of features and family friendly water depths for both swimmers and non-swimmer. The pool house needs to be completely replaced or renovated to improve functionality and ADA accessibility. The adopted CIP Plan includes a new aquatics facility featuring pool, decking, pool house with changing facility and restrooms, refreshment stand, fencing, mushroom/play apparatus, plus ADA compliance access at all points. This project could be included in the construction of a community recreation center where economies of construction might be realized. The facility would include updated features to include zero depth entry, spray features and more family friendly aquatic activities. Configuration would also include a minimum of 6 racing lanes and required diving depths a basic slide feature, spray areas, mushroom, zero depth entry, pool house, snack back storage, and pump infrastructure, slip proof deck and pool house areas and parking lot. A pool size of 225,000 gallons would be needed to provide adequate footprint for the aforementioned.

Messick Point Recreational Facilities

Existing Conditions

The Messick Point boat landing at the end of Messick Road, reconstructed and expanded in 2004, provides parking spaces and a boat launching area to Front Cove. Land adjacent to the landing is also owned by the City and is used for Parks and Recreation events. A new pier was constructed in 2004 to provide boat slips for commercial watermen and larger recreational boats. As part of the dredging process mooring dolphins were replaced with new pilings and have been assigned to specific individuals based on historic use of the site. In addition to the boat ramps, boat pier, dolphins and associated parking, a public restroom facility was put in place in 2007.

Proposed Actions

Current slips are designed for boats of 35' to 45' in length. Provisions should also be made for a jetty or breakwater structure at the mouth of Back Cove to help block wave action and sand migration into the channel during storms. Once this is accomplished, consideration should be given to expansion of the new pier to provide moorings for smaller boats. This will greatly increase the "safe harbor" ability of the facility. In addition, permanent restroom and shower facilities are required by the state health department. Careful monitoring of the parking area should be undertaken in order to determine whether additional parking may be required as the new facilities gain popularity. A committee of residents and City Staff will develop grant proposals for desired improvements.

Public Fishing Pier – There is a plan to build a city owned public fishing pier on Back Cove that can be used for crabbing and fishing.



Small Boat Launching Improvements – A low-to-the-water floating dock should be installed to facilitate launching and retrieval of kayaks, canoes, etc. without interfering those launching from trailers. Additionally, consideration should be given to expansion of the sandy area adjacent to and south of the boat ramp as well as reconfiguration of the armor stones so as to provide small boat access to that area.

Messick Point is the only large tract of City-owned waterfront property. As such, the waterfront of Back Cove should remain publically accessible and publically held under any development initiative.

Funding Plan

Possible funding sources for the above mentioned actions include the U.S. Army Corps of Engineers (jetty), and the U.S. Fish and Wildlife Service’s (USFWS) Boating Infrastructure Grant (additional slips and restrooms). Additional funding may be possible for parking lot expansion and fishing pier through the Virginia Marine Resources Commission (VMRC). Matching funds are desired but not required for the VMRC grants. However, local matching funds are required for the remainder of the funding sources of the above mentioned grant sources.

Public Beach

Existing Conditions

The City of Poquoson has over 80 miles of shoreline yet does not offer a sand beach amenity. Poquoson is the only locality in the area not to offer such a site for its residents. During the public input sessions for this plan, citizens expressed considerable interest in the development of such an amenity. A suggested location is Messick Point, as the beach would complement existing amenities and future proposed ones very well.

Proposed Actions

The goal will be to construct a small beach area along the Poquoson shoreline to provide a place for wading and sunbathing. The facility would require access to restrooms along with a parking area sized for the capacity of the beach.

Funding Plan

It is anticipated that Capital Improvement funds will be used to pay for this facility.

Whitehouse Cove Marine Facilities

Existing Conditions

In year of 1995, the City of Poquoson condemned the old “Dryden Dock”, located at the end of Rens Road and built a new public access pier. The pier houses one of the City’s two (2) sanitary sewer pump out systems for watercraft. The other is located at Messick Point.

Proposed Actions

The Rens Road boat ramp is in need of refurbishment or replacement. This ramp is not heavily used due to the lack of public parking, but is used enough to justify its continued operation.



Efforts should be made to bring the ramp up to a safe operational level and re-design the facility to accommodate hand launched boats as well as trailer launched craft. The City should survey alternative sites for relocating the ramp and pier where adequate public parking would be available.

Funding Plan

Funding of this project should be available through VMRC and Department of Game & Inland Fisheries (DGIF) grants.

Bennett's Creek/Poquoson River Boat Ramp

Existing Conditions

One of the facilities that was lost as part of the redevelopment of Poquoson Marina is the private, for-fee boat ramp that provided a safe, inexpensive launch facility with adequate public parking. This has left Poquoson with an inadequate public boat launch facilities for Poquoson River and Bennett's Creek, especially as the Western Precinct is fully developed.

Proposed Actions

Develop a Class-A two lane boat ramp with a handicapped accessible floating dock at a location suitable for providing access to the Bennett's Creek and Poquoson River area. The facility should have public restrooms, small boat launching capabilities, as well as parking for 35 to 50 car/trailer combinations. This will require that the city purchase an appropriate parcel of land in the near term future and develop the facilities as funds become available.

Funding Plan

Funding of this project should be available through Virginia Marine Resources Commission, DGIF grants.

Neighborhood Public Landings (Hunts Neck Landing, Poquoson Avenue and Cedar Road Landing)

Existing Conditions

The City operates small boat launch facilities at the ends of Hunts Neck Road, Poquoson Avenue and Cedar Road. The shallow water depth and lack of extensive public-owned land prevent these locations from being developed beyond use for neighborhood or small craft launching. All of the boat ramps are approaching the point of needed refurbishment.

Proposed Actions

Due to the limited space available for development, improvements to these facilities should be limited in scope and focused on the use of the ramps for hand launched vessels, launching small trailerable vessels as well as shore based fishing and crabbing. The ramp surfaces should be repaired to reduce the hazards associated with uneven or damaged concrete structures. Ramp designs should incorporate features that substantially reduce the slip hazards associated with smooth concrete ramps. Facilities should be built or maintained that allow one to launch small vessels, both hand launch and from trailers, without fear of damaging them on the concrete



ramps or armor stones. Consideration should be given as to the impact these proposed improvements will have on adjoining properties (i.e. increased traffic). However, a moderate amount of public use should be given priority consideration. The improvement to the Hunts Neck Landing should include parking enhancements. Because depth of water is frequently a controlling factor with respect to the popularity of a public launch facility, the city should not dredge to the ramps unless there are adequate facilities planned or in place.

The City should consider the development of additional landings should the opportunity to acquire suitable properties for this use occur. To this end the city should survey all potential areas that may already be publicly owned and insure that the City or Virginia Department of Transportation (VDOT) has clear title to the properties. Additionally, the city should consider requesting proffers for future neighborhood water access points in future development proposals as well as the purchase of appropriate parcels that could be used in the future.

Funding Plan

This project will probably require local funding; however state and federal access grants may be available.

Blueways

Existing Conditions

Poquoson has many miles of small creeks and channels, most of which are not navigable by motorized, commercial or pleasure boats. However, they are well suited for small, shallow draft craft such as canoes and kayaks. These waterways help to tell Poquoson's story, historically and environmentally. Trails through such waters are known as Blueways. Most such water trails offer interpretive guidebooks to help tell the story of what is seen. Blueways can attract visitors to Poquoson as well as educate and inform users of Poquoson's uniqueness. Currently there are no formal Blueways through the City's creeks and channels. If an effort is undertaken to develop a Blueway in the City it should be connected with the Captain John Smith Trail and the Chesapeake Bay Blueways Network.

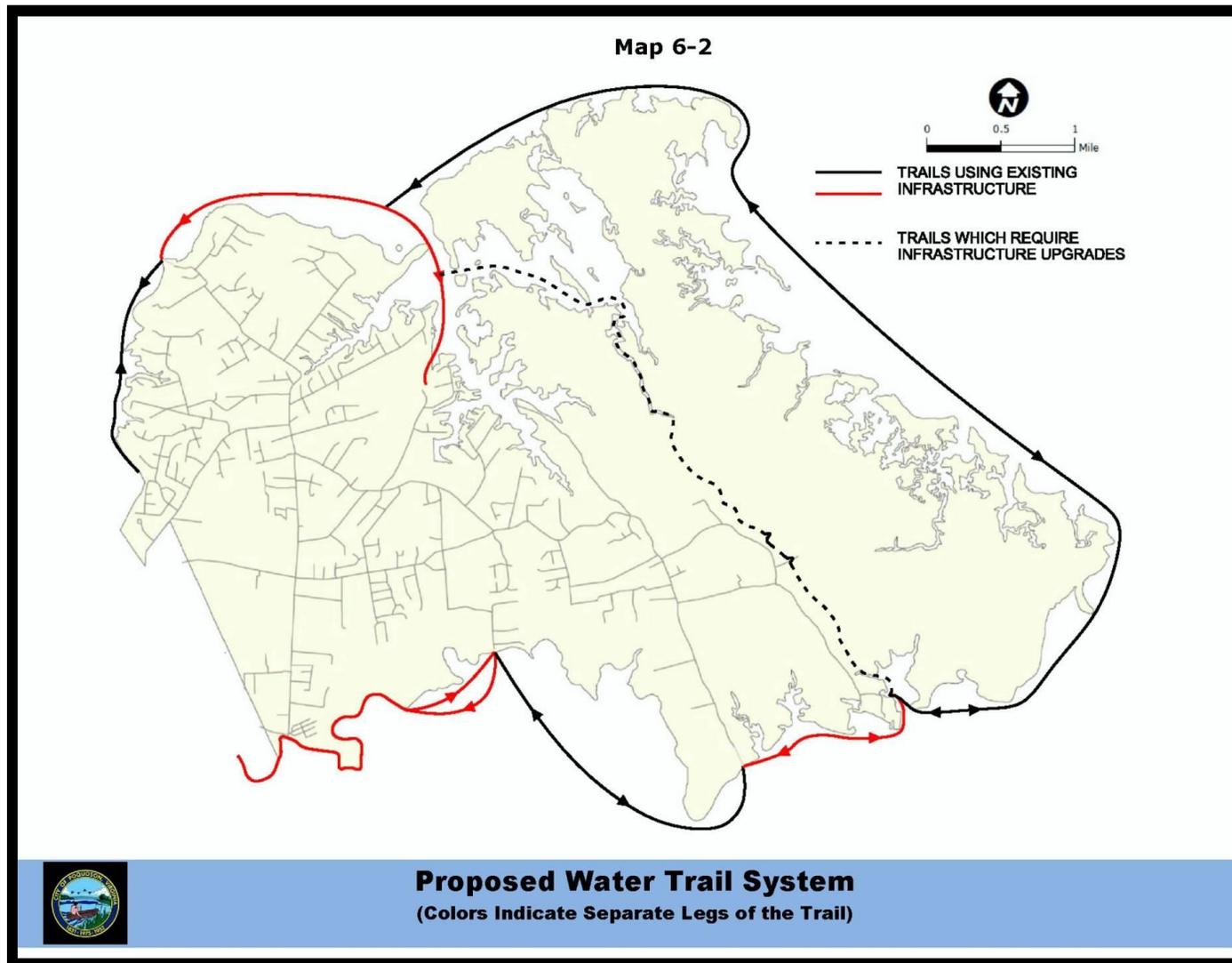
Proposed Strategy for the Future

It is proposed that a Blueway be established. A map of the proposed initial route follows on the next page, Map 6-2. Some signage and a trail guide for users will need to be developed. It is anticipated that the Blueway can be developed for minimal costs.

Funding Plan

Funding for this re-development can come from a variety of sources including the Virginia Trails Fund, Department of Conservation & Recreation (DCR), DGIF, VMRC, and the Captain John Smith Trail.





Plum Tree Island Wildlife Refuge

Existing Conditions

Of its total land area of 10,000 acres, Poquoson has 5,089 acres of wetlands. This includes the 4,100 acre Plum Tree Island Marsh, the largest saline marsh in the lower Chesapeake Bay. Unfortunately there are very few public access points into the marsh. The U.S. Fish & Wildlife Service (USFWS) does not currently allow access to the southern portion of Plum Tree Island, due to partially unexploded ordnance found within the Refuge. However, in recent years a cooperative effort between a number of local, state, and federal agencies as well as private entities, including the Army Corp of Engineers (ACOE), USFWS, and Shaw Environmental has focused on assessing the ordnance on Plum Tree Island and the possibility for its removal.

Proposed Actions

Efforts should be made to continue the cooperative working relationship among all parties involved in the project with the goal being to one day have access to Plum Tree as a recreation area. Day use of Cow Island is an example of one area highly suited for recreation. The Refuge also provides the potential for an extensive Blueway system as well. The City should also vigorously support federal efforts to cleanse the Refuge of unexploded ordnance in order to reduce possible toxins leaking from the ordnance and to allow safe, limited access. As part of the Blue way development the City should seek a cooperative program with fish and wildlife service to establish wildlife observation posts adjacent to the blueways. Consideration should also be given to development of a parking and Refuge entrance area.

Funding Plan

No local funding is foreseen to be required for this project. Several grant sources are available for this type of activity and can be identified once a definite project scope is identified.

Other Facilities

Sidewalks and Bikeways

Existing Conditions

The development of additional bikeways, trails and sidewalks was the most frequently cited need during the public input process and city-wide survey. The purpose for developing a comprehensive system of bikeways, sidewalks and trails is primarily as an alternative mode of transportation but also for increased recreational opportunities. Other benefits of a “pedestrian system” include energy conservation, reduced noise and air pollution, motor vehicle traffic reduction, health and fitness improvement, as well as other personal and economic benefits.

The Citizen Sidewalk Committee identified over 20 desired sidewalk projects and utilized the decision-making tool to score each project out of 100 points. The prioritized list of sidewalk upgrades/installations and the respective scores is listed in Table 6-1. Map 6-3 shows the location of the existing sidewalks as well as the prioritized upgrades.



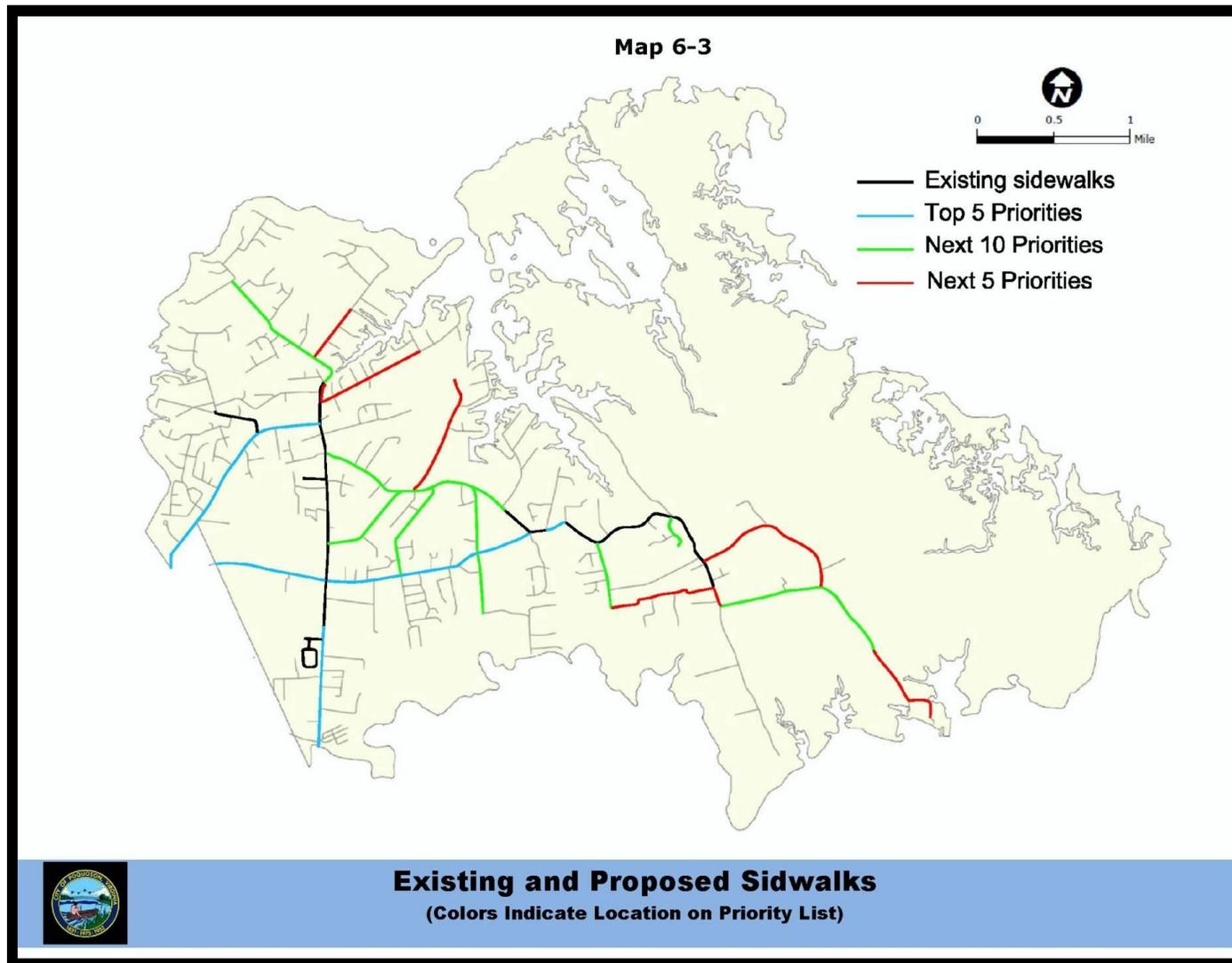
Table 6-1 Final Sidewalk Project Prioritization

Street Name	From	To	Score Out of 100
Little Florida	Wythe Creek	Laydon Way	87.8
Victory Blvd.	City Limits	Wythe Creek Rd.	77.2
Wythe Creek Rd.	Huntlandia Way	City Limits (Hampton)	74.2
Yorktown Rd.	Hunts Neck Rd.	City Limits	69.6
Poquoson Ave.	Poplar St.	Park St.	69.4
Poquoson Ave	Wythe Creek Rd.	Forrest Rd.	67.0
Odd Rd.	Little Florida Rd.	Poquoson Ave.	64.7
Bunting La.	Poquoson Ave.	Church St.	61.7
Cedar Rd.	Little Florida Rd.	Poquoson Ave.	58.8
Hudgins Rd.	Wythe Creek Rd.	Poquoson Ave.	57.1
Cedar Rd.	Poquoson Ave.	Little Florida Rd.	56.5
Messick Rd.	Poquoson Ave.	Last Residence	54.2
South Lawson Rd.	Poquoson Ave.	S. Lawson Park	53.7
Messick Rd.	Poquoson Ave.	End	53.5
Rens Rd.	Poquoson Ave.	End (Marina & Pier)	53.5
Church St.	Bunting La.	Poquoson Ave.	53.0
Messick Rd.	Last Residence	Messick Point	52.9
Poquoson Ave.	Church St	Messick Rd.	52.8
Ridge Rd.	Poquoson Ave.	Messick Rd.	52.3
Hunts Neck Rd.	Dixon Rd.	Browns Neck Rd	50.7
Browns Neck Rd.	Hunts Neck Rd.	Phillips Rd	49.6
Pasture Rd.	Hunts Neck Rd.	Wilson Dr.	45.3

Funding Plan

Funding for this sidewalk/bikeway redevelopment can come from a variety of sources including the new federal transportation law (SAFETY-LU), the Virginia Recreational Access Fund, private contributions and City capital improvement funds.





Trails

Existing Conditions

Presently the only trails available in the City are the walking path in Municipal Park and the Oxford Run Canal Trail. Municipal Park's trail is a packed gravel path that meanders through the wooded area of the park and connects Municipal Park to Poquoson High School and Phillips Park. The trail is approximately .8 miles in length. The Oxford Run Canal Trail is located along Oxford Run Canal, near Poquoson City Hall. This trail can be accessed from the City Hall parking area and from the Food Lion Shopping Center. The trail follows Oxford Run to the BMP behind Langley Federal Credit Union, circles the BMP and returns to City Hall. Once right of way is acquired, the trail could reconnect to City Hall via Alphas Street.

Proposed Actions

Several trails should be developed that connect into existing or planned sidewalk and bikeways. Trails can be constructed with a variety of materials including gravel, compacted sand, mulch or even pine straw. Trails should be developed within wooded areas, along water features and within parks. Trails are different than formal bikeways/sidewalks in that they are much less expensive to construct and primarily exist for recreational purposes. The second trail would serve as a connector from the end of the sidewalk on Poquoson Avenue through the marsh to East Messick Park at the corner of Ridge Road and Messick Road. A long-term goal would be to develop hiking trails for Plum Tree Island if remediation efforts render the area accessible.

Funding Plan

Funding for these trails is possible through the Virginia Outdoor Fund, Virginia Recreational Trails Fund, SAFETY-LU funding, private contributions and City capital improvement funds.

Community/Recreation Center

Existing Conditions

The development of a community/recreation center was broadly supported during the public input process and had been affirmed in several community surveys. The primary need for a community/recreation center stems from the lack of gymnasium space in the City. Community recreation programs often compete with school activities for gym time, severely limiting the times and number of community/recreation programs that can be offered. Furthermore, there is no dedicated space for adult sports. At present Parks & Recreation has maximized its current available outdoor programming space.

Additionally, the Parks & Recreation Office Staff is in a building which is nearing the end of its functional utility. New office space is included in the recreation center.

Proposed Actions

When constructed, a community/recreation center should be equipped to provide the following functions:



- Gymnasiums with two full size basketball courts (can be used for badminton and volleyball).
- Two full size handball courts, which may also be used for racquetball and paddleball.
- Fitness room with free weights, two circuits of machines and 20 or more pieces of cardiovascular equipment with a broadcast vision
- Dance/aerobic studio/room featuring sprung wood floor suitable for dancing and other activities (will also perform as a Teen Center on Friday and Saturday nights).
- Whirlpool with the capacity for 12 people.
- Performing Arts
- Youth/adult computer center with 20 computers
- A two lane suspended indoor walking track, competitively 1/10 mile running track.
- Teen lounge with table games and a television.
- Lobby area with large screen television.
- New parent fitness cyber machines with supervised (by the mother) infant play area TV games.
- Senior citizen lounge with living room and activity area.
- Arts and craft rooms with pottery wheels and a kiln.
- Community/meeting rooms that seat up to 50 people.
- Large kitchen (will accommodate any size group).
- Vending and snack area.
- Locker rooms with showers (men, boys, women, and girls).
- Family locker room (mothers with infants and small children).
- Meeting rooms to accommodate various sized audiences (would require pull out walls).

The development of a community/recreation center including all of the facilities noted above would be approximately 60,000 to 80,000 square feet. A new community/recreation center located in Municipal Park takes advantage of existing facilities and land. It is envisioned that the Poquoson Parks & Recreation Foundation will be housed in the facility.

Funding Plan

Knowing that the city could not afford all of the cost of community/recreation center, it was decided that the best vehicle to use was to create a non-profit charitable foundation, thus the Poquoson Parks and Recreation Foundation, Inc. (PP&RF) was created as a 501C3 tax exempt foundation, meaning that any donation from citizens or corporations will be tax deductible. PP&RF is an arm of the City of Poquoson. Private contributions, public partnership and/or City capital improvement funds should be used to fund this facility. The PP&RF umbrella account will accommodate other city projects and be tax deductible.

CITIZEN COMMENT

During the Comprehensive Plan Planning Process, two (2) surveys were conducted by the City of Poquoson in 2004 and 2006. There many questions in each survey related to the subjects contained in this chapter that was not listed under the Parks & Recreation heading. The following



summarizes citizen comments pertaining to Parks and Recreation subject matter discussed in this chapter that was received from the citizen opinion surveys of 2004 and 2006, respectively:

2004 Survey

Quality of Life

- More bikeways/sidewalks choice was selected the 2nd most frequent factor that could make living in Poquoson better for you and your family. Out of eight responses, this answer was 2nd only to improved mosquito control and the top two responses garnered nearly 53% of the responses.

Land Use

- When asked what 3 changes in regulations that determine residential land use would the respondents support: The top two answers out of five possible responses were:
 - Save more trees and green space; and
 - Require construction of bikeways/sidewalks as part of new development. These two responses represented 65% of the total submitted.
- The 2004 survey asked what three types of development or redevelopment are preferred along the undeveloped or underdeveloped waterfront areas, the top response was boardwalks. Roadways
- 78% of the respondents thought additional sidewalks/bikeways should be constructed in the City.
- 63% of the respondents were willing to spend additional tax dollars for the construction of the additional sidewalks/bikeways.

Parks & Recreation

- 66% of the respondents of the survey stated the existing facilities adequately served their family's needs, and 61% of the respondents thought the overall condition/appearance of the facilities were excellent or good.
- 59% of the respondents of the survey stated they were willing to fund improvements to the parks or open space areas.
- Top 3 responses for additional recreational facilities needed in Poquoson were:
 - Fishing Piers/Pond
 - Trails
 - Bay Access



2006 Survey

- The choice of more bikeways/sidewalks was selected as the 3rd most frequent factor that could make living in Poquoson better for you and your family. Out of ten possible choices, this answer garnered the 3rd most responses, behind only (1) improved mosquito control and (2) improved City stormwater drainage system. This response represented 18% of the total number of responses with the three top responses representing 55% of the total number. The next closest choice was more than 400 responses behind the 3rd selection, out of 5112 total selections.
- Respondents thought that the top two land uses that should be Poquoson's highest priority should be (1) parks and open areas, and (2) conservancy with no development.
- When asked what 3 changes in regulations that determine residential land use would the respondents support (out of 4 possible choices, an overwhelming majority chose to save trees and green space.
- The top answer (out of 5 possible choices) for what land use was supported for Messick Point was development of a City Park.
- The 2006 survey also asked what three types of development or redevelopment are preferred along the undeveloped or underdeveloped waterfront areas, boardwalks was the 2nd most response tallied.
 - 55% of the respondents of the survey thought the existing facilities adequately served their family's needs, a drop of 11% from 2004; however 10% of the respondents answered with "no opinion".
 - 59% of the respondents of the survey stated they were willing to fund improvements to the parks or recreational facilities, and another 55% stated they were willing to fund a bond issue by the City to buy land for additional parks and conservancy.
- Top 3 responses for additional recreational facilities needed in Poquoson were:
 - Trails
 - Fishing Piers/Pond
 - Picnic areas





There is a place we
love to be, close by the river shore.
There stands our dear old high school, which
we'll love forever more.
Oh, hail to thee, Poquoson High, with your colors
maroon and gold.
Your clubs, your football, and such teams,
each memory dear we'll hold.

- PHS Alma Mater

OVERVIEW

Poquoson City Public Schools has an excellent reputation and is widely viewed as one of the best school divisions in Virginia. Poquoson students consistently score above the national average on standardized tests and among the best in the state on Virginia Standards of Learning assessments. While among the top in performance, Poquoson schools continue to operate at one of the lowest costs per pupil in the state. This is not from lack of commitment on the part of the city, however; on average about 35% of Poquoson's total revenues are spent on education.

Poquoson City Schools will be challenged in the years ahead to keep pace with the increasing educational demands placed on them by state and federal requirements as well as enrollment fluctuations.

The Poquoson School Board is focused on ensuring that Poquoson students receive a state-of-the-art education that reflects an understanding of what students will need to know to be successful in a global community in the twenty-first century. Consequently, Poquoson City Schools has embarked on an ambitious long-range plan that includes an increase in course offerings for students, implementation of a phased construction plan, improved technology integration and establishment of a four-year-old preschool program.

Poquoson students and staff will also be challenged by the standards set in the No Child Left Behind legislation that requires school divisions to meet ever-increasing performance benchmarks related to student performance on the SOL tests. As the benchmark rises, the standards are becoming increasingly difficult to meet. The entire Poquoson school community is focused on continuing meeting and surpassing all state and federal measures of student achievement.



POQUOSON CITY PUBLIC SCHOOLS

Poquoson City Schools is comprised of four schools serving approximately 2500 students, with over 300 dedicated staff. Poquoson Primary School opened in 1988 and serves students in grades K-2. Poquoson Elementary School serves students in grades 3-5. PES is the City's newest school building and opened for operation in August 2008. Poquoson Middle School serves students in grades 6-8 and was built in the 1930's, with additions in the 1950's and 60's. An entire section was added to the middle school in 1970, with another addition in the 1990's. Poquoson High School serves students in grades 9-12 and was built in 1975, with additions in 1979 and 1996.

Expenditures

Poquoson City Schools has an excellent reputation, which enhances property values throughout the community. The City of Poquoson also spends a significant amount of its tax revenues on education. In FY 2008, the city spent 43% of its tax revenue on public education. Like jurisdictions across the nation, expenditures by the Poquoson Public Schools are derived largely from local, state, and federal funding.

Accreditation

All four Poquoson schools are fully accredited by the Virginia Department of Education and the Southern Association of Colleges and Schools (SACS)/Council on Accreditation and School Improvement (CASI), a regional accrediting agency encompassing eleven southern states.

School System Goals and Objectives

The school division's goals are identified in the Poquoson City Schools' Long Range Plan. Copies of the plan are available for citizen review in each school library, the Poquoson Public Library and on Poquoson City Schools' web site. The plan is reviewed and revised annually. The public is involved in every aspect of the long-range planning process, but the annual plan selection is approved by the school board .

Transportation of Students

77% of students who are enrolled in Poquoson schools are provided daily transportation by a fleet of 21 buses. In addition, school buses are used for field trips and school activities. Poquoson bus drivers are a veteran group with many years of driving experience. New school buses are purchased when the budget allows.



Talented and Gifted

Poquoson's Talented and Gifted (TAG) Program identifies students with high academic abilities. It serves these students by challenging them to develop their potential through enrichment activities, special classes, and extracurricular events. The EXPAND program, for grades K-2, affords an opportunity for early identification and challenge. The TAG Program for grades 3-6 places students together in an enriched environment in at least one academic subject. The Math Express Program accelerates students in their mathematics studies. Special classes are offered in grades 7-12 to challenge students' specific academic abilities in science, math, and the humanities. High school students may elect to attend New Horizons Regional Education Center Governor's School for advanced work in Biological Science, Engineering, or Scientific Programming, or may enroll in Advanced Placement courses at Poquoson High School.

Special Education and Related Services

Poquoson City Schools provides a full range of special education and related services within the school division for children ages 2 through 21. The school division participates in regional programs as well as contracting services with neighboring school divisions, private and public agencies. The school conducts a yearly Child Check in association with Child Development Resources in Williamsburg and maintains a continuous Child Find process to identify those children who are suspected of having disabilities. Services to meet the psychological needs of students are available, which include confidential evaluations, counseling, and consultation with parents and school personnel.

Adult Education

Adult education programs provided via Poquoson City Schools include General Educational Development (GED). The GED program consists of processing applications for the GED test and providing preparatory classes to anyone desiring these services.

Career and Technical Education

Poquoson Middle School and Poquoson High School offer a variety of career and technical education classes for students in grades 7-12. These courses range from Family and Consumer Science and Technology Education at the middle school to specialized courses and work-study programs at the high school level. The school division offers on-campus courses and participation in off-campus programs at the New Horizons Technical Center and Thomas Nelson Community College.

Extracurricular Activities

The Poquoson public school system offers a number of sports activities for its students including the following: girl's volleyball; girl's and boy's cross country; field hockey; football; golf; boy's and girl's basketball; wrestling; boy's and girl's swimming; cheerleading; baseball; softball;



boy's and girl's soccer; and boy's and girl's track. The division also offers a wide variety of activities and honor societies, including band, drama, chorus, debate, forensics, yearbook, newspaper, sailing, gymnastics, Key Club, Leo Club, Odyssey of the Mind, and academic challenge.

Pupil Standardized Test Scores

Poquoson students take the Virginia Standards of Learning tests each year. The tests are given in grades 3 – 8 and at the end of selected high school courses. Poquoson students have scored well on the SOL tests, and Poquoson is among the top performing divisions in the Commonwealth.

College Board Examinations (SATs, ACTs, etc.) are administered on a scheduled basis to those 11th and 12th grade students who anticipate pursuing a postgraduate education program. Eighty-six percent of Poquoson graduates continued their educational experiences at the postgraduate level in either two- or four-year institutions or vocational training programs.

BUDGET AND REVENUE

Budget and Revenue Sources

The 2008-2009 operating budget for the Poquoson public school system was \$22,478,460. The *major* categories comprising the budget include instruction, operation/maintenance, administration and health services, and transportation. Budget revenue is obtained from local, state, and federal sources. Expenditure information by category is offered below:

Table 6-4: Public School Expenditures	
<i>Expenditure Category</i>	<i>Percent of Total</i>
Instruction (including salaries)	73%
Operating/Maintenance School Plants	8%
Administration & Health Services	5%
Transportation	4%
Food Service	2%
Technology	4%
Grants	4%

Revenue information by source is offered below:

Table 6-5: Public School Revenues	
<i>Revenue Source</i>	<i>Percent of Total</i>
State	58%
Local	38%
Federal (Categorical)	4%



Comparative Local Expenditures

The local share of the total local cost to educate a student in the Poquoson school system in 2006-2007 was \$3,108. The state average for the local contribution per pupil was \$5,145. The City of Poquoson ranked 131 of the 132 systems in Virginia in total cost of all funds.

Revenue and Expenditure Trends

Intergovernmental revenue provides some funding to the city and considerable funding to the school system. The chart below indicates the changing percentage of revenue coming to the school division from local, state and federal governments over the past four years.

Table 6-6: Revenue Sources			
Year	Local	State	Federal
2005	41%	55%	4%
2006	40%	56%	4%
2007	39%	58%	3%
2008	40%	56%	4%
2009	38%	58%	4%

School operating expenditure growth in Poquoson has been increasing over the past few years despite thoughtful and deliberate attempts to try to maintain current expenditure levels. The table below depicts the growth in total operating expenditures.

Table 6-7: Total Operating Expenditures	
Year	Total Budget
2005	\$18,675,385
2006	\$19,827,542
2007	\$21,446,430
2008	\$21,995,206
2009	\$22,478,460

School expenditures are expected to increase 2-4% annually based on averages of the consumer price index. Additionally, the school system struggles to keep pace with unfunded state and federal mandates placed on the system.



Future Capital Needs

Poquoson Middle School is one of the most important and historic structures in the city. It stands as a symbol that reminds us of our rich past, present and future. In 2013 PMS will be twice the average age of schools in America. In addition to an inefficient heating and air conditioning system there are numerous challenges faced by the students and school staff as they work in this aging structure. For these reasons, PMS will need to be fully renovated in the near future. Additionally, Poquoson Primary School has also dealt with an inefficient heating and air conditioning system that needs to be replaced. The community has also voiced a need for a high school auditorium for many years. The City recently established a new football field behind the middle school which has enhanced the city and school programs. There are additional needs for athletic facility improvements in the high school, middle school and primary school. The Poquoson City Schools Capital Improvement Plan does provide further detail about capital needs and is available at the School Board Office.

2007-2008 POQUOSON SCHOOL BOARD GOALS AND OBJECTIVES

Please note that detailed School Board objectives and the current Long Range Plan are available at the School Board Office and on the Poquoson City Schools' website.

School Board Goal I: Maximum Outcome Based Instructional Program

- To implement a world-class education system based on high expectations and common standards for all students consistent with the PCPS Long-Range Plan and PCPS policy.

School Board Goal II: Highest Quality Professional Staff

- To improve performance by providing staff development based on district priorities, and to recruit and retain the highest quality professional staff for the district.

School Board Goal III: Inspiring and Safe Learning and Working Environments

- To establish school environments that encourage innovation, provide flexibility, ensure safety, and expand customer service and communication with our community.

School Board Goal IV: Modern School Facilities

- To improve and maintain Poquoson City Schools' facilities ensuring an open, healthy, and safe environment that supports instruction and extracurricular programs.

School Board Goal V: Comprehensive and Inclusive Extracurricular Activities

- To provide students with the opportunity to excel in a wide variety of experiences that foster personal growth and development through a wholesome participation in extracurricular programs.



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MAPS

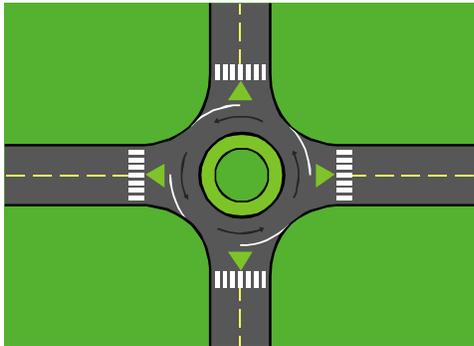
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Map 7-1: Level of Service 2001

Map 7-2: Projected Level of Service 2008

Map 7-3: Projected Level of Service 2026

Map 7-4: Victory Boulevard Corridor Plan and Area Connectivity Guide



INTRODUCTION

This chapter of the Comprehensive Plan provides a discussion of the conditions and trends affecting transportation in Poquoson, a selective update of the 1996 Level of Service and Transportation Improvement Study and a set of recommendations for future transportation infrastructure improvements and policy.

OVERVIEW

Transportation facilities have a dramatic impact on the quality of life in a community as well as its ability to develop. The vast majority of Poquoson's roadways serves residential subdivisions and has low traffic volumes. Most of the City's major collector streets such as Wythe Creek Road, Poquoson Avenue, Little Florida Road and others have increasing traffic volumes, and because these roads were constructed decades ago, are substandard to handle present and future traffic loads. Many roadways include narrow travel lanes, have deep roadside drainage ditches, irregular intersections, and do not have adequate turn lanes. Alternative modes of transportation such as transit, bikeways and sidewalks are lacking in Poquoson. The City of Poquoson, as of May 2007, contained approximately 60 miles of roadways with varying traffic volumes ranging from a low of 3113 vehicles per day for a segment of Poquoson Avenue to a high of 15,594 vehicles per day for a segment of Wythe Creek Road. Historic traffic counts reveal that some roadways have increased annually by as much as 5.3 percent over the past four (4) years.

TRANSPORTATION AND ITS IMPACT ON THE COMMUNITY

Transportation should be viewed as a vast collection of facilities and machines, which enhance human mobility. While roads and highways continue to be the largest single component of the transportation system, transportation planning also encompasses, and therefore must coordinate several different modes of transportation including air, bus, rail, water, transit, bicycle and the automobile. Road crossings, which are particularly prevalent in Poquoson, often create constraints in the transportation network and define the capacity of the road system. In the future, these points and places where transportation modes meet may become the most important aspect of transportation planning.



Transportation facilities shape and mold a community and have a dramatic impact on a city. Roads and intersections not only use a great deal of land, but they also attract development. New roads can channel business away from old routes affecting existing businesses. Major roadways can form physical barriers to development and tend to separate communities as well as create traffic choke points where they intersect. Transportation infrastructure also impacts the environment. Automobiles are a major source of air pollution in the region. The large impervious surfaces dedicated to roadways affect water quality through pollutant laden run-off having velocities which can cause erosion. The noise caused by automobiles and trucks on major collector streets also has an impact on surrounding neighborhoods. Transportation also affects Poquoson's economic base. Access and visibility are two of the most critical factors in commercial and industrial location choices. Employees, customers, raw materials, equipment, supplies, and merchandise must all be able to easily, economically, and safely reach the location while finished goods must be exported at a reasonable cost. An inadequate or overburdened transportation system will deter economic development.

CURRENT ROADWAY NETWORK AND STREET CONDITIONS

Network

The City of Poquoson has over 50 miles of publicly maintained roads in its thoroughfare system. Access between the City of Poquoson and the surrounding region is directly provided by either Wythe Creek Road to the south with the City of Hampton or by Victory Boulevard to the west with York County. Yorktown Road also provides access with York County to the west. Vehicular access between the eastern, central and western sections of the City is provided by a series of urban collectors which include: Little Florida Road, Poquoson Avenue, Messick Road, Wythe Creek Road, Hunts Neck Road and Yorktown Road. From these roads local access to individual's homes or businesses is provided by a series of local access roads that span outward in a fan pattern down the many necks of land located in the City.

Maintenance

Most roads in Poquoson have been accepted by the City for public maintenance and the Virginia Department of Transportation has also approved a number of City maintained streets for state maintenance funds. Furthermore, the Commonwealth as being eligible for federal highway funding has identified all of the Urban Minor Arterial and Urban Construction roads within the City. Roads that have been accepted for City maintenance, but are not eligible for state funds include Bennett Road, Freeman Drive and Magnolia Lane.

Private Streets

Some streets in the City are private and are not maintained by the City or State, but by the private property owners who use them. The City does not receive funds from the State to maintain these roads and therefore funds are not allocated in the budget for any repairs they may need.



Right-of-Way Widths

A number of the older streets within the City have deficient right-of-way widths, some of which are less than the 50-foot standard currently required by the Virginia Department of Transportation. The lack of right-of-way makes it more difficult and expensive to correct deficiencies.

Drainage and Road Elevations

Since the elevation of land in Poquoson varies from 0 to 10 feet above mean sea level; many of Poquoson's roadways are at risk for tidal flooding during a major storm. Those streets with elevations below 4.5 feet mean sea level are at particular risk, resulting in flooding from tide waters approximately every one or two years. For this reason, Poquoson's Subdivision Ordinance establishes a minimum elevation of 4.5 feet Mean Sea Level for all new streets. The most heavily traveled roads within Poquoson, Wythe Creek Road, Victory Boulevard, Little Florida Road, and portions of Poquoson Avenue are among the highest in elevation and, therefore, have the least risk of flooding. The heavily traveled section of Wythe Creek Road in Hampton, just south of the Poquoson corporate limits, however, is subject to periodic flooding.

Sidewalks and Bike Paths

The few sidewalks in the city are located primarily along the business section of Wythe Creek Road and along Poquoson Avenue from Forrest Road to Church Road.

FUNCTIONAL CLASSIFICATION

The configuration of Poquoson's thoroughfare system is based upon the premise that each road or street is part of a larger transportation system, known as a Street Hierarchy. Each road or street is classified based upon the specific role it plays in the movement of vehicles throughout the system. These classifications can then be used to govern the design criteria for each road as well as the amount of maintenance funds that may be required.

Street Hierarchy

The classifications of the street hierarchy for Poquoson are as follows:

Principal Arterial

These highways are the most significant roads in the urban area that serve the major centers of activity, constitute the highest traffic volume corridors, serve the longest trips, carry the major portion of through traffic in the urban area and provide continuity between rural arterials. There are no principal arterial roads in Poquoson.



Minor Arterial

These highways interconnect and supplement the principal arterial system with a greater emphasis on land access and a lower level of traffic mobility. They provide intra-community services as well as connecting rural collectors to the urban highway system. Examples of minor arterial roads include Victory Boulevard, Little Florida Road, and sections of Wythe Creek Road and Poquoson Avenue.

Urban Collector

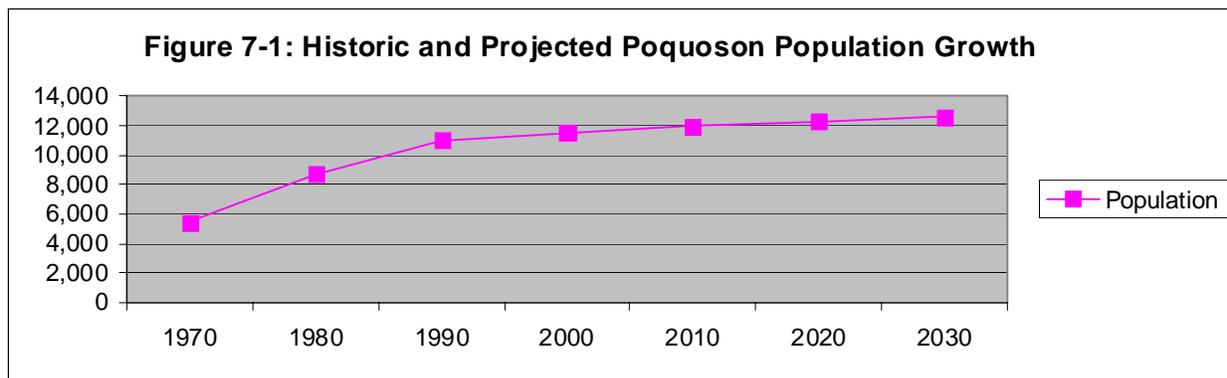
These highways provide land access service and traffic circulation within residential, commercial, and industrial areas. They collect local traffic and distribute it to the arterial system. Examples of urban collector roads include Messick Road, Yorktown Road, Hunts Neck Road, and sections of Wythe Creek Road and Poquoson Avenue.

Local Access Streets

These streets provide direct access to adjacent land and provide access to the higher systems. Service to through traffic is discouraged. Examples of local access roads include Rens Road, Pasture Road and Emmaus Road, as well as those public roads serving residential subdivisions.

OVERARCHING ISSUES INFLUENCING TRANSPORTATION IN POQUOSON

The population of Poquoson is projected to grow from 11,566 persons in 2000, to 12,600 persons in 2030, an increase of approximately 9%. This is a moderate increase considering past growth patterns and supports the summary of findings in Chapter 2- Population which states Poquoson is reaching a potential build out under current land use regulations. Figure 7-1 illustrates this trend.



The effects of congestion on the roadways from population growth will be compounded by an increasing rate of car ownership. In 2000, the City of Poquoson had 10,031 registered vehicles with a population of 11,566 for a car to person ratio of 0.867. This ratio of vehicle to persons means that within the City of Poquoson in the year 2000, there was less than one car person. By



2030, the number of vehicles registered in Poquoson is projected to grow to 12,648, an increase of 26%, for a car to person ratio of 1.04. Essentially by 2030, there will be at least 1 vehicle per person in Poquoson and is most likely due to these facts:

- Poquoson’s citizens boast the highest median income in the Hampton Roads area therefore allowing disposable income for additional vehicles for either themselves or their children;
- According to recent citizen surveys, over 60% of respondents stated they spent 10% or less in Poquoson and therefore commute to retailers outside of the City. This is most likely due to the limited availability of retailers located within the City; and
- A high percentage of residents of Poquoson commute to jobs outside of the City.

According to the 2000 Census, 78% of the Poquoson workforce is employed in jobs outside the City limits. All of these workers must use either Wythe Creek Road or Victory Boulevard to come and go and currently no form of public transportation exists in Poquoson.

Table 7-1 lists the top ten commuter destinations for Poquoson residents based on the 2000 Census.

Table 7-1: Top 10 Poquoson Commuter Destinations based on 2000 Census

Destination	Number of Workers
Hampton, VA	1614
Newport News, VA	1437
Poquoson, VA	1246
York County, VA	552
Norfolk, VA	173
Chesapeake, VA	109
James City County, VA	96
Williamsburg, VA	91
Portsmouth, VA	71
Virginia Beach, VA	57

Source: <http://www.census.gov/population/www/cen2000/mcdworkerflow.html#VA>

In addition to being the predominant commuter routes, the majority of retail and service businesses in the City are concentrated along Victory Boulevard and Wythe Creek Road. These factors, combined with the fact that no road improvements are currently programmed for the City of Poquoson, are projected to contribute to a worsening level of service on several major roads.



Traffic Growth Rates

Table 7-2 contains the most recent available traffic counts for twenty-nine road segments in Poquoson. The average annual growth rate for each of the segments is calculated in the rightmost column.

Table 7-2: City of Poquoson Weekday Traffic Volumes for Years 2004 and 2007

ROAD NAME	SEGMENT FROM	SEGMENT TO	2004 WEEKDAY VOLUME	2007 WEEKDAY VOLUME	Average Annual Growth Rate 2004-2007
Browns Neck Rd	Hunts Neck Rd	Norman Dr	2,020	-	-
Cary Chapel Rd	Wythe Creek Rd	York County Line	4,758	4,227	-3.7%
E Yorktown Rd	York County Line	Hunts Neck Rd	4,028	4,129	0.8%
Forest Rd	Poquoson Ave	Holloway Rd	727	721	-0.3%
Hudgins Rd	Poquoson Ave	Old Pond Rd	2,878	2,761	-1.4%
Hunts Neck Rd	Yorktown Rd	Browns Neck Rd	6,309	7,312	5.3%
Hunts Neck Rd	Browns Neck Rd	Pasture Rd	3,776	3,983	1.8%
Hunts Neck Rd	Pasture Rd	Edwards Rd	2,563	2,615	0.7%
Little Florida Rd	Wythe Creek Rd	Far Street	12,836	13,413	1.5%
Little Florida Rd	Far Street	Poquoson Ave	8,676	8,863	0.7%
Messick Rd	Poquoson Ave	Messick Pt	1,484	1,462	-0.5%
Odd St	Poquoson Ave	Terrace Dr S	1,844	1,968	2.2%
Poquoson Ave	Wythe Creek Rd	Rens Rd	3,589	3,719	1.2%
Poquoson Ave	Rens Rd	Little Fla Rd	3,570	3,592	0.2%
Poquoson Ave	Little Florida Road	Bunting Rd	8,175	8,208	0.1%
Poquoson Ave	Bunting Rd	Ridge Rd	4,387	4,260	-1.0%
Poquoson Ave	Ridge Rd	Messick Rd	3,298	3,113	-1.9%
Poquoson Rd	Messick Rd	Back Landing	707	662	-2.1%
Poquoson Rd	W Cemetery Lane	Amorys Wharf	444	332	-8.4%
Rens Rd	Poquoson Ave	Whitehouse Dr	2,006	1,907	-1.6%
Ridge Rd	Poquoson Ave	Messick Rd	820	806	-0.6%
River Rd	E Yorktown Rd	Rivergate Dr	695	785	4.3%
Valmoore Dr	Jefferson Ct	Hunts Neck Rd	698	-	-
Victory Blvd	York County Line	Wythe Creek Rd	14,073	13,992	-0.2%
Wythe Creek Rd	Hampton City Line	Alphus St	13,457	14,324	2.1%
Wythe Creek Rd	Alphus St	Little Fla Rd	15,040	15,994	2.1%
Wythe Creek Rd	Little Fla Rd	Hudgins Rd	13,123	13,685	1.4%
Wythe Creek Rd	Hudgins Rd	Poquoson Ave	8,001	8,730	3.0%
Yorktown Rd	Hunts Neck Rd	Victory Blvd	8,220	8,849	2.6%

Data source: VDOT. Prepared by HRPDC, 3/3/08.

Table 7-2 reflects a marginal increase in traffic growth rates regarding traffic city-wide; overall a 0.3% increase in traffic from 2004 to 2007. However, it should also be noted that the numbers shown in this table appear to show a sporadic and unpredictable pattern of growth and subsidence with traffic in Poquoson, and the main roadways (Wythe Creek Road, Victory



Boulevard and etc.) show increasing rates of traffic growth. With this knowledge, it is important to analyze past traffic count trends to determine whether the most recent counts are consistent with past data.

Traffic Count Trends

Table 7-3 provides traffic counts from years 1994, 2001, 2004 and 2007 conducted by Virginia Department of Transportation (VDOT). This table provides the different traffic counts for each of these years for available road segments in Poquoson and demonstrates the trend described above with Table 7-2. Again you will notice a fluctuating pattern of traffic growth and subsidence on road segments, with the main roadways experiencing more than moderate growth.

Table 7-3: City of Poquoson Historic Weekday Traffic Volumes 1994-2007

ROAD NAME	SEGMENT FROM	SEGMENT TO	1994 WEEKDAY VOLUME	2001 WEEKDAY VOLUME	2004 WEEKDAY VOLUME	2007 WEEKDAY VOLUME
Browns Neck Rd	Hunts Neck Rd	Norman Dr			2,020	-
Cary Chapel Rd	Wythe Creek Rd	York County Line	4,148	4,460	4,758	4,227
E Yorktown Rd	York County Line	Hunts Neck Rd			4,028	4,129
Forest Rd	Poquoson Ave	Holloway Rd			727	721
Hudgins Rd	Poquoson Ave	Old Pond Rd			2,878	2,761
Hunts Neck Rd	Yorktown Rd	Browns Neck Rd	6,256	6,107	6,309	7,312
Hunts Neck Rd	Browns Neck Rd	Pasture Rd	3,507	3,533	3,776	3,983
Hunts Neck Rd	Pasture Rd	Edwards Rd	2,310	2,590	2,563	2,615
Little Florida Rd	Wythe Creek Rd	Far Street	12,167	12,686	12,836	13,413
Little Florida Rd	Far Street	Poquoson Ave	8,125	9,038	8,676	8,863
Messick Rd	Poquoson Ave	Messick Pt	1,584	1,562	1,484	1,462
Odd St	Poquoson Ave	Terrace Dr S			1,844	1,968
Poquoson Ave	Wythe Creek Rd	Rens Rd	3,420	3,617	3,589	3,719
Poquoson Ave	Rens Rd	Little Fla Rd	3,755	3,597	3,570	3,592
Poquoson Ave	Little Florida Road	Bunting Rd	8,108	8,471	8,175	8,208
Poquoson Ave	Bunting Rd	Ridge Rd	4,051	4,237	4,387	4,260
Poquoson Ave	Ridge Rd	Messick Rd	3,055	3,134	3,298	3,113
Poquoson Rd	Messick Rd	Back Landing			707	662
Poquoson Rd	W Cemetery Lane	Amorys Wharf			444	332
Rens Rd	Poquoson Ave	Whitehouse Dr			2,006	1,907
Ridge Rd	Poquoson Ave	Messick Rd	920	800	820	806
River Rd	E Yorktown Rd	Rivergate Dr			695	785
Valmoore Dr	Jefferson Ct	Hunts Neck Rd			698	-
Victory Blvd	York County Line	Wythe Creek Rd	10,980	12,741	14,073	13,992
Wythe Creek Rd	Hampton City Line	Alphus St	13,558	13,991	13,457	14,324
Wythe Creek Rd	Alphus St	Little Fla Rd	15,316	15,438	15,040	15,994
Wythe Creek Rd	Little Fla Rd	Hudgins Rd	12,119	13,207	13,123	13,685
Wythe Creek Rd	Hudgins Rd	Poquoson Ave	8,426	8,491	8,001	8,730
Yorktown Rd	Hunts Neck Rd	Victory Blvd	7,776	7,993	8,220	8,849



Overall, traffic has increased moderately on the recorded road segments, while the main roadways continue to show significantly increased traffic flow. The 2007 traffic count for Victory Boulevard shows a minute decrease in traffic flow (0.2%), a decrease of only 81 vehicles, with all other connector roadways increasing in the amount of traffic experienced. However, the 2007 traffic count for Victory Boulevard is still 9.8% more than the 2001 number.

Congestion may drive the need to widen Victory Boulevard from a 2-lane roadway, but there are additional factors that play more importance in supporting this idea, such as Victory Boulevard's designation as the primary evacuation route for citizens during emergency events. Another factor is that improved traffic circulation and connectivity help promote economic development which Poquoson desperately needs to diversify its tax base. These factors are discussed later in the chapter under Future Roadway Improvements Recommendations.

LEVEL OF SERVICE

Much of roadway transportation planning is aimed at maintaining an "adequate level of service". This transportation related jargon simply means keeping the traffic on streets moving freely, efficiently and safely. Roadways and intersections are given a level of service (LOS) grade based on its traffic characteristics. You could almost consider these as roadway report card grades. Level of Service (LOS) ratings are used to provide a measure of the flow of traffic on various road segments throughout Hampton Roads. Level of service A indicates the best situation, with traffic flowing freely and without any significant impediments. At the opposite end of the spectrum are levels of service E and F, which indicate unacceptable impediments to traffic flow.

Level of Service (LOS) definitions

The Virginia Department of Transportation (VDOT) defines Level of Service grades as follows:

LOS A: Free-flow traffic with individual users virtually unaffected by the presence of others in the traffic stream.

LOS B: Stable traffic flow with a high degree of freedom to select speed and operating conditions but with some influence from other users.

LOS C: Restricted flow that remains stable but with significant interactions with others in the traffic stream. The general level of comfort and convenience declines noticeably at this level.

LOS D: High-density flow in which speed and freedom to maneuver are severely restricted and comfort and convenience have declined even though flow remains stable.

LOS E: Unstable flow at or near capacity levels with poor levels of comfort and convenience.



LOS F: Forced traffic flow in which the amount of traffic approaching a point exceeds the amount that can be served. LOS F is characterized by stop-and-go waves, poor travel times, low comfort and convenience, and increased accident exposure.

Level of Service Projections

Maps have been generated depicting existing LOS in 2001 (Map 7-1) and projected LOS for 2008 and 2026, Maps 7-2 and 7-3 respectively. The LOS projections assume that the road network will remain unchanged through the forecast period. The 2001 LOS and the projections for 2008 LOS are given using the letter codes A-F. The projections for 2026 are given in a more general set of classifications ranging from Low-Moderate, Moderate, and Severe. These rankings loosely equate to the LOS letter codes as follows:

Low-Moderate: LOS A - C
Moderate: LOS D
Severe: LOS E - F

Analysis of LOS Maps

All three maps show a similar LOS pattern with a worsening trend over time.

Map 7-1 depicts the recorded situation in 2001. The worst peak hour congestion was found in the segments of Victory Boulevard and Wythe Creek Road that connect Poquoson to York County and Hampton. This situation is projected to worsen through 2008, as shown on Map 7-2, when the LOS on three road segments is projected to decline. The segment of Wythe Creek Road south of the intersection of Alphas Street is projected to change from LOS D to E. The segment of Wythe Creek Road north of Hudgins Road is projected to change from LOS B to C and Poquoson Avenue is projected to change from LOS B to C. The 2026 projections, depicted on Map 7-3, show Victory Boulevard, Little Florida Road and Wythe Creek Road south of Alphas Street changing to severe congestion. Yorktown Road East is projected to change to moderate congestion.

Many different factors exist that contribute to the worsening conditions of traffic; such factors include a low fixed roadway capacity, absence of public transportation, and the lack of a carpooling effort. The public's perception may attribute the increased traffic congestion due to increased residential development, but increased residential development is only partly responsible for the worsening traffic conditions. As indicated in the population projections shown in Chapter 2 – Population, the current estimated population is only slightly larger than the 2000 census number with less than a 3% increase. As mentioned beforehand, the compounding effect is that the ratio of vehicles per person has continued to increase dramatically. Using the Weldon Cooper Center provisional 2007 population estimate of Poquoson (11,948) and the current number of vehicle registrations, the ratio is almost 1 vehicle per person (0.998).¹ Past

¹ As of January 2008, the number of passenger vehicle registrations totaled 11,920 according to the records held by the Commissioner of Revenue's Office.



trends of this ratio are reflected in Table 7-4. The 2000 ratio is a higher rate than all other neighboring localities in Hampton Roads according to data provided by the HRPDC.

Year	number of passenger vehicles registered	population	vehicles per person
1970	N/A	5441	N/A
1980	5272	8726	0.604
1990	8470	11005	0.770
2000	10031	11566	0.867
2007*	11920	11948	0.998

*2007 population number is provisional estimate provided by Weldon Cooper Center of UVA.

Accident Data

The intersection of Victory Boulevard and Wythe Creek Road had the highest number of crashes in the City of Poquoson for each of the years evaluated. The *Hampton Roads Regional Safety Study, Part 3: Crash Analysis and Countermeasures* contains a detailed analysis of crashes at this intersection for the years 1998-2000. Regionally, this intersection ranked 13th highest in crash severity rate of 468 analyzed intersections. On average this intersection had 26.7 crashes per year and 7.7 injuries per year. Selected observations from the analysis include the following:

- 14.8% of crashes occurred where other vehicles obscured the driver’s vision. Regional average was 4.5%.
- Nearly 46% of crashes occurred during the afternoon peak period (3-7 pm). The regional average was 29.9%.
- 49.2% of crashes were right angle collisions. Regional average was 39.5%
- 28% of crashes involved movements in and out of driveways.
- Most prevalent driver actions resulting in the crash were: did not have right-of-way (51.0%), following too close (27.5%) and improper backing (5.9%).

Table 7-5 contains crash data for several major intersections in Poquoson. Data from years 2001 to 2007 were provided by the Poquoson Police Department and used in conjunction with data from the previous Comprehensive Plan.



<i>Intersection</i>	Number of Crashes by Year									
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Little Florida at Poquoson Ave	2	1	-	2	2	3	-	1	3	-
Poquoson Ave at Hudgins Rd	3	2	1	-	2	2	-	2	1	-
Victory Boulevard/Little Florida Rd at Wythe Creek Rd	25	27	28	14	21	21	15	16	27	16
Wythe Creek at Hudgins Rd	7	8	9	10	13	5	4	8	3	4
Wythe Creek at Poquoson Ave	1	-	3	3	1	1	2	2	-	1
Hunt's Neck Rd at Yorktown Rd	1	1	3	2	4	4	-	3	4	-

<i>Intersection</i>	Additional Data Analysis, Number of Crashes from Table 7-5				
	Average	Median	Lo # - Hi #	Range	Mode
Little Florida at Poquoson Ave	1.4	1.5	0-3	3	0, 2
Poquoson Ave at Hudgins Rd	1.3	1.5	0-3	3	2
Victory Boulevard/Little Florida Rd at Wythe Creek Rd	21.0	21	14-28	14	16, 21, 27
Wythe Creek at Hudgins Rd	7.1	7.5	3-13	10	4, 8
Wythe Creek at Poquoson Ave	1.4	1	0-3	3	1
Hunt's Neck Rd at Yorktown Rd	2.2	2.5	0-4	4	4



Table 7-5 depicts a fluctuating rate of incidences for accidents at Poquoson's major intersections through the past years. While the frequency of accidents is dynamic at most of the intersections, dropping below or exceeding the average over the span; the intersection of Hunt's Neck Road and Yorktown Road shows an increased rate of accidents. Since 2000, only 2 years were below 1998 and 1999 annual accident counts. Table 7-6 provides additional analysis for the data in Table 7-5.

The following Remedies and Countermeasures are offered in the study, *Hampton Roads Regional Safety Study, Part 3: Crash Analysis and Countermeasures*:

- Ensure that signal heads are large enough to provide maximum visibility for drivers approaching the intersection.
- Review signal clearance times at the intersection.
- Review signal phasing and timing at the intersection.
- Consider using protected phase only left turns at the intersection. If protected/permitted phase is used, ensure that a sign, warning drivers to yield during green, is present and clearly visible.
- Consider access management solutions, such as adding a median along Little Florida Road (east of intersection), to reduce conflict points and improve driver visibility into and out of the Farm Fresh Shopping Plaza.

A more complete analysis of this intersection is contained in the *Hampton Roads Regional Safety Study, Part 3: Crash Analysis and Countermeasures*.

TRANSPORTATION DEMAND MANAGEMENT

The Census Transportation Planning Package 2000 contains the following information related to travel to work by Poquoson citizens. All of the statistics are based on comparison of 1990 data to 2000 data:

- Total Population increase 5.1%
 - Total Households increase 10.7%
 - Mean vehicles per household increased from 2.17 to 2.22.
 - Number of workers 16 years and over decreased by 0.7%
 - Percent that drove alone to work increased by 6.1%
 - Percent that carpooled to work decreased by 42.8%
 - Percent that biked or walked to work decreased by 26.7%
- (ctpp.transportation.org/ctpp/home/default.htm)

Given these trends, the LOS projections and the lack of available funding for future road improvements, the utilization of the transportation demand management tools available in Hampton Roads is an alternative that should be considered. The Traffix program is a cooperative public service designed to decrease traffic congestion by reducing the number of Single



Occupancy Vehicles commuting to work sites in Hampton Roads. Traffix provides services to both employers and employees. For employers, Traffix will survey employees to determine their transportation needs, compile the survey results into a custom company profile and develop an employee transportation proposal that may include carpooling, vanpooling, preferential parking for ridesharing and other options. For individual employees, Traffix offers ride matching services, the guaranteed ride program and other services. Currently, Hampton Roads Transit (HRT) does not offer bus service in Poquoson.

ROAD NETWORK IMPROVEMENTS

The 1996 *Poquoson Level of Service and Transportation Improvement Study* identified several programmed and planned improvements to the road network. The two significant programmed improvements that were identified in the 1996 study involved widening a segment of Wythe Creek Road north of Hudgins Road and a segment south of Alphus Street. The segment north of Hudgins road has been widened to five lanes to Wainwright Drive and to three lanes to Brown's Neck Road. The segment south of Alphus Street to Huntlandia Way has been widened to five lanes but remains a two-lane road to and beyond the Hampton City line. The list of planned improvements contained in the 1996 study included items from the 1999 Poquoson Comprehensive Plan and the *Hampton Roads 2015 Regional Transportation Plan*. The planned improvements included widening Wythe Creek Road and Victory Boulevard, intersection improvements on Wythe Creek Road, Little Florida Road and Poquoson Avenue, and other improvements to Little Florida Road, Poquoson Avenue, Yorktown Road and Cary's Chapel Road. Other than the previously mentioned widening of Wythe Creek Road from Alphus Street to Huntlandia Way, none of the planned improvements have been accomplished. The intersections in the widened section of Wythe Creek Road have been improved while other planned improvements have yet to be addressed.

Wythe Creek – Cary's Chapel Intersection Study

The *Wythe Creek – Cary's Chapel Intersection Study* was completed in 2004. This study evaluates a set of possible improvements to the intersection to improve safety and traffic flow. Safety is a concern due to limited sight distance caused by a bridge immediately to the south of the intersection. Congestion is also a concern at the intersection, particularly during the morning peak period. Twelve alternatives were analyzed for their affects on both safety and congestion at the intersection. The primary recommendation of the report is the signalization of the intersection.

Estimated Cost of Intersection Signalization: \$270,000*

*(*Based on Signal Warrant Study of the intersection and cost estimate provided by Hampton Roads District Engineering Section February 19, 2003)*



Victory Boulevard Corridor Study

The Victory Boulevard Corridor Study & Connectivity Guide was completed in 2008 by Kubilins Transportation Group Inc. The goal of the Victory Boulevard Corridor Study was to develop a strategic access management plan that allows drivers to use the corridor smoothly while accommodating alternative modal choices and promoting responsible property development. In order for the Victory Boulevard corridor to effectively encompass Smart Community practices, it needs to move as much vehicular traffic as possible while being inclusive of pedestrians and cyclists. Another goal of the study was to provide a design for a gateway entrance which would announce to the traveler their arrival to Poquoson in a manner that best reflects its character and history. The final report for the Victory Boulevard Corridor Plan & Area Connectivity Guide proposes the following recommendations:

- A proposed road network that takes into account previously submitted site plans for the area, parcel dimensions and opportunities for network connections;
- A Connectivity Index of 1.61 North of Victory Boulevard and 1.2 South of Victory Boulevard;
- Landmark dual lane roundabout and 16 foot wide median treatments;
- A roundabout at City Hall Avenue and right-in/right-out locations along the corridor;
- Phase II study to address queuing near the intersection at Wythe Creek Road;
- Off street bicycle and pedestrian connections, including nexus with Oxford Run Trail; and
- Road configuration for Victory Boulevard that accommodates motorists, cyclists, and pedestrians.

The Victory Boulevard Corridor Study essentially establishes a vision for the future expansion of the roadway to four-lanes by providing a typical cross-section of the recommended roadway, a network roadway system for the Big Woods area to guide land development and promote connectivity, and integration of multi-modal transportation solutions with adjacent preexisting sites along Wythe Creek Road. For more information regarding the recommended widening of Victory Boulevard and the Big Woods Roadway Network system, please see the Future Roadway Improvement Recommendations and Conceptual Roadway sections of this chapter, respectively.

Estimated Cost: \$9.1 million w/o Roundabouts, \$10.6 Million w/ Roundabouts*
(*Based on Conceptual Study with street lighting)

CIRCULATION

Circulation describes how citizens are able to “get around” within the City, not just movement from one place to another. Much of the same data is used to evaluate both circulation and transportation, such as traffic counts and roadway capacity; however, transportation is the means by which we travel, while circulation concentrates on the mode and routes of travel. Evaluating circulation requires more than just an analysis of the roadways; it involves concepts of mobility,



interconnectivity, access management, and alternative modes of transportation that are not fully utilized or implemented. For this plan, circulation will deal mainly with these concepts and influence decisions involving transportation facilities, roadway improvements and site development.

Interconnectivity and Access

Interconnectivity and access to property is essential to a community to preserve property values and most importantly promote the health, safety and welfare of the citizens. Property without direct frontage or access to public right-of-way is termed landlocked since the parcel is without access to public right-of-way and surrounded by other pieces of land. In older communities, property was subdivided prior to zoning ordinances which may have resulted in landlocked parcels. Today, zoning ordinances prohibit the practice of landlocking property. However, where property may be landlocked, new development must provide at least one means for access for any possible future development. Any future development of landlocked property will require cooperation from all the property owners in order to utilize the access point provided. When the landlocked property is developed, it too must provide access to adjacent properties that may be landlocked. This is a sound development practice and the interconnection of subdivision street systems is required by State law for all localities receiving maintenance funds from Virginia Department of Transportation (VDOT).

The concept of interconnectivity involves linking travelways to one another and the accessibility to property by more than one locational access point. Interconnectivity supports sound property development by promoting roadways to connect to one another for optimal access and providing land use opportunities. Not only does property development need to provide access to landlocked parcels, but also more than one access depending on the use, size and location of the property. Additional access points must be analyzed in conjunction with the property's use and determined if appropriate access is being provided or controlled.

Residential Development

All new residential developments must provide additional access points where physically possible. At least 2 access points must be provided for new residential developments by directly connecting entrances through land abutting public right of way, wherever the land abuts public right of way. Additional access points ensure proper circulation within subdivisions and access to public roadways, as well as providing emergency services multiple means of access. Additional access points should be located far enough apart to appropriately circulate traffic and provide sufficient and reasonable routes to general places of interest. Any new subdivisions, excluding family subdivisions, must have at least 2 access points located opposite of one another. Certain physical constraints may prevent roadways from being connected together, such as wetlands or water features. In these cases, exceptions may be warranted; however, review procedures should be in place to prevent an applicant from circumventing the purpose and intent of additional access points.



As mentioned previously, new property development must also provide access to any adjacent landlocked parcels, including subdivisions. Where roadway access is provided by an existing subdivision, new subdivisions must connect a roadway to this point for use.

Commercial Development

Commercial developments tend to locate on major roadways to maximize visibility and access. However, too many access points produce dangerous roadway conditions due to uncontrolled traffic flow. New development along Victory Boulevard must utilize a street access concept that encourages access from streets connected to Victory Boulevard, rather than direct access from Victory Boulevard. Any direct access onto Victory Boulevard must strictly control traffic flow, only permitting crossing of multiple lanes at intersections with traffic control devices. The current zoning ordinance encourages this concept; however, it should be revised to better emphasize the goals and objectives of the Comprehensive Plan. This is covered in more detail in the Land Use chapter.

During shopping center upgrades and redevelopment, existing developments must improve access points to better control traffic flow in a more desirable and safe fashion. Examples of access improvements that control traffic flow are “right-in/right-out” entrances and enhanced main access points that will attract the majority of vehicular traffic. Other means may include closing off access points and collaborating with adjacent property owners for shared access.

Bicycle and Pedestrian Infrastructure

The City of Poquoson’s current bicycle or pedestrian infrastructure is inadequate and in need of improvements. Many of the roads in the City are narrow with little or no shoulder and deep roadside ditches, making it difficult to retrofit bike paths or sidewalks. The *Hampton Roads District Bicycle Plan*, published in 2003, includes planned bike facilities on Victory Boulevard, East Yorktown Road, Hunt’s Neck Road, Pasture Road, Brown’s Neck Road, Wythe Creek Road, Poquoson Avenue, Odd Road, Cedar Road, Little Florida Road and Messick Point Road. Funding has not been identified for any of these facilities.

Recent surveys indicate a strong majority of the respondents’ desire for the implementation of additional sidewalks throughout the City. The following is a summary of those responses pertaining to sidewalks and bikeways.

2004 Survey

Quality of Life

- More bikeways/sidewalks choice was selected the 2nd most important factor that could make living in Poquoson better for you and your family. Out of eight responses, this answer was 2nd only to improved mosquito control and the top two responses garnered nearly 53% of the responses.



Roadways

- 78% of the respondents thought additional sidewalks/bikeways should be constructed in the City, and 63% of the respondents were willing to spend additional tax dollars for the construction of the additional sidewalks/bikeways.

2006 Survey

- Out of ten possible choices, the choice of more bikeways/sidewalks was selected as the 3rd most important factor that could make living in Poquoson better for you and your family. This answer garnered the 3rd most responses, behind only (1) improved mosquito control and (2) improved City Stormwater drainage system. This response also represented approximately 18% of the total number of responses with the three top choices representing 55% of the total number. The next closest option was more than 400 responses behind the 3rd selection out of 5112 responses.

Sidewalks

Sidewalks are mostly located in the Central planning district along the major commercial corridor of Wythe Creek Road and newly developed areas in the City. The City should devise a sidewalk implementation plan that identifies roadways in need of sidewalks. Priority for improvements are to be assigned according to street hierarchy, demand and any significant data derived from studies performed in the creation of the plan. The implementation of sidewalks should be coordinated with the efforts of a master Infrastructure Improvements Master Plan that would coordinate burial of utility lines and the piping of ditches, where feasible. Requiring sidewalks to be installed in all new subdivision developments, as well as within commercial centers, promotes connectivity to public infrastructure and improves circulation. Where needed, ordinances are to be revised to include this requirement in all applicable districts.

Bike lanes/paths

Bicycles provide an alternative mode of transportation for short distances and the use must be encouraged to improve mobility and circulation. However, to do so, the appropriate infrastructure must be in place for the users to not only be safe, but feel safe in order to promote use. Roadway improvements should include designated bike lanes that will support this mode of travel in a safe manner. It is recommended that funding options be researched to support the bike infrastructure improvements and determine what standards must be applied for VDOT funding. Like sidewalks, new subdivisions and commercial centers are to incorporate bike lanes/paths and associated appurtenances, such as bike racks and storage devices, in development plans. Again where needed, ordinances are to be revised to include this requirement in all applicable districts.



Public Transportation

As previously stated, Hampton Roads Transit (HRT) does not offer bus service in Poquoson. Poquoson should collaborate with HRT to obtain bus service to and from the City, preferably to the City's central business area along Wythe Creek Road and mainly at the intersection of Victory Boulevard and Wythe Creek Road. Acquiring bus service will present another opportunity to provide mobility for persons without vehicles, as well as an alternative to driving to reduce traffic congestion.

Once bus service has been contracted to serve Poquoson, the Comprehensive Plan and Zoning Ordinance should be revised to require large commercial centers and subdivisions to provide facilities to accommodate the citizens who use this service, such as covered bus stops with seating and bus lanes.

FUTURE ROADWAY IMPROVEMENT RECOMMENDATIONS

These recommendations are from professional studies and designs already commissioned by the City, staff analysis of collected data and field observations of current conditions. Recommendations for roadway improvements may not be the official name of the project or a project approved by City Council for commencement of work. However, these recommendations provide target areas of improvement for the roadway system and an ideal perspective of their design and function. Some of the recommendations are from the *Hampton Roads 2015 Regional Transportation Plan* and are mentioned as so.

Victory Boulevard widening (*from the York County line to Wythe Creek Road*)

The potential widening of Victory Boulevard may be one of the most significant roadway improvements that could occur in the City of Poquoson for numerous reasons. Improving this segment of roadway should increase interest in economic development of the Big Woods since Victory Boulevard connects Poquoson to Interstate 64 through York County. This project would also reduce roadway congestion during peak hours of traffic flow by doubling the capacity. This roadway serves as the gateway to the City and therefore must be aesthetically pleasing, commanding the same aesthetics from adjacent property uses. But the most important aspect of this roadway is that it serves as the primary evacuation route for the City during emergency events. In order to ensure proper function and public safety, the design of the future roadway is of the utmost importance.

The *Hampton Roads 2015 Regional Transportation Plan* recommends improving Victory Boulevard from the Wythe Creek Road intersection to the Magruder Boulevard intersection with at least 4 lanes, 2 each way, while possibly providing an immobile vehicle lane. However, the majority of Victory Boulevard within this segment lies in York County, which obviously requires York County to authorize its widening within the jurisdictional boundaries. In order to prepare a design that would transition well into any widening York County might facilitate, the City of Poquoson and York County should collaborate on the segment of Victory Boulevard



between the Cary's Chapel/Yorktown Road intersection and Wythe Creek Road Intersection. In preparation of the potential widening of Victory Boulevard, the City of Poquoson contracted a study for the portion of Victory Boulevard located within the City's boundaries. Any future improvement of Victory Boulevard should reference the Victory Boulevard Corridor Study & Connectivity Guide as it details ideal areas for traffic controlling intersections and provides prospective property developers target areas for street access.

As previously mentioned, the Victory Boulevard Corridor Study & Connectivity Guide was completed by Kubitins Transportation Group Inc. in 2008 and includes recommendations for the design of Victory Boulevard. The study provides a vision for the roadway's future design detailing provisions for access management, traffic control devices, connectivity with the Big Woods Network System, and a typical cross-section for roadway widening.

In summary, the Victory Boulevard Corridor Study & Connectivity Guide proposes a four-lane roadway with two (2) dual-lane roundabouts as traffic control devices at the intersections of existing and conceptual side streets to provide access to the adjacent properties, and curbed medians in the center of the roadway to safely separate oncoming traffic and provide safe standing areas for pedestrians attempting to cross the roadway. Median breaks are strategically located to maximize the flow of traffic by controlling direction and reducing conflict points. The study transitions the proposed widening from the four lanes of Victory Boulevard to blend with current alignment of the Wythe Creek Road intersection. Widening this roadway must coordinate improvements to stormwater management, which may include the piping of ditches, and the burial of any above ground utilities with the implementation of sidewalks and pedestrian/bicycle infrastructure.

The recommendations from the Victory Boulevard Corridor Study also support an effective and efficient street network system throughout the Big Woods area, both North and South. Both the access management portion of the Victory Boulevard Corridor and correlating Big Woods Street Network System are highly dependent on one another and positively correlate. Any changes to one affects the other directly, and therefore changes to either must be done in concert. For more information regarding the Big Woods Street Network System, please reference the Conceptual Roadways portion of this chapter.

Estimated Cost: \$9.1 million w/o Roundabouts, \$10.6 Million w/ Roundabouts*
*(*Based on Conceptual Study with street lighting)*

Wythe Creek Road widening *(from Huntlandia Way to Hampton city line)*

Currently, this segment is only 2 lanes (1 each way) and provides another means of access to the City of Poquoson. The potential widening of Wythe Creek Road from Huntlandia Way to the city limits of Hampton would significantly change the landscape of this segment and has been discussed by City officials in previous years. However, this project requires a collaborative relationship with adjacent localities, City of Hampton and York County, in order to effectively plan the roadway improvement due to the use, location and characteristics of traffic flow involved with this roadway segment.



The City of Hampton must be included in this project since Wythe Creek Road connects Poquoson to Hampton by crossing the 2-lane Wythe Creek Bridge and is mostly 2 lanes until the second traffic signal at Langley Air Force Base (LAFB). York County must be included in this project because Cary's Chapel Road lies primarily in York County but connects to Wythe Creek Road just before Wythe Creek Bridge. Improvements to Wythe Creek Road only on the Poquoson side would not improve roadway conditions since traffic would still bottleneck at the bridge. Any proposed improvements must extend into Hampton, at least to the LAFB Wythe Creek entrance, in a collaborative effort to reduce traffic congestion and improve traffic flow at the Wythe Creek Road/Cary's Chapel Road intersection.

Estimated Cost: \$12.052 Million*

*(*Based on the cost of project as programmed in the VDOT Six Year Improvement Plan as a 5-lane roadway.)*

Improvement to Wythe Creek Road/Cary's Chapel Road Intersection

As previously discussed, this intersection is consistently congested during peak hours because travelers use it as a bypass of Poquoson to and from Langley Air Force Base. Evening peak hours create stacking on and beyond the bridge due to long wait times and the short stacking lane for the left turn lane onto Cary's Chapel Road from LAFB. Traffic backup extends well into Hampton city limits in the evening, impeding through traffic headed towards Poquoson. However, this road lies primarily in York County; only a small segment of Cary's Chapel is within Poquoson city limits, with the intersection itself located in Poquoson. However, the "bypass" traffic affects travelers in a manner that disrupts convenience and poses serious safety issues during peak hours. The effort to improve this area must be a collaborative effort on behalf of Poquoson, Hampton, and York County due to roadway alignment.

Estimated Cost of Intersection Signalization: \$270,000*

(Based on Signal Warrant Study of the intersection and cost estimate provided by Hampton Roads District Engineering Section February 19, 2003)

Wythe Creek Road enhancements (from Browns Neck Road to Huntlandia Way)

Enhancements to Wythe Creek Road consist of the strategic placement of medians within the existing right-of-way of Wythe Creek Road from Browns Neck Road to Huntlandia Way. This project has also been referred to as the Wythe Creek Road Beautification. Currently, this segment of Wythe Creek is primarily five (5) lanes with the center lane primarily serving as a dual turn lane for the majority of Wythe Creek Road with it becoming a single turn lane approaching the traffic signals. The improvements outlined in the Summary Report of the Wythe Creek Road Work Session held October 3, 2005 serves as the guide for the enhancement of Wythe Creek Road. Improvements to this segment would include raised median implementation, landscaping and burial of overhead utilities. The installation of medians within the right-of-way provides many advantages as compared to the existing conditions, some of which are:



- Medians improve pedestrian safety and mobility by providing safe standing areas,
- Medians facilitate fluid traffic flow by reducing vehicular conflict points and passively directing traffic,
- Medians can reduce vehicle collisions by providing a barrier between oncoming lanes,
- Medians can reduce night glare with landscaping, and
- Medians with breaks still allow full access for adjacent property owners and their customers.

Estimated Cost: \$4.3 million*

*(*based on conceptual study with all suggested improvements and streetscaping listed)*

Yorktown Road improvements *(from the York County line to Wythe Creek Road)*

Proposed improvements to Yorktown Road is another project recommended in the *Hampton Roads 2015 Regional Transportation Plan*. Like Cary's Chapel Road, Yorktown Road serves as a bypass of the center of Poquoson, connecting Hunts Neck Road/Poquoson Avenue to Victory Boulevard. Traffic congestion is modest, but as expected most noticeable during peak hours. Most of this segment lies within the City of Poquoson before transitioning to York County where the intersection has been improved with a signal and additional turn lanes.

Improvements to Yorktown Road will consider turn lanes, as warranted, and shoulder widening from Wythe Creek Road to the York County line. Other recommended improvements are piping of ditches and sidewalk implementation along this road. Upon development, all improvements should coincide with the Infrastructure Improvements Master Plan to coordinate all facets of this recommendation in an efficient and effective manner.

Conceptual Estimated Cost: \$2.7 million for improvements at 3 primary intersections*

Right-turn lane Implementation per intersection (2 approaches) = \$170,000 per intersection

Left-turn lane Implementation per intersection (2 approaches) = \$730,000 per intersection

*(*does not include additional r-o-w, utility burial or inflation estimates)*

Little Florida Road improvement *(from Wythe Creek Road to Poquoson Avenue)*

In the *Hampton Roads 2015 Regional Transportation Plan*, it is recommended that Little Florida Road right-of-way be widened from Wythe Creek Road to Poquoson Avenue providing for two upgraded travel lanes and turning lanes at the primary intersections. Examples of primary intersections may be those located at Cedar Road, Odd Road, and Poquoson Avenue. Other recommended improvements along this road are piping of ditches and sidewalk implementation. Upon the development of an infrastructure master plan, all improvements will coincide with the infrastructure improvement master plan to coordinate all facets of this recommendation in an efficient and effective manner.

Conceptual Estimated Cost: \$1.8 million for improvements at 2 primary intersections*

Right-turn lane Implementation per intersection (2 approaches) = \$170,000 per intersection

Left-turn lane Implementation per intersection (2 approaches) = \$730,000 per intersection

*(*does not include additional r-o-w acquisition, utility burial or inflation estimates)*



Intersection of Poquoson Avenue/Little Florida Road/Laydon Way

This intersection is an area of concern for the City due to its unique alignment and heavy use. Poquoson Avenue connects to Little Florida Road at this intersection with an odd alignment and the offset of Laydon Way near this intersection. Laydon Way is a subdivision street that adds an element of caution due to its proximity to the intersection and curving nature of the southern portion of Poquoson Avenue. Currently traffic on Poquoson Avenue north of Little Florida Road must stop and/or yield to traffic on Little Florida Road and southern portion of Poquoson Avenue, and Laydon Way traffic must obey a stop sign before entering Little Florida Road. An Intersection Improvement Study has been performed to determine the design of traffic directing alternatives; however, no analysis has been conducted for feasibility of these alternatives. The City should have a feasibility study performed to determine which options will work best for the community.

Estimated cost: \$1.184 million*

*(*based on the alternative design with the highest cost as of date of study)*

Sidewalk Implementation

As previously mentioned, recent surveys have documented citizens' desires for sidewalks to be placed along the main routes of travel throughout the City. However, a more detailed study would provide a strategy on sidewalk implementation through data collection and analysis, and assigning priority regarding demand and current use. It is recommended that Sidewalk Implementation be a component of the Infrastructure Improvement Master Plan and be developed simultaneously. One goal of the Infrastructure Improvement Master Plan should be to improve pedestrian mobility by connecting citizens' access to public facilities and points of interest throughout the City of Poquoson. Researching sources of funding is essential for the plan to help offset the costs of the infrastructure improvement.

*Estimated cost: \$125,000 per linear mile**

*(*excludes any design preparation, ditch piping or any possible right-of-way acquisition)*

CONCEPTUAL ROADWAYS

Conceptual roads are potential roadways planned to improve circulation and provide access to undeveloped properties. In the City's efforts to encourage interconnectivity and promote responsible property development, certain areas have been identified for conceptual roadways. Conceptual roadways for the City of Poquoson are shown in Map (7-4) and are intended to support the land use designations of adjacent properties listed in the Land Use Chapter. Land development along or near these conceptual roadways must plan for these connections where physically possible. Stubbed roads may or may not be included in this conceptual plan but stubbed roads should always be connected to another development or roadway in some manner. Current roadways stubbed at the end are more likely a result of past property developers required to provide access to adjacent property rather than a planned road.



Big Woods Street Network System

The Victory Boulevard Corridor Study was completed in 2008 to determine appropriate areas to access the Big Woods section and the most suitable methods of traffic control. This study considered the lands within the Big Woods section and just beyond, while ensuring interconnectivity and appropriate access to all property. This group of conceptual roadways is designated as the Big Woods Street Network System to include pedestrian/bicycle infrastructure and will eventually evolve to include plans for stormwater management. While these roadways are indeed conceptual, they serve the purpose of planning a roadway network for undeveloped areas and establishing connections that will better access land while using smart design concepts mentioned earlier in this section, such as access management along main thoroughfares and directing traffic flow onto main thoroughfares. The actual construction of the roadway may not follow the exact location shown in Map 7-4, but it demonstrates the City's intent for orderly land development by providing a general location for the only access points allowed along Victory Boulevard. Currently the network is conceptual and expected to be constructed as the Big Woods areas is developed; therefore no design or construction costs have been calculated.

INFRASTRUCTURE IMPROVEMENT MASTER PLAN

The creation of an Infrastructure Improvement Master Plan should be pursued with the goal of preparing a City-wide plan that will examine, list and prioritize improvements for each aspect of the City's infrastructure. The Infrastructure Improvement Master Plan should serve as an outline, corresponding with the issues presented here in the Comprehensive Plan, and present strategies to bring the recommendations of the transportation and utilities sections to fruition. It is important that the Infrastructure Improvement Master Plan coordinate the efforts between the projects to ensure efficiency and control improvement costs. The following topics are the key areas of the City's Infrastructure needing improvement with the corresponding issues that should be identified and addressed by the Infrastructure Improvement Master Plan:

- Transportation- roadway improvements, construction of conceptual roadways, connectivity between subdivisions, sidewalk implementation, and bike lane implementation
- Stormwater Management- piping of ditches, installation of curb and gutter, ensuring proper maintenance and utilization of regional BMP's, research and implementation of new stormwater management techniques and practices, and other drainage improvement projects
- Utilities- Pumpstation capacity analysis detailing necessary improvements, burial of overhead utilities, verification of proper location and spacing of hydrants to ensure adequate fire protection coverage, and the extension of public utilities to all citizens.



GOALS, OBJECTIVES AND STRATEGIES

Goals

1. Develop a transportation system capable of moving people and goods safely and comfortably in and out of the City.
2. Plan and develop a balanced transportation system to support the Goals & Objectives set forth in the Comprehensive Plan.
3. Develop a bicycle and pedestrian trail system in Poquoson, which connects recreational, commercial, educational and residential centers.
4. Promote the development of Transportation Demand Management (TDM) techniques in order to reduce traffic volumes, particularly during the peak hours.
5. Develop a transportation plan for the upgrade of all primary and secondary streets that are in concert with physical constraints and the HRPDC Regional 20 Year Plan.

Objectives

1. Develop 5 and 20-year transportation improvement plans consistent with regional transportation planning initiatives.
2. To provide a road network that will facilitate the safe and efficient movement of traffic among commercial, educational, residential and recreational facilities.
3. To reduce pedestrian and vehicular conflicts.
4. Develop a bikeway network facilitating safe bicycle transportation within the City of Poquoson and between neighboring localities.
5. Integrate bikeway development into the 20 Year Transportation Improvement Plan when funding is available.
6. Encourage the provision of bikeways and bicycle facilities, including bike racks, in multi-family residential developments, commercial shopping areas and public centers.
7. Encourage the development of public transportation services and facilities for senior citizens, physically challenged residents, and other special populations.
8. Require and promote the interconnection of subdivision street systems to allow local movement without the necessity of utilizing collector and arterial roads and to aid in the provision of services, especially emergency services, to the lots within the subdivisions.



9. Encourage the beautification of roadways in the City, especially along entrance corridors and major collectors.
10. Implement the recommendations identified in the *Poquoson Level of Service and Transportation Improvement Study* prepared by the Hampton Roads Planning District Commission in March 1999.
11. Encourage pedestrian linkages between residential areas and schools, shopping centers, and recreational and government facilities.
12. Provide aesthetically appealing sidewalks throughout commercial areas and along main thoroughfares of the City.
13. Complete existing pedestrian systems in cooperation with adjoining jurisdictions.
14. Secure state and federal grants for alternative funding sources for transportation projects and improvements.

Strategies

1. Apply Virginia Department of Transportation state design standards for traffic volume and speed, and apply these standards to roadway improvement projects.
2. Design and construct in phases, bikeways and sidewalks throughout the City, especially along the City's main thoroughfares and collector streets.
3. Add two lanes to complete four lane ingress and egress for Victory Boulevard, in cooperation with York County.
4. Continue construction of bikeways as part of road construction or reconstruction/widening projects.
5. Update the City's development regulations and ordinances, where needed, to include requirements that all streets and thoroughfares meet or exceed VDOT standards.
6. Establish priorities for intersection improvements at several locations along Wythe Creek Road, Little Florida Road, and Poquoson Avenue.
7. Complete the widening of Wythe Creek Road to coordinate with the Hampton Bridge upgrade.
8. Pave shoulders along major collector streets to improve the levels of service and to make the roadways safer for vehicles.





INTRODUCTION

The provision of an adequate water supply and distribution system together with a system for removing waste is a primary factor in the development of the City of Poquoson. The location and capacity of the City's water and sewer systems determine to a large extent the City's direction, size, and rate of growth. The disposal of waste and control of runoff is necessary to maintain environmental quality. The sewer system has been extended throughout Poquoson. There are a number of areas in the City where stormwater drainage may pose a hazard to streets and property, and approximately 80% of the City's facilities are currently located within the floodplain. It is also important to note that the Chesapeake Bay Preservation Act requires the construction of stormwater quality drainage structures that affect future land use patterns and economic development activities.

WATER SUPPLY

Service Provider- Newport News Waterworks

Poquoson obtains its drinking water supply from Newport News Waterworks. Water service is provided to Poquoson by the Waterworks, which owns all the water lines in the City and bills the customers directly. In addition to the City of Poquoson, Newport News Waterworks serves Hampton, parts of York and James City Counties and Newport News.

Newport News Waterworks has the largest water system on the Peninsula, serving over 350,000 people. The system consists of a raw water intake on the Chickahominy River, five reservoirs, two water treatment plants, and a distribution system with twelve finished water storage tanks. The Chickahominy River supplies 75% of the raw water for this system. The balance is supplied by natural drainage into the reservoir network. Newport News Waterworks provides a dependable supply of high quality drinking water, which meets federal standards.

Water Service Coverage

Very few wells are used for drinking water in Poquoson and public water is available to all developed areas of the City. In undeveloped areas of Poquoson, the developer of property is required to extend public water to the development and then dedicate the system to Newport News Waterworks.



Fire Protection

While an adequate water supply is important to provide drinking water for residents of Poquoson, sufficient water is also important for fire protection. While most water lines in the City are large enough to accommodate fire hydrants, some lines still need to be upgraded. In order to fight residential fires adequately the Poquoson Fire Department needs at least 1,500 gallons of water per minute at each hydrant. All new fire hydrants constructed in Poquoson must be served by an eight (8") inch water line at a minimum.

The City is working with Newport News Waterworks to coordinate the upgrading of the waterlines in certain areas of the City from two (2") inch to eight (8") inch to enhance fire protection. In the future, the City may need to partner with the Newport News Waterworks to construct a water storage tank in the central part of Poquoson. The tank would enhance the water pressure throughout the City and provide storage of water to be used in the event of a fire. Poquoson must also be careful to ensure that there are adequately sized lines and fire hydrants with sufficient water pressure throughout the system, particularly within areas targeted for economic development such as Messick Point and the Big Woods. In addition, water lines should be looped to provide continuity of flow.

Future Demand

While the costs and designs of water distribution systems are important considerations, the single most critical concern with respect to expanding water service is the acquisition and development of a long-term supply of raw water. As shown in the attached chart, the City water demand is projected to increase by about 150% between 1990 and 2040. While commercial water demand is expected to increase, the majority of Poquoson's water demand will be generated by residential developments. Newport News Waterworks is working to address future water demand through the recently approved King William Reservoir Project.

Water Conservation Measures

Newport News Waterworks stresses water conservation and conducts a proactive conservation education and water demand reduction campaign. The Summer Consumption Rate (SCR), which took effect in 1989, is applied as a surcharge to any customer whose consumption is greater than the average system-wide difference between the six-month summer season and the winter "control season." In addition, the Waterworks' tactical water conservation measures include the encouragement of short-term reductions during winter shortages.

Newport News Waterworks uses several techniques to control customer demand until new sources of raw water are developed:

- First, implementation of flow certifications will require individual customer and developers to describe the amount of water needed, as well as their usage patterns, and to include minimum, peak and average flows.



- Second, Waterworks may have to establish a policy of not accepting a customer request if it cannot certify that water can be provided in quantities sufficient to meet new customer demand.
- As a last resort, if demand for water accelerates or a severe drought occurs, a total moratorium on new connections may need to be instituted. Clearly, the implementation of this measure would have serious detrimental impacts on economic development initiatives throughout the region.

Using ground water for irrigation of lawns and other landscaping is becoming more prevalent for single-family homes, apartment complexes, businesses and industries on the Peninsula as the cost of drinking water increases. The State Health Department is responsible for permitting these irrigation wells in accordance with State regulations.

In addition to the water conservation measures employed by Newport News Waterworks, the City of Poquoson also participates in the Hampton Roads Water Efficiency Team (HR WET) program. HR WET is an education committee of the Hampton Roads Planning District Commission, which is comprised of local government staff members who are committed to regional water efficiency education. Through the team's focus and dedication, along with assistance and contributions from the HRPDC staff, successful programs promoting efficient water use throughout the region continue. The water efficiency and conservation programs are targeted primarily to homeowners.

SANITARY SEWER SERVICE

The wastewater collection and treatment system, which serves the Peninsula, is the shared responsibility of the Hampton Roads Sanitation District (HRSD) and the City. Collection of wastewater generated in the City is provided through facilities owned and operated by the City of Poquoson. At present, approximately 4,656 homes and businesses are served by public sewer service.

Hampton Roads Sanitation District (HRSD)

HRSD presently serves a 706 square mile area on the Peninsula. It operates and maintains the Interceptor Sewage System and four wastewater plants on the Peninsula (Boat Harbor, James River, Williamsburg, and York) and many pump stations and force mains. Sewage treatment is provided for the City of Poquoson at the York River Treatment Plant. This plant has a design capacity of 15 million gallons per day, and should be adequate to meet the future needs of the City. Each HRSD wastewater treatment plant has a Virginia Pollution Discharge Elimination System (VPDES) permit. HRSD does not foresee any additional wastewater plants serving the Peninsula. However, there are planned expansions at the James River, Williamsburg, and York River Plants where land is available.



Biosolids, or sludge, are by-products of wastewater treatment. Biosolids from the Boat Harbor Plant are incinerated on site. The resulting ash is landfilled or recycled into concrete blocks. Biosolids from the James River Plant and York River Plant are recycled as Nutri-green compost. Nutri-green compost is sold to landscapers, nurseries and the general public for commercial and home landscaping and gardening.

Local Waste Water Collection System

The City of Poquoson Utilities Department operates and maintains Poquoson's wastewater collection system, which includes 29 pumping stations, 18 grinder pump stations, 50 miles of gravity sewer lines and 9 miles of sewer force mains. The Utilities staff provides 24-hour service and is responsible for maintenance of the gravity and force mains, pump stations, installation of sewer taps, and the replacement or repair of broken or misaligned lines.

Failing Septic Systems

The vast majority of Poquoson is comprised of soils, which have one or more significant limitations for septic systems. Most septic systems will not function properly in the City of Poquoson and are therefore not allowed by the Health Department. As a result, many vacant building lots in the City that do not have public sewer available cannot obtain a permit for a private septic tank system and thus are not developable.

Sanitary Sewer Expansion

In 1985, the City prepared a Master Sanitary Sewer Study and prioritized those areas needing public sewer service. These areas included:

- Priority Area 1: Powhatan Place/Freemoor Area (which includes Westover Shores and Freemoor Estates).
- Priority Area 2: Pasture Road/Hunts Point Area (which includes Pasture Road, Moore Road, Wagner Road, Poquoson River Estates, and Poquoson Shores)
- Priority Area 3: Pine Street, River Road, Browns Neck Road, Woodland Road and Hansom Park area.

In accordance with the major recommendations of this study, in 1990 the City completed a major expansion of the sewer system, providing service to all of Priority Areas 1, 2, and 3.

In July, 1997 a neighborhood sewer extension study was prepared to identify those areas in Poquoson that were located on public rights-of-way, but not accessible to public sewer and to recommend methods of providing sewer to those areas. Eleven areas totaling approximately 520 homes were identified in the study. Those areas were identified as follows:



- Group 1= Woodland Rd., Poplar St., Pasture Rd., and Rens Rd.
- Group 2= Poquoson Ave., North Lawson Rd., Browns Neck Rd. and Hunts Neck Road.
- Group 3=Hansom Dr., Church Rd., Langley/Rollins St, and Forrest Rd.

The extension study recommended the installation of a low-pressure system that would utilize individual grinder pumps for six (6) of the areas, conventional gravity for the remaining five (5) areas and construction of five (5) sewer pump stations.

The completed study was the basis for an application to the Department of Environmental Quality (DEQ) for consideration of a \$7.5 million loan from the State's Revolving Loan Fund. The loan request was approved in December 1997 for \$4 million.

Throughout the fall of 1997 and winter of 1998, public information meetings and Council work sessions were conducted to gain public input and better define the scope of the sewer extension project.

In April 1998, engineering consultant services were obtained for the design of the extension project. The City applied to the DEQ in July 1998 for the additional \$3.5 million needed to complete the sewer extension and pump station rehabilitation projects. The project is now complete and all existing homes within 1,000 feet of the public rights-of-way are accessible to public sewer. A majority of the homes have connected to the system or will be required to do so within the next three (3) years.

Pump Station Improvements

In 1993, the City of Poquoson began to address the need for improvements to the City's sanitary sewer system. In 1994, the City issued a 2.8 million dollar bond for improvements to several pump stations. This was to install a new telemetry system and make several infiltration and in-flow improvements.

Five (5) of the 21 existing pump stations were in excellent condition. They had stand-by power on site and required no improvements. A design report was prepared in April 1994 and the replacement of three (3) primary pump stations was completed in 1997.

Thirteen (13) remaining pump stations were identified as being in need of repair. Four (4) stations were completely replaced due to deterioration or exceeding capacity. The remaining nine (9) pump stations were rehabilitated through the DEQ revolving loan fund. Construction was completed in 2004.

Continuing efforts to keep the City's sewer system operating at peak performance will require upgrades in several areas. Upgrades to Pump Station 2 is presently needed and to the emergency electrical power systems.

Although Pump Station 2, located at 2 Hunts Neck Road, is relatively new and in good structural condition, it is in need of a capacity upgrade. This is due to increased flows from the new sewer



expansion project in the Hunts Neck Road area. This combined with the high head pressures on the HRSD force main system, the station experiences excess surcharging during times of heavy flows. To reduce the risk of a sewer overflow, new pumps, motors and controls are needed. An engineering report has been prepared and several recommendations have been put forth.

Another area that needs to be addressed is the lack of on-site emergency power at nine (9) of the City's 29 pump stations. Although emergency back-up systems are required on all new pump stations, several of the older stations are not equipped with on-site emergency power. The problem is more significant in some areas because pump stations with back-up power pump to stations without, causing surcharging and increasing the possibility of sewer overflows. A request for funding is in the City's Capital Improvements Plan.

STORMWATER MANAGEMENT

The Poquoson storm drainage system consists of City-owned drainage easements and drainage on property maintained by the City. Much of the system is made up of agricultural drainage ditches that have been constructed over the years and roadside ditches of more recent construction. Newer subdivisions also have planned drainage systems and are required to follow all State and local mandated stormwater management practices including Chesapeake Bay Preservation.

Stormwater management systems must fulfill three basic objectives:

1. They must prevent significant loss of life and property due to flooding from a rainfall or tidal storm surge. The system must be designed to meet state and local requirements, currently a minimum of a 10-year storm event.
2. They must provide an acceptable degree of convenient access to property during and following frequent rainfall events.
3. They must release water, which is as free from sediment and normal water-borne pollutants as possible.

All three of these objectives must be accommodated in the initial design process. It is both very difficult and expensive to try to retrofit systems, which fail to accommodate one or more of the objectives. It is critical to recognize that site-specific stormwater management systems are not restricted in their design or impact to the immediate tract of land, which they serve. Each is a part of a basin-wide drainage system and must, at a minimum, accommodate stormwater flowing into the tract from upstream sources and mitigate the impacts of the outflow on downstream properties.

The stormwater collection system is primarily the responsibility of the City. Previously, the system was geared to flood control and not water quality. The City Engineering Department works with developers so that new development does not flood properties downstream to improve the quality of the stormwater leaving new development sites and to ensure that all Best



Management Practices are followed. The Public Works Department is responsible for maintenance of the stormwater collection system that drains streets and public areas. The system is a combination of open canals, street side ditches and enclosed pipe. Most of the drainage ways are cleaned out one or more times a year for both drainage and mosquito control purposes. Some of the ditches are manually cleaned because access easements either do not exist or are not wide enough to accommodate machinery.

Current Conditions

Poquoson at this time has no major drainage problems such as are faced by most cities because of several factors including: the division of the City into small watersheds; low intensity of development; and flat topography. The small watersheds limit the amount of runoff that is concentrated at any one point. The low density of development provides more surfaces for absorption of rainfall. The flat topography causes a slow rate of runoff providing more time for absorption, a high time of concentration, and a large area for retention for each increment of water level rise. Although there is, at times, rain water standing longer than residents might wish, very little damage to property results from rainfall. Tidal flooding is the major cause of flood damage in Poquoson.

Master Drainage Plans

Several citywide drainage plans have been developed for the City of Poquoson in the past. The original Master Drainage Plan, which covered approximately 30% of Poquoson, was prepared in 1975 and was supplemented in 1986 by The Big Woods Drainage Study and later by studies of other watersheds (Odd Road, Little Florida Road, etc.)

In 1986, C.K. Tudor Engineers, Inc. prepared The Big Woods Drainage Study for the City of Poquoson. The purpose of the study was to determine the capacity of the existing Big Woods drainage system to function during a 10-year storm and the requirements of a system to serve the area under the 10-year storm if developed in conformance with the recommendations of the 1985 Zuchelli-Hunter Big Woods Study. The results of the study suggest the construction of two large detention ponds with overflow areas to handle stormwater runoff. While this study still has some merit for use, the stormwater structures were effective at retaining water but were not designed to provide stormwater quality control improvements as required by the Chesapeake Bay Preservation Ordinance.

In October 1991 the Poquoson City Council authorized an update of the City's 1986 Master Drainage Plan. The 1992 Plan has two principal parts. The first part consists of an updated inventory of all major drainage structures (pipes, culverts, inlets etc.) and ditches. The second part of the study includes specific strategies needed to improve Poquoson's drainage system. Seven drainage basins in the City were analyzed in detail and a number of improvements were recommended. Some of these improvements were implemented, such as the ditch and culvert enhancements along Odd Road, while many others still need to be addressed. A stormwater utility charge, now permitted by the General Assembly for localities, may provide a mechanism for financing recommended improvements.



Stormwater Quality Control

The way in which stormwater management is being viewed has changed dramatically over the past decade. Past practices tended to focus on achieving the fastest possible removal of stormwater from a site after a rainfall through either closed pipe or ditch systems. This focus largely ignored the possible effects of downstream flooding. The quantitative aspects of drainage are only one side of the issue. More and more attention is being focused on the qualitative aspects of stormwater runoff, particularly as it impacts the Chesapeake Bay and its tributaries. In 1991 the City adopted the Chesapeake Bay Preservation Ordinance which requires buffers and stormwater quality improvements.

Future stormwater detention and retention areas should be designed to serve as recreational amenities (fishing ponds, bird watching areas, etc.) and/or as aesthetically pleasing design features such as fountains, wherever possible. Shared development and use of stormwater management areas are strongly encouraged particularly in potentially high-density commercial areas such as the Big Woods. An enterprise fund could be created to pay for the construction of such shared facilities. Piping of roadside ditches should also be considered in concert with roadway widening and bikeway/sidewalk construction projects.

In October of 1997, C.K.Tudor Engineers, Inc. completed an update to their 1986 Big Woods Drainage Study. The study was expanded to include consideration of stormwater quality control improvements as well as upgrades to the system to improve capacity. Two recommendations were made in the report. The construction of a large stormwater basin on the north side of Victory Boulevard and the widening of the Oxford Run ditch, which extends from the south side of Victory Boulevard to Wythe Creek Road, will probably allow for the most efficient development of the Big Woods. The expanded ditch will act as a long detention pond to meet stormwater quality requirements for future development in the Big Woods and will also add needed capacity to the drainage system for development in the Big Woods. It is anticipated that these improvements could be facilitated through construction phasing with each new developer contributing to the construction. Phase I of the ditch widening was completed in 2004.

The second recommendation involved the use of multiple on-site detention ponds for several individual drainage areas throughout the Big Woods. This option would still require construction of a large pond on the north side of Victory Boulevard, but would provide only minimal improvements to Oxford Run ditch. The option is estimated to be more costly and would use more available land; however, it would also lend itself to construction phasing with each new developer contributing to the cost of construction.

Citizen Comments regarding Stormwater Management

Respondents of the 2006 survey were given the option to choose three (3) factors viewed to improve living in Poquoson. The choice of improved stormwater drainage system was received the 2nd most selections as a factor that could make living in Poquoson better for you and your family. Out of ten choices to answer the question, this answer garnered the 2nd most responses,



behind only improved mosquito control. This response represented 18% of the total number of responses.

TELECOMMUNICATIONS

An often overlooked, but very important facet of infrastructure is telecommunication facilities. Although mostly a private sector service, telecommunications deserve consideration from the locality since it is an integral aspect of utilities.

Since the last Comprehensive Plan, technology has vastly improved and created new electronic devices for business and personal use. The technological advances have made communication and access to information available virtually anywhere as long as there is a connection to telecommunication facilities. As the communication companies strive to increase service availability, our fast-paced and competitive society has fueled the demand for these services; giving this era the moniker as the “information age”.

Communication facilities are essential both at the commercial and residential level. Disruptions in service can cause inconveniences and threaten public safety, health and welfare. As mentioned in the Economic Development sub-element, an efficient, reliable and economical telecommunications infrastructure is critical to business sustainability and recruitment. In order to protect the public safety, health and welfare while fostering business prosperity, the federal government passed the Telecommunications Act of 1996 which regulates telecommunication facilities.

The Telecommunications Act of 1996 mandates that both State and local governments act as regulators, providers and facilitators as the Federal government moves to ensure that all companies within the industry can compete in what were once monopolies¹. In the City of Poquoson’s Zoning Ordinance, Article XVIII, Wireless Telecommunication Tower(s) and Antenna(s) regulates the siting, construction, location and modification of these facilities while promoting their viability and minimizing any adverse impacts, in accordance with the Code of Virginia.

As essential as communication is to daily life, it is important for telecommunications within the City to stay modern and have increased availability to citizens and businesses. To do so, the City of Poquoson should network with communication companies and establish a collaborative relationship regarding new facilities and technology, and upgrade to existing conditions. Any upgrades or modernization should be encouraged and coordinated with other planned infrastructure improvements, such as fiber optic cable, where applicable and practicable. However, it is important to note that these improvements and services are provided by private sector communication companies and therefore determined by market conditions.

¹ Source: Community Planning: An Introduction to the Comprehensive Plan, Kelly & Becker.



INFRASTRUCTURE IMPROVEMENT MASTER PLAN

The creation of an Infrastructure Improvement Master Plan should be pursued with the goal of preparing a City-wide plan that will examine, list and prioritize improvements for each aspect of the City's infrastructure. The Infrastructure Improvement Master Plan should serve as an outline, corresponding with the issues presented here in the Comprehensive Plan, and present strategies to bring the recommendations of the transportation and utilities sections to fruition. It is important that the Infrastructure Improvement Master Plan coordinate the efforts between the projects to ensure efficiency and control improvement costs. The following topics are the key areas of the City's Infrastructure needing improvement with the corresponding issues that should be identified and addressed by the Infrastructure Improvement Master Plan:

- Transportation- roadway improvements, construction of conceptual roadways, connectivity between subdivisions, sidewalk implementation, and bike lane implementation
- Stormwater Management- piping of ditches, installation of curb and gutter, ensuring proper maintenance and utilization of regional BMP's, research and implementation of new stormwater management techniques and practices, and other drainage improvement projects
- Utilities- Pumpstation capacity analysis detailing necessary improvements, burial of overhead utilities, verification of the proper location and spacing of hydrants to ensure adequate fire protection coverage, and the extension of public utilities to all citizens.



GOALS, OBJECTIVES AND STRATEGIES

Goals

1. Continue to maintain the high-level quality of public utilities service.
2. Ensure that new developments are consistent with the adequacy and accessibility of existing facilities.
3. Maintain a fair and adequate system of user charges to maintain and provide quality services and facilities to citizens.
4. Provide efficient facilities and service delivery systems and develop public facilities as components of regional programs where feasible.
5. Enhance water availability for consumption as well as fire suppression.
6. Continue to maintain the newly expanded wastewater collection system.
7. Insure the maintenance and efficiency of stormwater management facilities (public and private) throughout the city.
8. Where feasible, modernize infrastructure by piping ditches, installing curb & gutter, and burying power and communication lines throughout the City.

Objectives

1. Locate new facilities to provide convenient service to the greatest number of City residents or service consumers.
2. Provide for the adequate and safe supply and distribution of public water.
3. Provide and maintain an adequate sewage collection system for the City.
4. Provide an adequate system of ditches and swales to discharge storm water drainage.
5. Annually review the adequacy of existing public resources to finance needed public facilities through the City's Capital Improvements Program and annual budget process.
6. Design facilities to accommodate future expansion capabilities and for efficient and cost-effective operations over the expected life of the facilities to meet expected levels of service.
7. Design facilities to allow for maximum site utilization while providing optimum service to, and compatibility with, the surrounding community.



8. Facilitate programs and projects, which promote water conservation.
9. Coordinate the piping of roadside ditches, burial of overhead power and communication lines, and bikeway/ sidewalk construction projects in concert with roadway improvement/widening.

Strategies

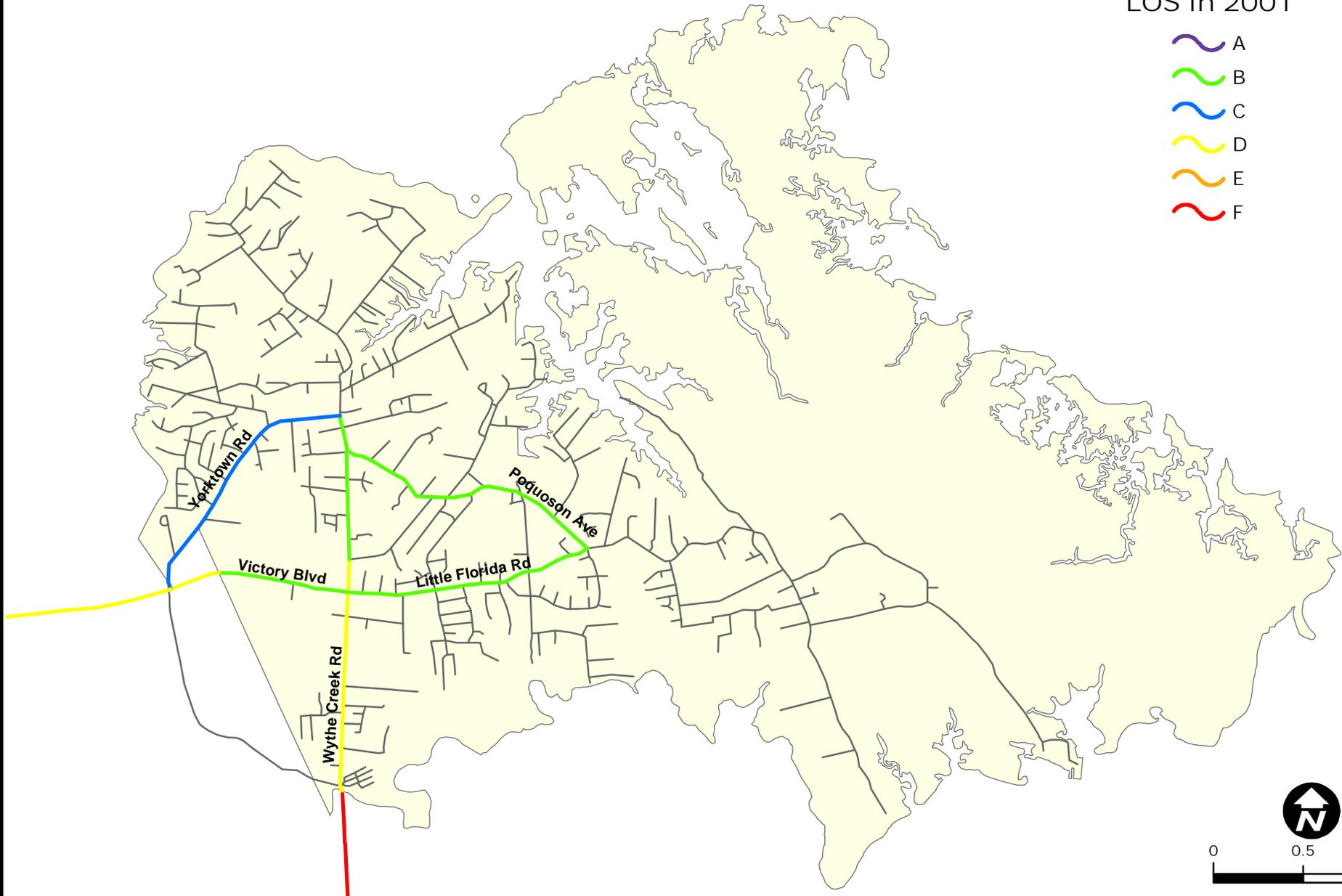
1. Program the establishment of facilities through the City's Capital Improvements Program, to include stormwater system improvements, which should be identified in the future Infrastructure Improvement Master Plan.
2. Develop and apply public facility standards to identify facility requirements associated with level of need, appropriate quantity and size, and relationship to population and growth areas.
3. Construct new facilities consistent with projected anticipated needs and a financial plan that includes expected operating and maintenance costs.
4. Continue to participate in regional approaches to water supply and availability.
5. Continue to require all new developments to be connected to public water systems, and require looping of water lines where possible.
6. Continue to work with the City of Newport News Waterworks to upgrade existing two-inch (2") water lines, which limit fire protection in some areas of the City.
7. Consider creating a stormwater utility charge to finance stormwater management system improvements.
8. Encourage developers to design stormwater detention and retention areas to serve as recreational and aesthetically pleasing design features.
9. Strongly encourage developers to construct shared stormwater management facilities for cost effectiveness and efficiency benefits.
10. Develop an Infrastructure Improvement Master Plan that implements the piping of ditches, installation of curb & gutter, and burial of power and communication lines in concert with roadway widening and improvements. The infrastructure plan should coordinate utility improvements with transportation improvements, and prioritize project implementation based on current and projected use and demand. The Plan should also coordinate recommendations from previous studies into a cumulative phased plan in an effort to provide adequate stormwater drainage.



Map 7-1

LOS in 2001

-  A
-  B
-  C
-  D
-  E
-  F



Level of Service (2001)

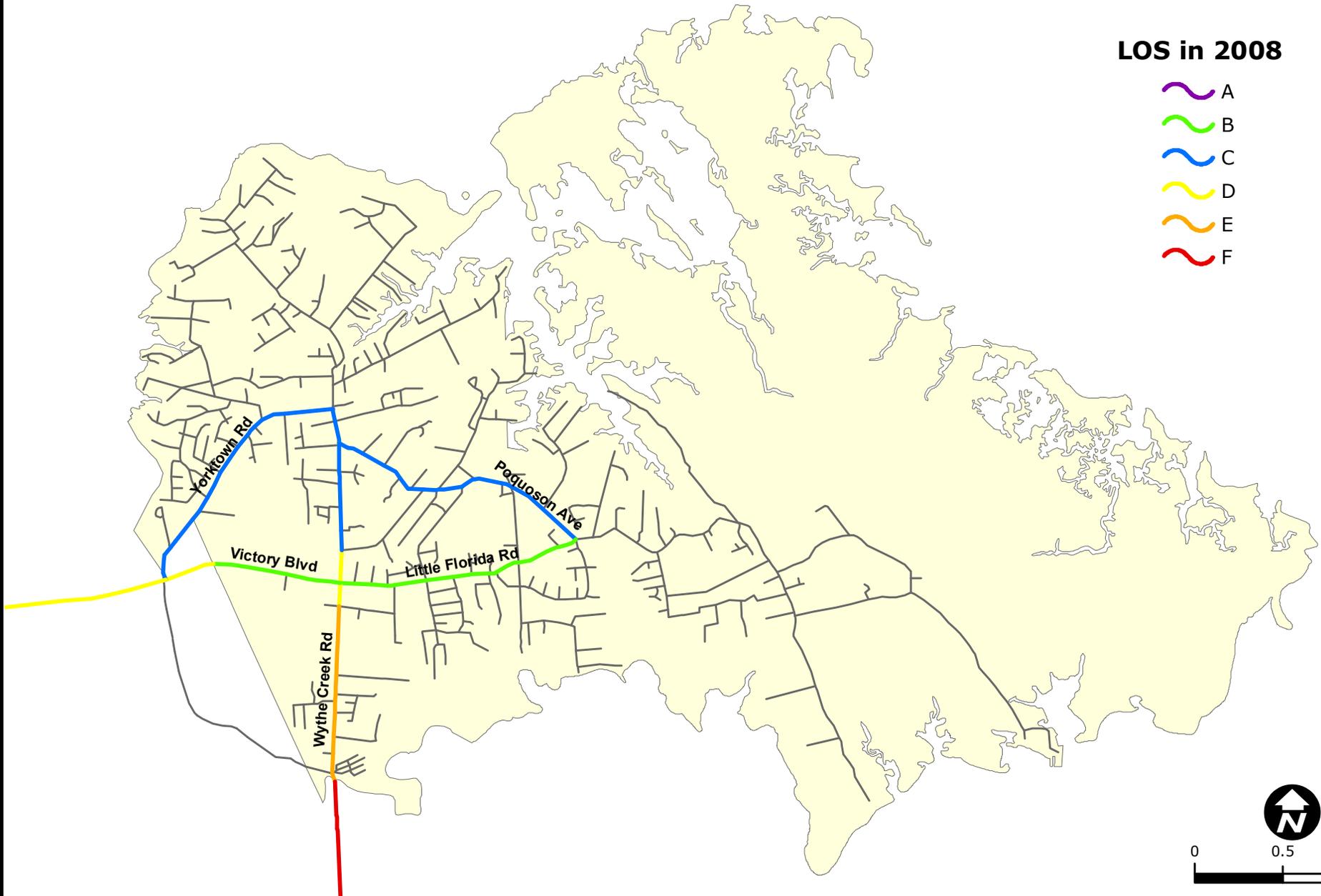
Map Created by HRPDC GIS Staff, May 2005
Data Source: US Census TIGER, 2000



Map 7-2

LOS in 2008

-  A
-  B
-  C
-  D
-  E
-  F



Projected Level of Service (2008)

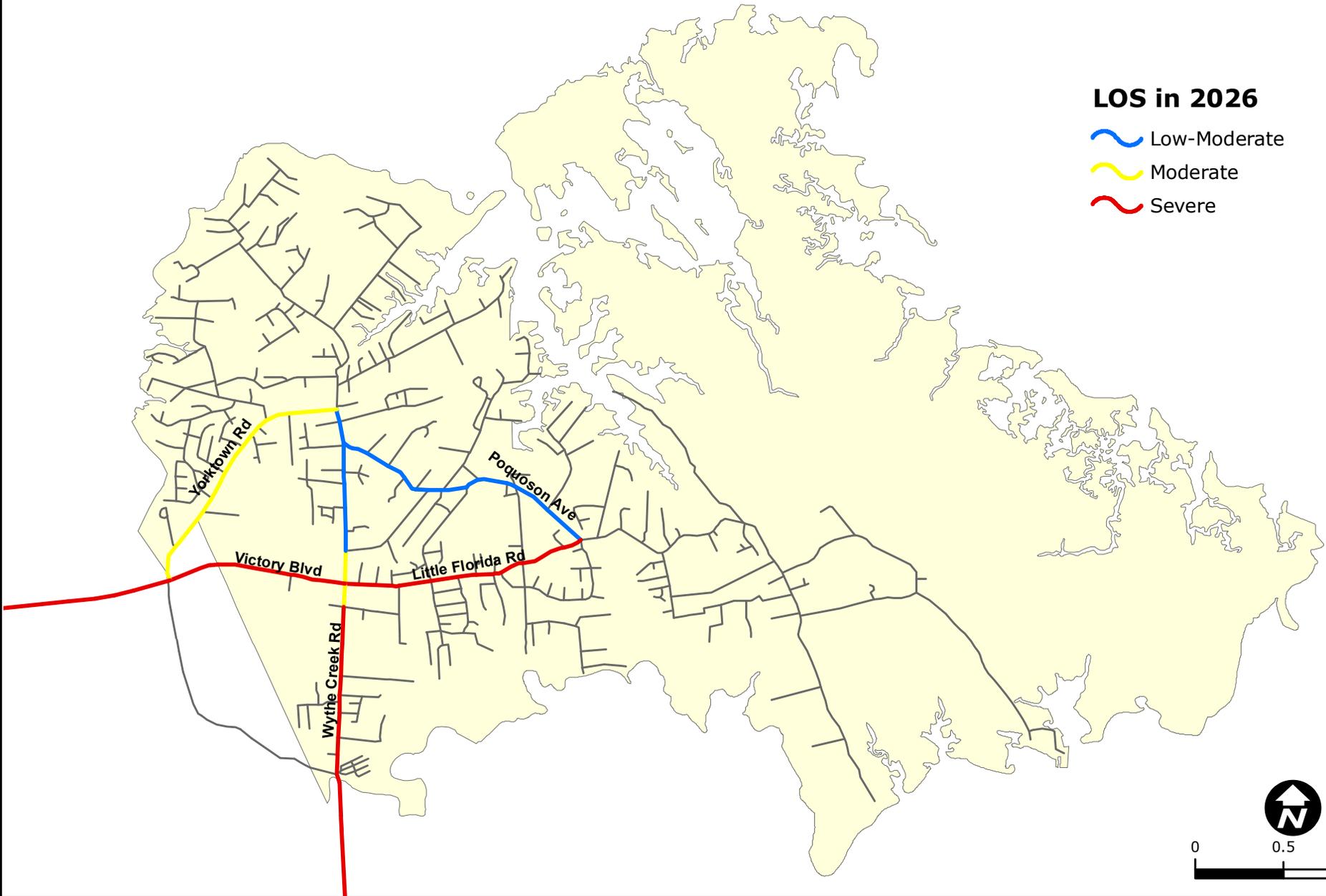
Map Created by HRPDC GIS Staff, May 2005
Data Source: US Census TIGER, 2000



Map 7-3

LOS in 2026

-  Low-Moderate
-  Moderate
-  Severe



Projected Level of Service (2026)

Map Created by HRPDC GIS Staff, May 2005
Data Source: US Census TIGER, 2000



Victory Boulevard Corridor Plan and Area Connectivity Guide



Legend

- Full Movement Stop Controlled on Minor Approaches
- Existing Traffic Signal
- Proposed Dual Lane Roundabout
- Right-In/Right-Out
- City Boundary
- Proposed Network Concept
- Corridor Study Area
- Proposed Bicycle/Pedestrian Connection
- Existing Oxford Run Canal Trail

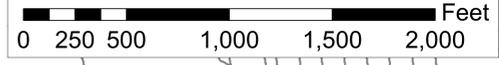


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- Map 8-3: Current Zoning for Land Use
- Map 8-4: Future Land Use



INTRODUCTION

The Land Use chapter describes the distribution of existing land uses and the potential for future land development. It is essential to know how much land is currently used for residential, commercial, industrial, recreational and other types of development and how much land is undeveloped. While residential densities and use characteristics are generally described in this chapter, specific standards such as minimum lot sizes and appropriate uses are, and should continue to be, designated in the Zoning Ordinance and Zoning Map of the City.

The strategy used in the development of this Comprehensive Plan is a concept of dividing the land use plan into districts so that each area of the locality can be effectively managed and planned. Planning districts are determined by land use patterns and geography. Typically, planning districts do not follow voting districts because voting district alignments can change. However, in this case, the planning districts slightly follow the voting districts due to the fact the land use patterns of each district resemble the current voting districts. There are some overlapping land use patterns in the voting districts, but for the purpose of the planning districts, the overlap does not exist. The planning districts are described in more detail below.

PLANNING DISTRICT CHARACTERISTICS

The planning districts retain the same title as the voting districts but are designated according to existing land use patterns. Each planning district has its own distinctive zoning base layer and each district will also have its own individual section in the Land Use chapter to follow this Section. Please see Map 8-1 for a depiction of Poquoson's planning districts. It is expected that the past development trends will continue in each district. The respective base layer, anticipated growth patterns and a brief description of each district follows:

Eastern Planning District

The base zoning layer is R-2 (single family residential; 18,000 sq. ft. lots) and encompasses the territory zoned R-2 including other lands zoned differently within the R-2 area and C-1 (Conservation) zoned lands east of R-1. The Plum Tree National Wildlife Refuge is a significant portion of the Eastern Planning District and is protected by federal, state and local regulations and zoned for conservation. The extensive marshlands located in the Eastern Planning District



limit development, and past development trends reflect only minor in-fill development and family subdivisions. This trend is expected to continue and the minimal activity in the district indicates it is near full build-out. Although the district maintains a low density and is sparsely populated, existing development in this district is more compacted along the main roadways than the other districts giving the area appearance of higher density. Possible redevelopment can be expected for commercially zoned land located at the waterfront area although challenges are present due to the environmental sensitivity of the area.

Central Planning District

The base zoning layer is R-1 (single family residential; 20,000 sq. ft. lots) and encompasses the territory zoned R-1 including other lands zoned differently within the R-1 area. This district is more densely populated due to multi-family housing units, commercial development, and more usable land area than the Eastern Planning District. Most of growth is expected in the central business area located along Wythe Creek Road and Victory Boulevard.

Western Planning District

The base zoning layer is R-S (single family residential; 26,700 sq. ft. lots) and encompasses the territory zoned R-S including other lands zoned differently within the R-S area. This district is predominantly developed with low-density single-family homes in a suburban design. Large tracts of developable land still exist within this district.

EXISTING LAND USE

An inventory of existing land uses serves several purposes in the development of a Comprehensive Plan. Study of the existing land use pattern will identify factors that have influenced past development. An analysis will identify conflicts between land uses, will aid in the forecast of future developmental patterns and will provide the basis for a future land use map.

Data provided by the Poquoson City Assessor's Office indicates that there are approximately 10,000 acres in Poquoson. In 2006, 4,012 acres or approximately 40% of this area was developed, while undeveloped land accounted for 5,987 acres or approximately 60% of the City's total area. Included in the undeveloped acreage is approximately 4,537 acres of conservation land. The majority of the conservation land in the City is comprised of the Plum Tree Island National Wildlife Refuge, which is owned by the Federal Government. Map 8-2 depicts the existing land uses in Poquoson. Map 8-3 depicts the current zoning for allowed land uses.

Residential

Aside from conservation, the largest land use category in Poquoson is residential, which accounts for roughly 5,000 acres or 50% of the City's total land area. This includes property currently occupied by single-family and multi-family residences, as well as manufactured homes. It also includes woodland and open space areas designated for future residential use. The



majority of residential land, nearly 99%, is zoned for single-family detached dwellings. The remaining 1% is zoned for multi-family use. Currently, there are six multi-family complexes containing 530 multi-family units located within the City. Most of the multi-family units are in the Wythe Creek Apartments, Poquoson Place Townhouses, and Towne Villas Townhouses. There are also approximately 138 mobile homes in the City, nearly all of which are located in Shady Oaks Mobile Home Park.

Commercial

This category is comprised of land occupied by general commercial or water-related business activities. General commercial includes retail trade and business establishments such as shopping centers, gas stations, and restaurants. Poquoson has 223 acres (2.2%) of commercial land, primarily located along Wythe Creek Road.

Industrial

This category is comprised of land used for manufacturing and warehousing activities, and includes 99.5 acres or about 1% of the land area in the City. Poquoson has only one non-waterfront manufacturing establishment that occupies 2 acres of land.

Public/Semi-Public

Public land use is comprised of government facilities such as parks, schools, and City Hall. Semi-public uses are privately owned facilities regularly used by the public. They include the Masonic Hall, churches, and cemeteries. Poquoson has 266 acres (2.6%) used for public and semi-public purposes. This includes the City's closed 40-acre landfill.

Table 8-1: Existing Land Use Inventory		
EXISTING USES*	ACREAGE	PERCENT OF TOTAL LAND
Developed	4012	40.5%
Residential	3423.5	34.6%
Commercial	223	2.2%
Industrial	99.5	1.0%
Public, Semi-Public	266	2.7%
Undeveloped Land	5,987	59.9%
Conservation Land	4537	45.4%
Open Space/Unimproved Land	1,450	14.50%
TOTAL	10,000	100%

*As of 2006, HRPDC Update.



DEVELOPMENT TRENDS

Subdivision Platting

The first subdivisions to be platted in the City were comparatively small, but beginning in the late 1950's the size of new subdivisions increased. A little more than 2,500 new lots have been platted since that time and more than one-third of those were platted between 1970 and 1980. Most subdivisions have been and continue to be established in the western and central parts of the City. Within older subdivisions, and the City in general, the extension of public sewer by 1999 spurred infill development where soil conditions had deterred the use of septic systems and allowed lots to remain undeveloped.

Building Permit Trends

Building permit records are probably a more accurate measure of residential development than is the platting of subdivisions, since a subdivision plat does not necessarily indicate that construction has occurred. Subdivision and building permit activity has followed somewhat similar patterns over the years. Both had peak years of activity in 1973, 1977 and 1983 and both declined considerably during the 1980-82 recession. Building permits and new subdivisions activity increased once again in the mid to late 1990's with a substantial number of building permits issued during that same timeframe. Between 2000 and 2002, there appeared to be a slight decline in both the number of building permits issued and the number of lots being platted. In 2003 and 2004, subdivision activity seemed to decrease while building permits peaked in response to damage sustained from Hurricane Isabel.

Commercial Development Trends

Historically, commercial uses were scattered throughout the City and consisted of rural oriented "general" stores including small grocery stores and gas stations at major crossroads. Waterfront commercial uses were and are still prevalent from earlier days.

Until the late 1970s, the only concentration of commercial uses was located in central Poquoson near the intersection of Poquoson Avenue and Odd Road. With the opening of Poquoson Shopping Center in 1980, and Wythe Creek Plaza in 1987, commercial uses began to concentrate along Wythe Creek Road giving Poquoson a new and identifiable commercial center, though to some degree it has characterized the area as "strip development".

Since the early 1990's, commercial development has been on the rise due to favorable economic conditions and has included a variety of uses such as retail, banking, restaurants, and automotive servicing. In addition a new conglomeration of businesses exists at the southwest corner of the Victory Boulevard and Wythe Creek Road intersection and is known as Poquoson Commons Shopping Center. As businesses have relocated to the new shopping center, those units vacated in existing shopping centers have been occupied by new tenants. Generally speaking, the reuse of existing commercial structures in the City is relatively high.



FACTORS AFFECTING LAND USE IN POQUOSON

Poquoson's land development pattern has been influenced by several significant factors, including:

Geography

Poquoson's location on a peninsula with its many necks of land and inlets of the Chesapeake Bay has determined its land development pattern. The land on many of these necks has been developed for home sites because of the desirability of waterfront locations.

Roadways

The proximity to the City's roadway system has also influenced land use patterns in Poquoson. There are five principal roads in Poquoson - Wythe Creek Road, Little Florida Road, Victory Boulevard, Yorktown Road, Hunts Neck Road and Poquoson Avenue. All other roads in the City branch off from these roadways into the various "necks" of the City. Land development patterns have followed this roadway system.

Wetlands

The extensive tidal wetlands in Poquoson have limited development. Federal, state and local regulations require the preservation of many types of wetlands, minimizing the development potential of some areas within the City.

Utilities

The limited availability of public sewer has historically affected land development patterns in Poquoson. Unsuitable soil conditions and Chesapeake Bay Preservation Act requirements limited the use of private septic systems, restricting development in some sections of the City. The public sewer system was expanded in 1999, making this service available to all homes within 1,000 feet of the public right-of-way or with access to the right-of-way. The sewer system expansion opened the door to new and infill development in sections of the City where it was previously restricted.

Location in Metropolitan Area

Poquoson is within easy commuting distance of the major employment and cultural centers in the metropolitan area, making it a desirable bedroom community. Consequently, much of Poquoson's development has been residential in character.

Development Regulations

The Poquoson Comprehensive Plan identifies the general direction and character of development that is to take place in the City. The City's Zoning, Subdivision and Site Plan Ordinances specify



how a particular parcel of land may be developed. Consequently, the enforcement of the City's land use and development regulations play an important role in guiding future development.

Development Patterns

To a large extent, future development is guided by what already exists. Being principally a residential bedroom community to the greater Peninsula area, most of Poquoson's development has traditionally been residential. This is illustrated by the fact that of all the land in Poquoson that has already been developed, 81% has been developed with homes. Commercial and industrial development has been limited and has only recently begun to grow.

ULTIMATE POPULATION

For residential land use planning purposes, it is helpful to forecast the City's ultimate population, which is the population that would be attained if all the existing residentially zoned land were developed. By projecting the ultimate population, it is possible to forecast long-term land use, transportation and facilities demands.

The 1999-2004 Comprehensive Plan projected an ultimate future population of 19,600 persons for the City of Poquoson. This projection was based upon the existing zoning of undeveloped residential land, densities of the 1999-2004 Future Land Use Plan, and an assumed average household size of 2.6 persons per household. The ultimate population is not projected for a given year because it is not dependent upon a predetermined growth rate. Instead, it is predicted on the proposition that the City's population will stop growing when the supply of residentially zoned land is exhausted. The ultimate population estimate assumes that public sewer will be available throughout the City and that no development of wetlands will occur.

However, it is important to note that the ultimate future population of 19,600 does not account for any potentially undiscovered wetlands on undeveloped property which may very well lower this number. As previously discussed in Chapter 5, Poquoson's environmentally sensitive landscape poses development constraints that often limit the capacity of undeveloped property. Considering this fact, the ultimate population number should not be viewed as the number that Poquoson is anticipated to reach, but rather a number that provides a maximum population that the City of Poquoson should not exceed under current zoning regulations.

It is also important to note that the Ultimate Population projection provided by the 1999-2004 Comprehensive Plan references the Population Element and a 2015 population of 15,000. In comparison, the 2015 population projection of 15,000 would not be reached until the year 2034 when using the projection data from the 2008-2028 Comprehensive Plan - a nineteen year difference to reach the same number. Due to this disparity between each population projection, this plan recommends that a thorough build-out analysis be pursued using the 2010 Census numbers. The City of Poquoson recently participated in the Local Update of Census Address (LUCA) Data Program which involved staff review of federal address documents and data to ensure the most current census information is being used for the 2010 Census. Comparing the



ultimate population to the population projections provided in Chapter 2-Population Element of this plan indicates that Poquoson's year 2030 population of 14,504 is about 74% of the ultimate population of 19,600.

FUTURE LAND USE PLAN

The Future Land Use Plan Map (Map 8-4) graphically represents areas best suited for residential, commercial, professional business, public/semi-public land uses, as well as areas which should not be developed, for the City of Poquoson through the year 2028. The suggested land use arrangement is generalized and based upon the recommendations and guidelines from the background analyses and goals, objectives and strategies of the Comprehensive Plan. The intent of the maps should be interpreted with the text of the Future Land Use Plan and Planning District sub-elements.

The Future Land Use Plan is based upon the following assumptions:

- Poquoson's future growth will be largely determined by the economic growth on the Peninsula, which is expected to improve at a slow yet cyclical rate.
- Poquoson has the necessary things in place to continue to be one of the more desirable places to live on the Peninsula with competitive taxes, good schools, and an attractive residential atmosphere which attract development primarily for moderate to upper income households seeking low density, single-family homes. It is recognized that future appropriate and prudent governmental decisions will have to be made to continue this attractiveness.
- Poquoson will continue to be primarily a City of single-family homes with low densities, complimented by small, but well planned moderate density residential developments.

Future Land Use Categories

Ten land use categories are shown on the Future Land Use Plan Map (Map 8-4) found at the end of this chapter providing a City-wide perspective of the Future Land Use Map. The District Plans outline the planned area for respective uses designated within the planning district and only lists the uses designated within that district. The following land use descriptions are a summary of each use designation throughout the City and include the following:

Resource Conservation

The *Resource Conservation District* is intended to protect wetlands, beaches and other environmentally sensitive lands in Poquoson. Areas with this designation preclude development and are limited as to the type of uses allowed. Typical uses allowed within this district are limited mainly to parks, nature recreation, and general farming and agricultural. Areas of land to



be used as land banks for wetland mitigation should be rezoned to *Resource Conservation* for protection.

Public Use/Park or Open Space

Public uses include government offices, government facilities and parks. Government offices and facilities are allowed in mostly all districts due to the purpose of fulfilling a public need; however, this district will be used to identify significant public property such as public safety facilities, schools and parks throughout the City - both present and future. While utilities and related structures are generally publicly owned facilities, they are not shown on the Future Land Use Map since they serve primarily as an accessory to the surrounding land use itself. Public utilities are allowed in almost every zoning district due to their necessity.

Low Density Residential

This category is for single-family residential areas in Poquoson that are intended to have a maximum of one and a half (1.5) to two (2) dwelling units per acre, as prescribed by the three current land use zoning districts: R-S, R-1, and R-2. Low Density Residential is the base layer of zoning for the City and is proposed for all parts of the City not designated for commercial, conservation, public use or medium to high density residential development. This designation may include open-space subdivisions in accordance with the Zoning Ordinance, not exceeding the maximum density allowed.

High Density Residential

A maximum density of twelve (12) dwelling units per acre is allowed in the *High Density Residential District*. This category is intended for multi-family residential dwellings such as condominiums, apartments and townhouse styled developments and allowed in the R-3 Multi-Family Residence zoning district. This designation also lends itself to care facilities for elderly and/or disabled persons that require more care such as convalescent homes or long-term rest homes. Virtually all of the areas designated for multi-family residential have already been developed with mobile-home parks, apartments or townhouses. High-density development generates high traffic volume with an increased demand for infrastructure improvements and should be located adjacent to arterial roadways. However, potential redevelopment sites not located near main thoroughfares or essential public utilities (water, power, sewer) are not precluded from redevelopment altogether. Redevelopment proposals, as well as new proposals, not adjacent to main roadways must improve the roadways and essential public facilities necessary to accommodate the proposed use. When doing so, new roadways must be built to VDOT standards, improve connectivity where physically feasible and utilities installed to meet City construction standards.

Limited Business

The *Limited Business District* is intended to serve small-scale low intensity commercial uses which are typically more compatible with adjacent residential uses. Such uses typically have limited hours of operation and generate a minimal amount of vehicular traffic. This category of business is dependent on serving nearby neighborhoods and this is the primary pool of customers. Typical uses for *Limited Business* include professional offices, small personal service establishments, and small specialty retail stores. Small restaurants and small-scale general retail



stores that provide daily convenience items to nearby neighborhoods could also be considered as part of this district with a Conditional Use Permit. Nonconforming uses will usually be encompassed within this designation as a means to allow the property to retain a commercial use without intensifying any future use. Properties designated as *Limited Business* are considered compatible to adjacent residential uses. The B-1 zoning district allows the uses designated as *Limited Business*.

Village Commercial

The *Village Commercial District* is intended to encourage the establishment of a village center by permitting a variety of commercial, office and limited businesses in order to create a center of business and economic activity consistent with the advantage and prominence of the location inherent in the Big Woods Area. The Village Commercial use and design are allowed in the Village Commercial Zoning District. Architectural Control Guidelines overlay this district and will guide aesthetics, form and design appropriately. The ordinance is designed to promote the development of a more intimate and traditional "village" type commercial development. Some of the major components of this district include the following:

- No minimum lot size.
- Zero-lot line development.
- On-street parking with major-shared parking lots located behind buildings.
- Shared stormwater facilities.
- Uniform streetscape with benches, streetlights, landscaping etc.
- Underground utilities.
- Uniform sign standards.
- Bikeways and sidewalks.
- Roadway access from collector and sub-collector thoroughfares.

Permitted uses in the *Village Commercial District* are as follows:

- Retail Specialty Shops - sales of gifts, antiques, flowers, books, jewelry, wearing apparel, tobacco and related supplies, or craft shops.
- Personal Service Shops - real estate sales, travel agency, brokerage firms, employment counseling, insurance sales, advertising, mailing, and stenographic service.
- Studios - studios for dance, art, music, photography, radio, or television.
- Professional Offices - offices for lawyers, engineers, architects, accountants, doctors, dentists, and chiropractors.
- Eateries - restaurants, bakeries, confectioneries, coffee houses, cafes, bars, deli's, restaurants without drive-through facilities.
- Public - community recreational facilities, libraries and government offices.

General Commercial

The *General Commercial District* is intended to serve retail service needs for Poquoson. They include commercial activities, which require proximity to major streets for visibility and accessibility. Unlike the *Village Commercial District*, the *General Commercial District* is needed to accommodate high traffic generating uses such as automobile sales, service stations, and fast food or drive-in restaurants. The *General Commercial District* is intended to designate



locations for the commercial uses that generate high traffic volumes and to produce a cohesive and vibrant commercial core for the City along Victory Boulevard and Wythe Creek Road. Potential development proposals for the Big Woods area were outlined in the City of Poquoson Business Development Analysis completed by LandMark Design Group in July 2004 and are covered in Chapter 3- Economy, Section III- Economic Development sub-element.

Significant infrastructure improvements will be necessary for the development of this area along Victory Boulevard, and efforts should be made to confine general retail type uses within the proposed General Commercial areas. In addition, the *General Commercial* areas should be developed with attention to controlled street access, signage, screening and buffers, including enhanced landscaping and green area in order to promote a more attractive appearance and design indicative of premiere upscale property development. Development within the district should retain a traditional “village” design while remaining identifiable as a corporate retailer. The business must balance its commercial image with Poquoson’s character as a small village and bedroom community. The design of the General Commercial district will correlate with a Gateway entrance into the City and the Big Woods street network design. Plant screening, earthen berms and landscaping buffers shall be used as transitional buffers between this district and any adjacent residential districts, as well as along public right-of-ways. The Architectural Control Guidelines overlay this district and will guide aesthetics, form and design appropriately.

Typical uses to be found in the *General Commercial District* include planned shopping centers, automobile sales lots, large-scale chain retailers, movie theaters, commercial lodging facilities, educational facilities, hospitals, large commercial recreational facilities and formal dine-in restaurants. Ideally, businesses with drive-thru services will target properties with a General Commercial future land use designation. The *General Commercial District* is allowed in the B-2 (Business/Commercial) and G-C (General Commercial) Zoning Districts.

Waterfront Mixed-Use

The *Waterfront Mixed-Use District* is intended to provide opportunities for redevelopment along the waterfront in areas that currently have a number of non-conforming uses in operation on underutilized sites. The existing conditions of the areas with this designation are in great need of redevelopment and has mixed types of uses located on the property that include retail, commercial and high density residential. The *Waterfront Mixed-Use District* allows uses less intense than those permitted in the *Waterfront Commercial* district, and focuses on encouraging quality development with its design.

The *Waterfront Mixed-Use District* is allowed to include restaurants, retail shops, personal service establishments, professional office space, and commercial recreational businesses such as non-motorized watercraft rental. Residential uses are allowed as a component to redevelopment not to exceed a density of eight (8) dwelling units per acre. Housing design and style in the *Waterfront Mixed-Use District* should maintain compatibility with the landscape of Poquoson. Commercial lodging facilities, seafood retail and marinas could also be considered as part of this district with a Conditional Use Permit. Ideal designs for the *Waterfront Mixed-Use District* would provide public accessible boardwalks, dedication of public space for visitors and patrons,



and recreational amenities (private or public) in an effort to create a destination point and place of interest for residents and visitors.

As the designation's title would indicate, *Waterfront Mixed-Use* is intended to provide different and multiple uses onsite while maintaining harmony with adjacent residential uses. In effort to complement the goals outlined in Chapter 3- Economy, Section I- Economy sub-element, objective #3, the total land area of the project area should have a ratio of 40% commercial to 60% residential in order to foster a revenue ratio of the same. Property developed under this category must collaborate with adjacent properties designated *Waterfront Commercial* to prevent adjacent uses from becoming a nuisance by providing adequate screening and buffers between uses. It is strongly recommended that these areas be developed with a master plan in order to take full advantage of this rare waterfront property. Currently no ordinance directly addresses this future land use designation, but this plan recommends that an ordinance be adopted to better facilitate and foster this type of development.

Waterfront Commercial

The *Waterfront Commercial District* is a more intense use that reflects the history and heritage of Poquoson. These areas are designated for businesses that benefit the seafood industry and require access to the water. Permitted uses include seafood capturing and processing businesses, seafood retail shops, marinas, boat repair and service businesses, and fishing equipment retailers. Commercial lodging facilities, boat sales, recreational facilities (commercial, private or public) and food service businesses could also be considered as part of this district with a Conditional Use Permit. Property owners of sites designated *Waterfront Commercial* that desire residential uses could attain residential uses by adhering to the following two criteria:

1. The residential is used as a transition between onsite commercial and adjacent off-site residential; AND
2. The applicant amends the comprehensive plan to reflect the residential portion of the site as *Waterfront Mixed-Use District*.

Due to the intensity of such uses, property developed under the *Waterfront Commercial* category must be coordinated with the development of adjacent properties designated *Waterfront Mixed-Use* to prevent these sites from becoming a nuisance by providing adequate screening and buffers between uses. It is strongly recommended that these areas be developed with a master plan in order to take full advantage of this rare waterfront property. Areas designated as a *Waterfront Commercial District* have an underlying zoning of B-2 (Business/Commercial).

Research & Development

The *Research & Development District* is intended to encourage the development of light industrial and office park uses. Development in this district is intended to be similar in character to that in the Hampton Roads Center in the City of Hampton. Permitted uses will include professional offices in combination with laboratories, light industrial and manufacturing uses. Hotels, restaurants and conference centers will be allowed as secondary uses and only with a Conditional Use Permit, but are better suited in the *General Commercial District*.



The *Research & Development District* intends to encourage office and industrial park land uses that incorporate open space and landscaping to create a "campus-like" appearance, atmosphere, and character. In an effort to facilitate low impact development and foster responsible design, many aspects of site planning should be shared and coordinated with adjacent land development. These development principles are outlined in the development standards found in this section and the corresponding ordinance. A brief overview of the design encouraged in the *Research & Development District* is as follows:

- Shared entrances will be encouraged to minimize traffic hazards and congestion;
- Roadway access shall only be from collector and sub-collector thoroughfares built in a roadway network;
- Shared stormwater management facilities;
- Shared parking areas; and
- Enhanced landscaped buffer areas adjacent to any adjoining residential zoning district boundaries and along public right-of-ways.

DEVELOPMENT STANDARDS

Development standards are intended to provide a guide to accommodating land uses in a manner harmonious with the natural and man-made environment. These standards are further intended to provide a basic framework for evaluating proposals for rezoning, special use permits, site plans, subdivisions, and other reviews in conjunction with applicable ordinance provisions. General standards applicable to most development projects are presented in the first section. Subsequent sections present standards for specific land uses. Development proposals should also conform to other elements of the Comprehensive Plan as well as other City ordinances and policies.

General Land Use Standards

1. Permit new development only where such developments are compatible with the character of adjoining uses or where the impacts of such new developments can be adequately addressed. Particular attention should be given to addressing such impacts as incompatible development intensity, building height and scale, land uses, smoke, noise, dust, odor, vibration, light, and traffic.
2. Permit the location of new uses only where public services, utilities and facilities are adequate to support such uses. The need for public services (police, fire, education, recreation, etc.) and facilities generated by a development should be met by that development. Means to address public service needs include proffers involving cash, construction, project phasing, uses, density, intensity, dedication, facility construction, cost sharing, and other items.
3. Preserve the natural and wooded character of the City. Particular attention should be given to locating structures and uses outside of sensitive areas; maintaining existing topography, vegetation, trees and tree lines to the maximum extent possible, especially along roads and



between uses; encouraging enhanced landscaping of developments located in open fields; locating new roads so that they follow existing contours and old roadway corridors whenever feasible; limiting the height of structures to an elevation below the height of surrounding mature trees whenever possible; minimizing the number of street and driveway intersections by providing common driveways and interconnection of developments; and utilizing light only where necessary and in a manner that eliminates glare and brightness.

4. Protect land designated as conservation areas on development plans by perpetual conservation easement held jointly by the City of Poquoson and a qualifying second party or dedicated to a land trust.

5. Protect environmentally sensitive resources such as steep slopes, historic and archaeological resources, designated greenways, wetlands, wildlife habitat, and other sensitive resources by locating conflicting uses away from such resources and utilizing design features, including building and site design, buffers and screening to adequately protect the resource.

6. Minimize the impact of development proposals on major roads by limiting access points and providing side street access and joint entrances. Provide for vehicular, bicycle, and pedestrian connections to adjacent properties and developments in order to minimize such impacts and to provide adequate access among residential and nonresidential activity centers and among residential neighborhoods. Include bikeways and/or pedestrian facilities within major developments.

7. Provide for ultimate future road widening needs and new road locations through the reservation of adequate right-of-way, and by designing and constructing roads and utilities in a manner that accommodates future road improvements. Require facilities to support bus and transit services in tourist areas and at transit dependent uses.

8. Require underground utilities in new developments, including new line extensions and major improvements to existing lines, and provide screening and buffering of existing above ground utilities and encourage their placement below ground.

Commercial and Industrial Land Use Standards

1. Locate proposed commercial and industrial developments adjacent to compatible uses (public or other similar uses, etc.) as opposed to residential or other sensitive areas. Where a commercial or industrial development desires a location near a sensitive area, the site should be designed so that transitional uses such as offices and/or buffers are located between conflicting uses.

2. Industrial and commercial areas should be planned and located to avoid traffic through residential and agricultural areas except in special circumstances where residential and nonresidential areas are both part of an overall master plan and special measures are taken to ensure the residential or agricultural uses are adequately protected. Industrial uses to be located on rural lands may be permitted more than one-half mile from such transportation facilities



where such a location is essential to the use (i.e., resource related such as a borrow pit) and direct access to an adequate public road is provided.

3. Mitigate objectionable aspects of commercial or industrial uses through a combination approach including performance standards, buffering and special setback regulations.
4. Provide landscaped areas and trees along public roads and property lines and develop sites in a manner that retains or enhances the natural, wooded character of the City.

Residential Land Use Standards

1. Ensure that gross housing densities are compatible with the local environment, the scale and capacities of public services, facilities and utilities available or planned, and the character of development in the vicinity. Net densities should be significantly higher than gross densities and minimum open space significantly increased when feasible. Ensure that residential developments provide usable open space and protect the City's natural wooded character and resources. When evaluating development proposals, permit higher gross densities based on the degree to which a proposed development achieves the goals, objectives, strategies and standards of the Comprehensive Plan, with emphasis on affordable housing; provision of open space; protection of the environment; natural features; adjoining land uses; and capacities of public facilities and services and the ability to meet the public needs of the development.
2. Design residential developments in a manner that fosters a sense of place and community and avoids the image of continuous suburban sprawl.
3. Preserve sensitive areas as open space, maintain trees and vegetation. Consider siting for solar orientation, and design residential development to preserve the character of its natural setting in order to provide a more workable, efficient, and pleasant living environment.
4. Base all design on a rational use of land reflecting topographic and other physical features and natural boundaries of the site rather than imposing a rectilinear layout intended solely to satisfy minimum ordinance requirements.
5. Vary building orientation and setback, facade treatment, and lot size to avoid repetitiveness in larger developments.
6. Prohibit direct access to arterial and collector streets from individual single-family detached units and two-family units. Locate residential developments on internal roads as both an aesthetic and traffic safety measure.
7. Encourage off-street parking areas for multi-family residential developments thereby minimizing conflicting turning movements with on-site and off-site traffic circulation.



8. Emphasize the use of natural screening/buffering over artificial or planted screening/buffering. Use of natural site features (vegetation, topography, etc.) should be given highest priority when providing screening and buffering.

POLICY DEVELOPMENT FOR SEA LEVEL RISE (SLR)

As mentioned in Chapter 5, Section I: Environmental, page 5-2, climate change and Sea Level Rise will have a tremendous effect on the City and the Hampton Roads region. In turn, policies should be developed to accommodate Sea Level Rise Adaptation Strategy when issued by the Secretary of Natural Resources (estimated issuance January 1, 2011). The following suggestions should guide policy development in regards to this issue:

- Develop a policy that minimizes fill of land;
- Develop a policy that maximizes the preservation of existing vegetation or requires the replacement of vegetation;
- Evaluate land development and zoning ordinances that requires large lot sizes for properties located within the floodplain and allows small lot sizes for properties outside of the floodplain; and
- Develop a policy that addresses the elevating of roadways in the City.

COMMUNITY APPEARANCE

Architectural Control Guidelines

In 1996 the General Assembly of Virginia approved special enabling legislation allowing the City of Poquoson to amend its Charter for the purpose of establishing architectural control regulations. Later that year the City Code was amended to establish the architectural control districts and the Architectural Review Board. One of the main reasons for developing architectural control regulations was the demand for such by citizens who felt that the City should have some control over the appearance of commercial structures in order to preserve the unique, small town atmosphere of Poquoson and protect it from the visual clutter found in some commercial districts. While architectural controls cannot guarantee that every commercial development will meet the aesthetic standards of all citizens, they are an important tool to encourage developers of commercial property to consider the effect that the appearance of their development will have on surrounding properties.

In addition the architectural controls encourage developers to build aesthetically pleasing commercial structures that blend into the surrounding environment and promote the relaxing, visual appeal of the City of Poquoson. Current guidelines are in place for the Architectural Control Overlay District, but revisions should be implemented that more accurately describe the desired product. Updating the design guidelines will continue to provide guidance to commercial development consistent with the character of Poquoson and maintain visual



harmony. The visual attractiveness of a commercial district is critical to the success of each and every business endeavor that will locate in the district.

Entrance Areas and Corridors

These areas and corridors are important for historical and aesthetic reasons. Entrance corridors serve as a visual demarcation of political jurisdictions, establish the character and visual attractiveness of the City for visitors, and generally indicate a locality's commitment to aesthetics and overall good design. There are three entrance corridors leading into the City: Victory Boulevard, Yorktown Road and Wythe Creek Road. Design features such as signs, location of parking areas, landscaping and open space affect the visual quality of entrance areas and corridors.

In October 2005, the Wythe Creek Road corridor was the subject of a visioning work session facilitated by Kubilins Transportation Group. Members of the City Council, Planning Commission, and select City staff participated in the work session, the results of which have been published in the Summary Report of the Wythe Creek Road Work Session (November 2005). Generally speaking, the overall vision for Wythe Creek Road is that of a walkable, pedestrian and business-friendly “main street”.

Property Maintenance Code

Recognizing the City’s need for a property maintenance code and the support of such regulations by the citizenry, Council adopted the 2000 International Property Maintenance Code in November 2004 with an implementation date of January 1, 2005. These property and building maintenance standards ensure the general health, safety and welfare of all existing buildings and premises, protect the aesthetic character of the community, and generally protect and enhance property values throughout the City.

CONSIDERATION OF LAND USE TAXATION

Residents have expressed the desire for taxation based on land use compared to fair market value. While the Virginia State Code does contain provisions guiding such a concept, a study should be conducted on the system and its impacts prior to affirming a stance on the topic.



GOALS, OBJECTIVES AND STRATEGIES

Goals

1. Promote an orderly and planned rate of growth that is designed to retain Poquoson's small town character while accommodating quality development.
2. Achieve a pattern of land use and development that reinforces and improves the quality of life for citizens and assists in achieving the goals of the Comprehensive Plan in Economics, Environment, Housing, Utilities, Transportation and Recreation.
3. Revise Zoning Ordinance and all subsequent ordinances to better promote desirable types of community development.
4. Direct and guide growth as presented in the Comprehensive Plan Future Land Use Plan and Map for harmonious and responsible property development.

Objectives

1. Provide adequate land areas for orderly and efficient economic growth and development in the City.
2. Provide for a stable, unified, attractive commercial district that meets the needs of the City.
3. Encourage quality commercial/professional business development that blends in with and compliments the City.
4. Provide regulations that enhance the maintenance of residential and commercial properties throughout the City.
5. Promote the use of land in a manner that is harmonious with other uses and at the same time compliments the environment.
6. Promote the use of land consistent with the capacity of existing and planned public facilities and services and the City's ability to provide such facilities and services.

Strategies

1. Outline land areas in the Comprehensive Plan Future Land Use Map best suited to accommodate projected needs for residential, commercial, professional, business, public, and semi-public activities.
2. Do not rezone land for uses not recommended in the Comprehensive Plan.



3. Maintain adequate subdivision and zoning regulations designed to prevent fragmented, inharmonious, and disorderly development.
4. Require developers to locate new developments where public water and sewer are presently available or require them to provide public water and public sewer consistent with the Master Sewer Plan.
5. Encourage all future commercial development to be located in the vicinity of the Big Woods and along Wythe Creek Road within close proximity to Victory Boulevard.
6. Discourage strip commercial development and minimize conflicts between residential and commercial uses by requiring the establishment of buffer areas, the size of which is based on the intensity of the commercial or professional use.
7. Provide a unified appearance and safe design for businesses along Wythe Creek Road, with particular emphasis on access, signs, landscaping, green areas and appropriate architecture.
8. Develop and implement a sustainable renovation and refurbishment streetscape strategy for the Wythe Creek Road and Victory Boulevard commercial corridors to enhance future development and to increase consumer patronage.
9. Encourage a variety of commercial uses that will expand and stabilize the City's tax base.
10. Maintain the current minimum lot sizes for the City's three single-family residential zoning districts.
11. If alternative development types are permitted, their frequency and density levels should not be allowed to the extent that it overburdens the infrastructure capacity or adversely impacts the character of surrounding neighborhoods.
12. Encourage commercial/professional business development in the "Big Woods" area in strict compliance with the Big Woods Zoning District.
13. Prohibit the approval of uses in the Big Woods that are not specifically permitted by right or Conditional Use Permit according to the applicable zoning district.
14. Require that proposed light industrial uses minimize or eliminate air and water pollution, dust, odor and noise which may be detrimental to other nearby land uses and the overall character of the City.
15. Continue to enforce the Property Maintenance Code that establishes minimum property and building maintenance standards and ensures the general health, safety and welfare of the public.



16. At the direction of the Architectural Review Board, continue to implement the architectural control guidelines to preserve the unique, small town atmosphere of Poquoson and protect it from the garish clutter found in some commercial districts in neighboring jurisdictions.
17. Enhance the development opportunities of the City's waterfront properties through the creation of one or more waterfront mixed-use commercial districts along White House Cove and at Messick Point.
18. Encourage public and private coordination of efforts and activities that shape land development in an effort to lower the cost of development and promote sufficient land use.
19. Require sufficient documentation to determine the impacts of a proposed development including, but not limited to, studies of traffic impact, water quality and quantity, and fiscal impact. Require that the recommendations of such studies be adequately addressed prior to preparation of development plans, or in instances where a rezoning or Conditional Use Permit is required as part of those applications.
20. Update, expand and revise Architectural Control Guidelines to better guide property development in the Architectural Control District.
21. Create a Waterfront Redevelopment Master Plan that will outline redevelopment opportunities for key waterfront sites throughout Poquoson, to ensure a balanced utilization of property to the benefit of both property owners and the citizens of the City.
22. Study and consider Land Use Taxation for properties that qualify.



OVERVIEW

The Eastern Planning District Sub-element of the Land Use chapter concentrates on land use issues pertaining to the Eastern Planning District and provides a cumulative synopsis of those issues by establishing the Eastern Planning District boundary, describing existing land uses, designating uses for future land development, and addressing future improvements and projects in relation to Section I: City-Wide Plan.

EASTERN PLANNING DISTRICT CHARACTERISTICS

The Eastern Planning District has a base zoning layer of R-2 (Single Family Residential) as well as a significantly large area consisting of C-1 (Conservation) zoning. All lots with R-2 zoning make up the Eastern Planning District to include lands zoned differently within the R-2 area and C-1 (Conservation) zoned lands east of R-1 zoning. Please see Map 8-1 for a graphical representation of the Eastern Planning District. The Eastern Planning District has a more compact appearance compared to the rest of the City even though the density level is the same. This compact appearance is due to several factors found in the Eastern Planning District, some of which are the large amounts of land designated for conservation and smaller size lot requirements.

EXISTING LAND USE

Each Planning District has its own unique qualities, history and potential. The Eastern Planning District has a significant amount of land zoned for conservation with minimal commercial uses. The remaining balance is residential with the majority consisting of Single Family Detached Residential units at a low density level. The Eastern Planning District defines the City's relationship with the water as this district borders the Chesapeake Bay and reflects the desire to be near its beauty. The existing land use pattern of the Eastern Planning District identifies these factors and it is anticipated that these trends will continue. Again, Map 8-2 provides a graphical representation of the existing land uses found in the Eastern Planning District while Map 8-3 depicts current zoning for land uses allowed in Poquoson; both are found at the end of the chapter.

Resource Conservation

Resource Conservation Areas protect wetlands, beaches and other environmentally sensitive lands in Poquoson. Resource Conservation is the largest land use in the Eastern Planning District, as well as the City of Poquoson. The majority of the conservation land in the City is comprised of the Plum Tree Island National Wildlife Refuge, which is owned by the Federal Government. Approximately 60% of the City's total area is undeveloped land which accounts for 5,987 acres in the City of Poquoson. Approximately 4,537 acres of the undeveloped acreage is zoned for conservation.



The Plum Tree National Wildlife Refuge is a significant portion of the eastern planning district and is protected by federal, state and local regulations. Plum Tree National Wildlife Refuge is zoned for conservation and presents different challenges for planning due to the environmental sensitivity of the area. The Conservation (C-1) zoning corresponds with the Resource Conservation future land use designation.

Residential

Other than land designated for conservation, the predominant use of land in the Eastern Planning District is single family detached residential dwellings. The R-2 zoning district is the dominant developable or usable land category in the Eastern Planning District. The R-2 zoning district has minimum lot sizes of 18,000 square feet, or approximately 0.41 acres, and a minimum lot width of 90 feet. This particular land use pattern identifies the Eastern Planning District as well as its boundary with the Central Planning District since it is only found in the Eastern Planning District. The R-2 zoning district is also the only residential zoning district in the Eastern Planning District.

Commercial

There are four particular areas located within the Eastern Planning District that do not have the R-2 or C-1 zoning classification. These uses are commercial in nature and comprised mostly of land occupied by water-related business activities. While still in operation, these areas are either non-conforming or underutilized according to its existing zoning designation.

- Messick Point area and adjoining properties- Zoned B-2 (Business/Commercial)
- Amory's Wharf area and adjoining properties- Zoned B-2 (Business/Commercial)
- Former Back River Market (on corner of Lodge Rd and Poquoson Ave)- Zoned B-2 (Business/Commercial)
- Crabcake House restaurant (Non-conforming use) and adjoining parcels- Zoned B-1 (Office/Professional)

Public & Semi-Public

Public

As discussed in Section I, public land use is comprised of government facilities (Federal, State & local) such as schools, City Hall and the United States Post Office. Pump stations located within the district are not included in the list below. Public parks are also considered public facilities, but for the purpose of analyzing existing land use, parks are listed under Parks & Open Space. The following are some of the public facilities owned and/or operated by the City of Poquoson:

- *Poquoson Elementary School*
- *Poquoson Middle School*
- *Poquoson Fire Station No. 1*
- *Messick Point Pier and Dock*
- *Former City Landfill*



Semi-public

Semi-public uses are privately owned facilities regularly used by the public which includes the Masonic Hall, churches, and cemeteries. Some of the existing semi-public uses in the Eastern Planning District are listed below:

- *Eastern Cemetery*
- *Weston Cemetery*
- *Trinity United Methodist Church*
- *Messick Baptist Church*
- *Saint Basil the Great Antiochian Orthodox Church*

Parks and Vacant/Open Space

Below is the public park/open space owned and maintained by the City of Poquoson located in the Eastern Planning District. More detailed descriptions are found in Chapter 6 in the Parks & Recreation Sub-element.

- *East Messick Pocket Park*
- *South Lawson Park*

FUTURE LAND USE

The Eastern Planning District is nearing a point of full build-out and the most sparsely populated district due to extensive marshlands. However, existing development in this district is more compacted along the main roadways than the other districts and smaller lot size requirements give the area appearance of higher density. Past development trends are expected to continue under current regulations for the Eastern Planning District which are anticipated to be only minor in-fill development for smaller lots and family subdivisions for the larger lots. Redevelopment for the commercially zoned land is also possible and recommended.

The following are descriptions of future land use designations found in the Eastern Planning District. Please reference the Future Land Use Map (Map 8-4) for more accurate depictions of the future land use designations.

Low Density Residential

As mentioned above, the Eastern Planning District's primary usable land is low density residential. The current land use zoning promotes this type of use and the low density residential designation supports this recommendation. Past trends indicate a limited amount of development in this area due to the environmental constraints and proximity to numerous marshes. Anticipated growth patterns are expected to remain the same resulting in minor in-fill development for smaller lots and family subdivisions for the larger tracts of land. A large amount of formally planned subdivisions are not expected for the future land use of the Eastern Planning District's residentially zoned land. Without this process, opportunities for affordable housing are not encouraged for this district. It should also be noted that higher densities in the Eastern Planning District should be discouraged due to the lower land elevation.



Limited Business

Back River Market

Back River Market, parcel with tax map number 30-11-2, is located at 1250 Poquoson Avenue on the corner of Lodge Rd. and Poquoson Ave., and has a Future Land Use designation of *Limited Business*. Potential redevelopment of the site should follow the land use description listed in Section I of this chapter, as well as the rest of the Comprehensive Plan.

Crabcake House

Crabcake House restaurant and commercially zoned adjoining parcels have a future land use designation of *Limited Business*. Any expansion or major repair is limited due to its non-conforming nature. However, potential redevelopment of the site should follow the land use description listed in Section I of this chapter, as well as the rest of the Comprehensive Plan.

Waterfront Commercial

The following sites have been designated as Waterfront Commercial in the Future Land Use Plan:

Messick Point Area

The Messick Point area is well known for its history with commercial fishing and this use is planned to remain in the area. The Messick Point area and adjoining commercially zoned properties have a Future Land Use designation as *Waterfront Commercial*. This designation starts at the tip of Messick Point and follows the east side of Messick Road and ends at tax map number 32-1-19. Due to the numerous parcels located in the subject area, please see the Future Land Use Map, Map 8-4, for a graphic depiction of the parcels designated for *Waterfront Commercial*.

The Messick Point area includes the City-owned boat ramp & dock, which provides public access to the Back River, and a few other primary uses located onsite that includes a private yacht club and seafood harvesting/retail operation. Many of the other parcels are owned by the City's Industrial Development Authority. The Messick Point Revitalization Study recommends a combination of uses that include incorporating the existing yacht club in a renovated structure with dry dock storage, storage units, boat storage, 2 restaurants, watersports recreation, condominium residential, docking slips and a small public park. However, the Messick Point Revitalization Study was completed in 2004 and progress towards its recommendations has been stagnant.

Since the completion of Messick Point Revitalization Study, differing opinions have surfaced regarding the highest and best use of the property. The Department of Recreation has recommended the Messick Point site include the construction of a community meeting center to complement any potential restaurants. In addition, the top answer (out of 5 possible choices)



selected in the 2006 survey for what land use was supported for Messick Point was the development of a City Park. The differing opinions for the highest best use warrant the site receiving another study. Until another study is performed, the Comprehensive Plan recommends that the site retain its Future Land Use designation of *Waterfront Commercial* since this designation best matches the recommendations listed in the Messick Point Revitalization Study.

The Comprehensive Plan highly recommends that a Waterfront Redevelopment Master Plan be prepared that analyzes all of Poquoson's waterfront property as whole, instead of a piecemeal process. Preparing a Waterfront Redevelopment Master Plan would consider all suggestions and recommendations for the waterfront; thereby prioritizing interests and hopefully meeting all of the needs desired by citizens. Any redevelopment initiative of the Messick Point area should incorporate the pier and dock into a Master Plan of the site to ensure public access. This site is recommended for inclusion in the Waterfront Redevelopment Master Plan.

Amory's Wharf Area

The Amory's Wharf area and adjoining commercially zoned properties have a Future Land Use designation of *Waterfront Commercial*. This site is found at the end of Poquoson Avenue and includes tax map number 39-1-13. The rehabilitation of Amory's Wharf Pier should be incorporated into any redevelopment initiative. Former uses on site include seafood harvesting and retail. It is recommended this site also be included in the Waterfront Redevelopment Master Plan. Please see the Future Land Use Map (Map 8-4) for a graphic depiction of future land use designations.

Public Use & Parks/Open Space

South Lawson Park has a Future Land Use designation of Public Use. South Lawson Park, a multi-purpose park that was constructed in 1983, is located at the end of South Lawson Road and includes two soccer fields, an outdoor volleyball court, play equipment, two picnic shelters and a fresh water fishing pond.

The East Messick Pocket Park is located at the southern side of Messick Road, at the corner of Ridge Road and Messick Road, and is designated for Public Use. This small pocket park has recreational facilities for kids and is intended to serve the immediate neighborhood due to its small size, as compared to serving the City. The Parks & Recreational Sub-element in Chapter 6 provides more in depth details of this subject, including what uses currently exist and what is planned for future improvements.

The Messick Point boat landing at the end of Messick Road, reconstructed and expanded in 2004, provides parking spaces and a boat launching area to Front Cove. A new pier was constructed in 2004 to provide boat slips for commercial watermen and larger recreational boats. Patrons who desire using the facilities should inquire with the City Manager's Office regarding use of the dock and pier.



Amory's Wharf has a dilapidated pier in dire need of reconstruction as current conditions are unsuitable for use. Efforts should be made to restore this amenity for use by citizens as soon as possible. Water depths at this site indicate an ideal location for small recreational watercraft such as flat bottom boats or canoes.

Resource Conservation

Sites currently zoned as Conservation (C-1) retain the corresponding Future Land Use designation of Resource Conservation in the Future Land Use Plan. All sites designated for Resource Conservation must retain an undisturbed and natural state due to the environmental sensitivity of the property. Plum Tree Island National Wildlife Refuge is one of the most significant properties designated for Resource Conservation in the Eastern Planning District. The Refuge is bordered by the Chesapeake Bay, Poquoson and Back Rivers, and other lands designated for Resource Conservation. Any land used for wetland mitigation banks should be rezoned to Resource Conservation to ensure their protection.

FUTURE PLANNED IMPROVEMENTS/PROJECTS

Blueways

The City of Poquoson is currently exploring funding sources for implementing a Blueways trail system. Blueways trails are waterways not navigable by most commercial or pleasure boats; however, they are well suited for small, shallow draft craft such as canoes and kayaks. The Blueways watercraft trails would utilize small creeks and channels near Plum Tree Island National Wildlife Refuge. These waterways help to tell Poquoson's story, historically and environmentally. Most such water trails offer interpretive guidebooks to help tell the story of what is seen. Blueways can attract visitors to Poquoson as well as serve to educate and inform users as to Poquoson's uniqueness.

South Lawson Park Redevelopment

For a variety of reasons South Lawson Park has been an under-utilized resource. With the purchase of additional land for the park, an opportunity exists to create a facility that helps to meet the athletic facility needs of the City for the next ten years and also provides park features currently not available in any of the other city parks. Planning for the redevelopment of the park is underway and will feature new open multi-use athletic fields to serve the need for additional soccer, field hockey and football play space. A new softball field is also planned. The pond will be expanded and stocked and will serve the community as the only fresh water public fishing area in the City. A new basketball court and playground are also included in the plan as are new, larger picnic shelters, restroom facilities and a measured walking/jogging path. The park is anticipated to re-open in Spring of 2010.



OVERVIEW

The Central Planning District Sub-element of the Land Use chapter concentrates on land use issues pertaining to the Central Planning District and provides a cumulative synopsis of those issues by establishing the Central Planning District boundary, describing existing land uses, designating uses for future land development, and addressing future improvements and projects in relation to Section I: City-Wide Plan.

CENTRAL PLANNING DISTRICT CHARACTERISTICS

The Central Planning District has a base zoning layer of R-1 (Single Family Residential) but also possesses a significant portion of commercial uses, as well as higher density residential uses, along Wythe Creek Road. All lots with R-1 zoning make up the Central Planning District including lands zoned differently surrounded by the R-1 area. The Central Planning District is south/southeast of the Western Planning District and west/southwest of the Eastern Planning District. Due to the significant amount of commercial uses along the Wythe Creek Road Commercial Corridor, the Central Planning District serves as the Central Business District for the City providing the citizens with basic goods and services. Please see Map 8-1 for a graphical representation of the Central Planning District.

EXISTING LAND USE

The existing land use patterns for the Central Planning District reflect a transition period from a rural small village to a small town that experienced growth during the 60s and 70s. The Central Planning District contains an area that was formerly the small village's main businesses, services and retail sales area along Poquoson Avenue and the Wythe Creek Road Commercial corridor that provides the City the same today. The City's two main arterials are found in the Central Planning District providing access outside of the City's limits as well as other collectors serving the length of the City and connections in between. Map 8-2 provides a graphical representation of the existing land uses found in the Central Planning District, and Map 8-3 depicts current zoning for land uses allowed in Poquoson.

Resource Conservation

Resource Conservation Areas protect wetlands, beaches and other environmentally sensitive lands in Poquoson. Currently, only one parcel has conservation designation in the Central Planning District. It is located at the southwest corner of Cary's Chapel Road and Wythe Creek Road. Views from aerial photography and site visits indicate that the parcel appears to be inundated with wetlands and therefore validates the current zoning of Conservation (C-1) placed on the property.



Residential

The predominant use of land in the Central Planning District is single family detached residential dwellings. The R-1 zoning district is the dominant developable or usable land category in the Central Planning District. The R-1 zoning district has minimum lot sizes of 20,000 square feet, or approximately 0.46 acres, and a minimum lot width of 100 feet. This particular land use pattern identifies the Central Planning District as well as its boundary with adjacent planning districts since the R-1 zoning is only found in the Central Planning District.

The Central Planning District also contains multi-family residences allowed under the R-3 provisions of the Zoning Ordinance. The R-3 zoning district allows attached residential dwellings and a maximum of 12 dwelling units per acre. Lot sizes and width vary according to the number of units in the subdivision plan.

Commercial

As previously stated, the Central Planning District serves as the City of Poquoson's Central Business District with commercial uses located primarily on Wythe Creek Road. The commercial corridor fronts both sides of Wythe Creek Road, extending south from Valasia Road, through the Wythe Creek Road/Victory Boulevard intersection and ending at the Oxford Run stream. The Business/Commercial (B-2) zoning district is the predominant zoning classification along the corridor, with a few sites zoned Office/Professional (B-1) and General Commercial (G-C). The character of the corridor is an eclectic blend representing different trends of development over the past years resulting in a non-uniform appearance. However within the past decade, an Architectural Review Board has been established to review architectural features of development along this corridor and maintain the character of Poquoson.

Public & Semi-Public

Public

As discussed in Section I, public land use is comprised of government facilities (Federal, State & local) such as schools, City Hall and the Post Office. Pump stations located within the Central Planning District are not included in the list below. Public parks are also considered public facilities, but for the purpose of analyzing the existing land use; parks are listed under Parks & Open Space.

The following are some of the public facilities owned and/or operated by the City of Poquoson that are located within the Central Planning District:

- *Poquoson Primary School*
- *Poquoson High School*
- *Poquoson Fire Station No. 2*
- *Poquoson Municipal Building and Public Works compound*
- *Poquoson City Hall and Public Library complex*



Semi-public

Semi-public uses are privately owned facilities regularly used by the public which includes civic centers, churches, and cemeteries. Some of the existing semi-public uses in the Central planning District are listed below:

- *Masonic Hall*
- *Tabernacle United Methodist Church*
- *Poquoson Baptist Church*
- *Poquoson Museum*
- *Smith Cemetery*
- *Wythe Creek Cemetery*

Parks and Vacant/Open Space

Below is the public park/open space facilities owned and maintained by the City of Poquoson located in the Central Planning District.

- *Municipal Park*
- *Phillips Park*
- *Oxford Run Canal Trail*

FUTURE LAND USE

The Central Planning District is more densely populated due to multi-family housing units, commercial development, and more usable land area than the Eastern Planning District. The future growth of the Central Planning District will represent the most significant portion of Poquoson's growth with most of the growth expected to occur in the central business area located along Wythe Creek Road and Victory Boulevard. As well as new development of commercial properties, redevelopment of commercially zoned land along the Wythe Creek corridor is encouraged. Residential development in the Central Planning District will vary according to the property's location, access, attributes, and future land use designation; ranging from family subdivisions, formally planned subdivisions, clustered open-space subdivisions to moderate and high density developments.

The following are descriptions of future land use designations found in the Central Planning District. Please reference the Future Land Use Map (Map 8-4) for more accurate depictions of the future land use designations.

Resource Conservation

Sites currently zoned as Conservation (C-1) retain the corresponding Future Land Use designation of Resource Conservation in the Future Land Use Plan. All sites designated for Resource Conservation must remain undisturbed and in a natural state due to the environmental sensitivity of the property. The parcels designated for Resource Conservation in the Central



Planning District is bordered by Wythe Creek and are the southernmost properties in the Central Planning District. Any land used for wetland mitigation banks should be rezoned to Resource Conservation to ensure their protection. The land use analysis finds extensive wetlands located on the parcels with tax map numbers 36-1-11, 36-1-12, and 36-1-13 and are designated *Resource Conservation* in the Future Land Use Map (Map 8-4); as all parcels previously designated for *Resource Conservation* retain that designation in the Future Land Use Plan. Please see the Future Land Use Map (Map 8-4) for a graphic depiction of Future Land Use designations.

Public Use & Parks/Open Space

The following sites have Future Land Use designation of Public Use.

The Parks & Recreational Sub-element, Section II in Chapter 6, details what facilities currently exist for citizens and what is planned for future improvements. Poquoson Marina currently has a boat ramp and pier dedicated for public use. The Oxford Run Canal Trail is a public park use although each section of the parcel maintains a land use designation of the adjacent property because Oxford Run also serves an additional purpose as a drainage structure, which is considered an utility like the regional BMP located near Alphas Street. Utilities are primarily accessory to the adjacent land uses. For the purpose of the Comprehensive Plan, utility structures such as sewer pumpstations and drainage structures are not shown in the Future Land Use Map.

- *Municipal Park*
- *Phillips Park*
- *Oxford Run Canal Trail*

The Public Education Sub-element, Section III in Chapter 6, lists the educational facilities currently located in the Central Planning District and what is planned for future improvements.

- *Poquoson Primary School*
- *Poquoson High School*

The Government Structure, Positions & Duties sub-element, Section I in Chapter 6, details what government services and facilities currently exist for citizens and what is planned for future improvements. What follows is a summary of existing sites:

- *Poquoson Fire Station No. 2*
- *Poquoson Municipal Building and Public Works compound*
- *Poquoson City Hall and Public Library complex*
- *Poquoson Post Office*



Low Density Residential

As with most of Poquoson, the Central Planning District's primary usable land is low density residential. Future development for this designation will consist of a maximum density of two (2) units per acre. Formally planned subdivisions are anticipated to progress this trend. Past trends indicate a scattered pattern of subdivision development in this district, with most formally planned subdivisions in the Central Planning District located east of Wythe Creek Road, in the eastern most portion of the district. The current zoning supports formally planned single family detached housing developments and family subdivisions, and depending mainly on the parcel's location and owner's intentions, this is the anticipated growth pattern for Low Density Residential. Formal subdivision development may provide opportunities for affordable housing as outlined by *Strategy #1* in Chapter 3- Housing, which involves mixing residential types.

Strategy #1 details mixing residential types in a low density area to allow single family attached dwellings, specifically duplexes, with single family detached dwellings in formally planned subdivisions. The mixing of residential types within a subdivision must still coincide with the recommended density designated in the Future Land Use Plan, which in this case is a maximum of two (2) units per acre. The anticipated effect of employing this strategy is that developers will yield the maximum amount of units allowed while providing an attached housing product that generally is considered more affordable and manageable than detached dwellings. Of course, this strategy must have a policy in place to guide its implementation, which will require an ordinance. Please reference Chapter 3- Housing for detailed explanation of this strategy and the desired outcomes. Other than the areas listed below, the Future Land Use designation for the Central Planning District is Low Density Residential.

High Density Residential

High Density Residential proposals have proven to be a controversial topic in Poquoson; however, it is important for the City's leaders to provide its 'fair share' of multi-family housing, meaning an amount that will accommodate residents of Poquoson in need of this type of housing. While there are a few high density residential developments within the City, a demand for such developments are still needed to accommodate current Poquoson residents in need of affordable housing. A recent proposal of the Poquoson Marina redevelopment involved eliminating a mobile home park for new development. While the developer provided ample notice and relocation incentives; it is unknown if all of the residents were able to retain residence in the City. Another mobile home park in the City has a future land use designation that encourages redevelopment and it's important to ensure these residents can still reside in Poquoson.

Some of the difficulties in designating areas for high density residential are ensuring the site has adequate access to infrastructure, particularly transportation networks, and that it is located near compatible land uses, such as other high density developments. It is also important not to confuse the *High Density Residential* designation with similar designations that may propose high density residential within the development, such as Waterfront Mixed-Use. The *High Density Residential* designation reflects this specific use as detailed in the Land Use Categories description in Section I of Chapter 8 - City Wide Perspective. *High Density Residential* may



serve as a buffer between higher intensity uses, such as commercial, and low intensity uses, such as Low Density Residential.

Limited Business

Champ's Service Center

This site is a legal non-conforming automobile repair shop located 608 Wythe Creek Road, at the corner of Poquoson Ave. & Wythe Creek Rd., known as Tax Map number 18-1-33. Any expansion or major repair is limited due to its non-conforming status and has a *Limited Business* designation. However, potential redevelopment of the site should follow the land use description listed in Section I of this chapter, as well as the rest of the Comprehensive Plan.

Cox Com Inc. Telecommunications Tower

The site is located at 34A Cedar Road, tax map number 19-1-206A, with telecommunication facilities on approximately 2.5 acre parcel. The site is a legal non-conforming use as all telecommunication facilities are required to be on publicly owned land. Although ultimately, the site should be designated for public use to become compliant with the Zoning Ordinance; it is unlikely to happen since the property is owned by the telecommunications tower. Therefore this site is designated as *Limited Business* with the use restricted to the operation of the telecommunications tower.

Village Commercial

City Hall Professional Park

The construction of the Poquoson City Hall/Library Municipal Complex was viewed as a first step to encourage economic development along the Victory Boulevard corridor. While that vision has yet to become reality, professional office space has developed on the corner of City Hall Avenue and Victory Boulevard with the anticipation of additional office space to follow. A City Hall Professional Park concept is envisioned as offices for professionals with a campus styled setting, to include small specialty restaurants and food shops either as standalone parcels or located on the first floor office buildings. The Oxford Run Canal Trail borders the area on the western and southern boundaries and serves drainage as well as a recreational amenity for citizens. Future Development in this area should maintain public access to this trail and emphasize its existence within the park.

The Village Commercial (V-C) Zoning District regulates the uses of the Village Commercial Future Land Use Designation, permitting a variety of commercial, office and limited businesses in order to create a center of business and economic activity consistent with the advantage and prominence of the location. The ordinance is designed to promote the development of a more intimate and traditional "village" type commercial development. Some of the major site design components of this district will include the following:



- No minimum lot size.
- Zero-lot line development.
- On-street parking with major-shared parking lots located behind buildings.
- Shared stormwater facilities.
- Uniform streetscape with benches, streetlights, landscaping etc.
- Underground utilities.
- Uniform sign standards.
- Bikeways and sidewalks.
- Roadway access from collector and sub-collector thoroughfares.

The parcels designated for Village Commercial, in particular a professional office park, are carried over from the last Comprehensive Plan, which are properties with tax map numbers: 27-1-3, 27-1-85, 27-1-85A, 27-1-86, 27-1-87, 27-1-88, 27-1-90, 27-1-91, 27-1-92, 27-1-93, 27-1-94, 27-94A, 27-1-95, 27-1-96, 24-1-96A, 27-1-97A, 27-1-98, 27-1-99, 27-11-A, 27-11-B, 27-13-B, 27-13-A, and 27-1-84. Please see the Future Land Use Map (Map 8-4) for a graphic depiction of Future Land Use designations.

General Commercial

Wythe Creek Road Commercial Corridor

Wythe Creek Road is the primary commercial corridor in the City with commercial establishments fronting the eastern and western sides of the roadway, from the Oxford Run Canal to Fire Station Number 2. Both sides of Wythe Creek Road have been sporadically developed with commercial structures reflecting styles and design from different time periods. The development of commercial businesses along Wythe Creek Road, in combination with roadway improvements to Wythe Creek Road, has produced a Central Business District or Commercial Corridor for the community. The land use description for *General Commercial* provides large-scale, higher intensity uses that are high traffic generators to create cohesive and vibrant commercial core. The majority of the western side of Wythe Creek Road is adjacent to commercially zoned property; however, where *General Commercial* is adjacent to residential zoned property including *High Density Residential*, enhanced buffers and screening should be implemented between the properties to protect property values and preserve quality of life. Future development and redevelopment on the eastside of Wythe Creek Road is directly adjacent to residentially zoned property and should also implement enhanced buffers and screening between the properties.

In the center of the City is the intersection of Wythe Creek Road and Victory Boulevard/Little Florida Road which serves as the main intersection of Poquoson. It is clearly recognizable in aerial photographs, located in the center of the Central Planning District, and both Wythe Creek Road and Victory Boulevard serve as the primary routes for traffic entering and exiting the City. Almost all properties located within the Wythe Creek Road Commercial Corridor are zoned B-2 (Business/Commercial) which allows a myriad of commercial uses along this area. However the B-2 zoning district is dated compared to the General Commercial Zoning District found in the



Zoning Ordinance, which more closely resembles the intent of the General Commercial Future Land Use designation. The City should comprehensively evaluate the zoning ordinance to determine how to implement requirements found in the General Commercial zoning to the properties in the Wythe Creek Road Commercial Corridor for a better development, and revise regulations viewed as deterrents or hindrances affecting property redevelopment and site improvements. Furthermore, the City of Poquoson should also develop a marketing strategy to promote economic growth within the city and strengthen the corridor's viability for growth and renewal as mentioned in the Chapter 4- Section III Economic Development.

Big Woods (East)

The Big Woods section of properties is an area located both north and south of Victory Boulevard, and comprised of an eastern and western portions of property that are zoned differently. The eastern portion of these parcels are designated for *General Commercial* and envisioned to provide large-scale, high intensity uses, such as chain restaurants or big-box retailers. Proposals in the Big Woods area should be developed with attention to controlled street access, principles of better site design, enhanced landscaping and green areas to promote a more attractive appearance and design indicative of premiere upscale property development. Potential development proposals for the Big Woods area were outlined in the City of Poquoson Business Development Analysis completed by LandMark Design Group in July 2004 and are covered in Chapter 3- Economy, Section III- Economic Development sub-element.

Significant infrastructure improvements will be necessary for the comprehensive development of this area, and efforts should be made to restrict strip type development that will prohibit future development. The *General Commercial* areas of the Big Woods should be developed with attention to controlled street access along Victory Boulevard and correlate with a Gateway entrance into the City and the Big Woods street network design. Plant screening, earthen berms and landscaping buffers must be used in transitional buffers between this district and any adjacent residential districts, as well as along public right-of-ways, to protect property values and promote quality development. Structures within the district should retain a traditional "village" design while remaining identifiable as a corporate retailer; the business must balance its commercial image with Poquoson's character as a small town and suburban bedroom community. The Architectural Control Guidelines overlay this district and will guide aesthetics, form and appearance appropriately.

Research & Development

Big Woods (West)

The western portions of the 'Big Woods' area is designation as *Research & Development*. The *Research & Development District* is intended to encourage the development of light industrial and office park uses. Development in this district is intended to be similar in character to that in the Hampton Roads Center in the City of Hampton. Permitted uses will include professional offices in combination with laboratories, light industrial and manufacturing uses. Hotels,



restaurants and conference centers will be allowed as secondary uses and only with a Conditional Use Permit, but are better suited in the *General Commercial District*.

The *Research & Development District* intends to encourage office and industrial park land uses that incorporate open space and landscaping to create a "campus-like" appearance, atmosphere, and character. In an effort to facilitate low impact development and foster responsible design, many aspects of site planning should be shared and coordinated with adjacent land development. *Research & Development District* land designation is permitted in the *Research & Development Zoning District*. Due to the numerous parcels located in the subject area, please see the Future Land Use Map (Map 8-4) for a graphic depiction of the parcels designated for *Research & Development*.

The Big Woods section, both east and west, represent a large amount of land; however, it is not anticipated that all of the acreage would be fully developed as *General Commercial* due to the potential of environmental constraints that face most of Poquoson's land. With this in mind, it is important for the various and numerous property owners of this area to collaborate together and build a comprehensive development encompassing many properties while preserving environmental assets and accentuating their presence. Due to the numerous parcels located in the subject area, please see the Future Land Use Map (Map 8-4) for a graphic depiction of the parcels designated for *General Commercial*.

Waterfront Mixed-Use

Poquoson Marina Area

The Poquoson Marina area and adjoining properties have retained the *Waterfront Mixed-Use* designation from the previous Comprehensive Plan. Conceptual plans regarding a major redevelopment of the Poquoson Marina were approved by Council giving the developer incentive to move forward with the initiative. The plans showed a mixed-use redevelopment of 168 boat slips/marina facility, seafood restaurant with office space, two retail stores, a new public boat ramp, a redeveloped public pier, and a mixed residential type subdivision of 138 dwelling units. Of course, there are still many processes to be completed regarding the initial proposal, but it is hopeful the redevelopment of this area will spark the same interest across the cove at the York Haven Marina and Owens Marina. The Poquoson Marina area is envisioned to be a quality marina facility and destination point for citizens and boaters. The following parcels have been designated for *Waterfront Mixed-Use*, tax map numbers: 12-1-75, 12-1-76, 12-1-76A, 12-1-77, 12-1-78, 12-1-79, . Please see the Future Land Use Map (Map 8-4) for a graphic depiction of Future Land Use designations in this area. The Comprehensive Plan highly recommends the site be included in a Master Waterfront Redevelopment Plan.



OVERVIEW

The Western Planning District Sub-element of the Land Use chapter concentrates on land use issues pertaining to the Western Planning District and provides a cumulative synopsis of those issues by establishing the Western Planning District boundary, describing existing land uses, designating uses for future land development, and addressing future improvements and projects in relation to Section I: City-Wide Plan.

WESTERN PLANNING DISTRICT CHARACTERISTICS

The Western Planning District has a base zoning layer of R-S single family residential. All lots with R-S zoning make up the Western Planning District to include the few properties zoned B-2 (Business/Commercial) within the R-S area. The Western Planning District lies north of the Central Planning District and R-1 zoning, and this district is predominantly developed with low-density single-family homes with modern suburban design. The existing land elevation in the Western Planning District provides an attractive site for future residential development and large tracts of developable land still exist within this district. Please see Map 8-1 for a graphical representation of the Western Planning District.

EXISTING LAND USE

Since Poquoson's growth in the 60s and 70s, the Western Planning District has developed with time the low density suburban residential found in the City and possesses examples of recent subdivisions development and design giving the area a modernized and formally planned appearance. Connectivity between different subdivisions promotes access and circulation through the district and City. The Western Planning District also possesses a third access outside of City limits although it connects to Victory Boulevard, one of two main routes, just outside of the City's limits. Please see Map 8-2 for a graphical representation of the existing land uses found in the Eastern Planning District. Map 8-3 depicts current zoning for land uses allowed in Poquoson.

Residential

Other than conservation land, the predominant use of land in the Western Planning District is single family residential detached dwellings. The R-S use is the dominant developable or usable land category in the Western Planning District. The R-S zoning district has a minimum lot size of 26,700 square feet, or approximately 0.61 acres, and a minimum lot width of 120 feet. This particular land use pattern identifies the Western Planning District as well as its boundary with the Central Planning District since it is only found in the Western Planning District. The R-S zoning district is also the only residential zoning district in the Western Planning District.



Commercial

There are three particular areas located within the Western Planning District that do not have the R-S zoning classification. These uses are commercial in nature and comprised mostly of land occupied by water-related business activities. While still in operation, these areas are either non-conforming or underutilized according to its existing zoning designation. All three areas are located on Whitehouse Cove towards the end of Browns Neck Road.

- Owens Marina and adjoining properties- Zoned B-2 (Business/Commercial)
- York Haven Marina and adjoining properties- Zoned B-2 (Business/Commercial)
- Islander Marina- Zoned B-2 (Business/Commercial)

Although the B C Smith Building is zoned R-S, it is a non-conforming commercial use at the corner of Yorktown Road and Browns Neck Road that has had many different uses with the majority of the uses remaining small scale, serving mostly neighborhood customers.

Public & Semi-Public

As discussed in Section I, public land use is comprised of government facilities (federal, state & local) such as schools, City Hall and the Post Office. Currently there are no public facilities located in the Western Planning District other than general public utilities. Pump station facilities are not included on this list as these structures are located sporadically throughout this and every district based on necessity. There are also no public parks located within the Western Planning District.

Semi-public

Semi-public uses are privately owned facilities regularly used by the public which includes the Masonic Hall, churches, and cemeteries. Some of the existing semi-public uses in the Western Planning District are listed below:

- *Hunts Neck Cemetery*
- *Browns Neck Road Cemetery*
- *Cemetery on corner of Hunts Neck Road & Valmoore Drive*
- *Emmaus Church*

Parks and Vacant/Open Space

As previously stated, currently no parks are located in the Western Planning District but a Parks Long Range Plan should be prepared to outline the goals to achieve the community's recreation desires.



FUTURE LAND USE

The Western Planning District is expected to continue to develop residentially since it still has relatively larger tracts of developable land available compared to the rest of the City. Past development patterns for the district indicate low-density single-family homes in a suburban design and this trend is expected to continue under current regulations for the Western Planning District. The current land use designation for predominantly all of the Western Planning District is R-S, single family residential, and this land use category is supported by a future land use designation of Low Density Residential.

Redevelopment for commercially zoned land is also possible and recommended. Areas in need of redevelopment are designated for the highest and best use in order to encourage the redevelopment process.

The following are descriptions of future land use designations found in the Western Planning District. Please reference the Future Land Use Map (Map 8-4) for more accurate depictions of the future land use designations.

Low Density Residential

As mentioned above, the Western Planning District's primary usable land is low density residential and the anticipated growth patterns are expected to reflect this type of development. Future development for Low Density Residential designation will consist of formally planned subdivisions that have a maximum density of two (2) units per acre. The future growth of Low Density Residential development in the Western Planning District will represent a significant portion of Poquoson's growth, while not the majority. Future Low Density Residential development in the Western Planning District can provide opportunities for affordable housing as outlined by *Strategy #1* in Chapter 3- Housing Element, which involves mixing residential types.

Strategy #1 details mixing residential types to allow single family attached dwellings, specifically duplexes, with single family detached dwellings in formally planned subdivisions. The mixing of residential types within a subdivision must still coincide with the recommended density designated in the Future Land Use Plan, which is a maximum of two (2) units per acre. The anticipated effect of employing this strategy is an attached housing product that generally is considered more affordable and manageable than detached dwellings. The incentive for land developers is the ability to yield the maximum amount of lots allowed while not increasing density. Of course, this strategy must have a policy in place to guide its implementation which will require an ordinance. Please reference Chapter 3- Housing for detailed explanation of this strategy and the desired outcomes.

Other than the areas listed below, the Future Land Use designation for the Central Planning District is Low Density Residential.



Limited Business

The B C Smith building (on the corner of Yorktown Road and Hunts Neck Road) has a Future Land Use designation of *Limited Business*. Currently non-conforming, this site is small scale and low intensity serving mainly the neighborhood. The Future Land Use designation of *Limited Business* should give the property owner enough incentive to modernize the site and services provided in an effort to bring the property into compliance as much as physically possible.

Waterfront Commercial

The following sites have been designated as *Waterfront Commercial* in the Future Land Use Plan:

- Owens Marina and adjoining properties
- York Haven Marina and adjoining properties

Both sites are located on Whitehouse Cove, towards the end of Browns Neck Road and have a Future Land Use designation of *Waterfront Commercial*. This is primarily due to the more intense and industrial uses existing onsite which consist of marinas, boat repairs and servicing, and boating and fishing equipment retail. The designation includes parcels with tax map numbers 12-1-46, 12-1-47, 12-1-48, 12-1-48A, 12-1-48B, 12-1-48C, 12-17-A, 12-17-B, and 12-17-C. Please reference the *Waterfront Commercial* description in Section I under Land Use classifications for more details of this category. It is envisioned that the redevelopment of this site will be complimentary to the redevelopment of Poquoson Marina across the water, creating a marina hub and destination point for boaters and citizens.

Public Use & Parks/Open Space

Currently the Western Planning District does not have any sites designated for public use or park space. The citizens of this area must use facilities located elsewhere in the City. An ideal location for a future park/public use must have certain qualities to attract citizens for use. Such qualities would be: proximity near a main arterial roadway for ease of access, enough land to serve many citizens, not located within or behind subdivisions, and no extensive clearing of vegetation required for active open space. This plan recommends the Preparation of a Parks & Recreation Long Range Plan by the City in an effort to meet the public space demands of the citizens and the Western Planning District.

FUTURE PLANNED IMPROVEMENTS/PROJECTS

Parks & Recreation

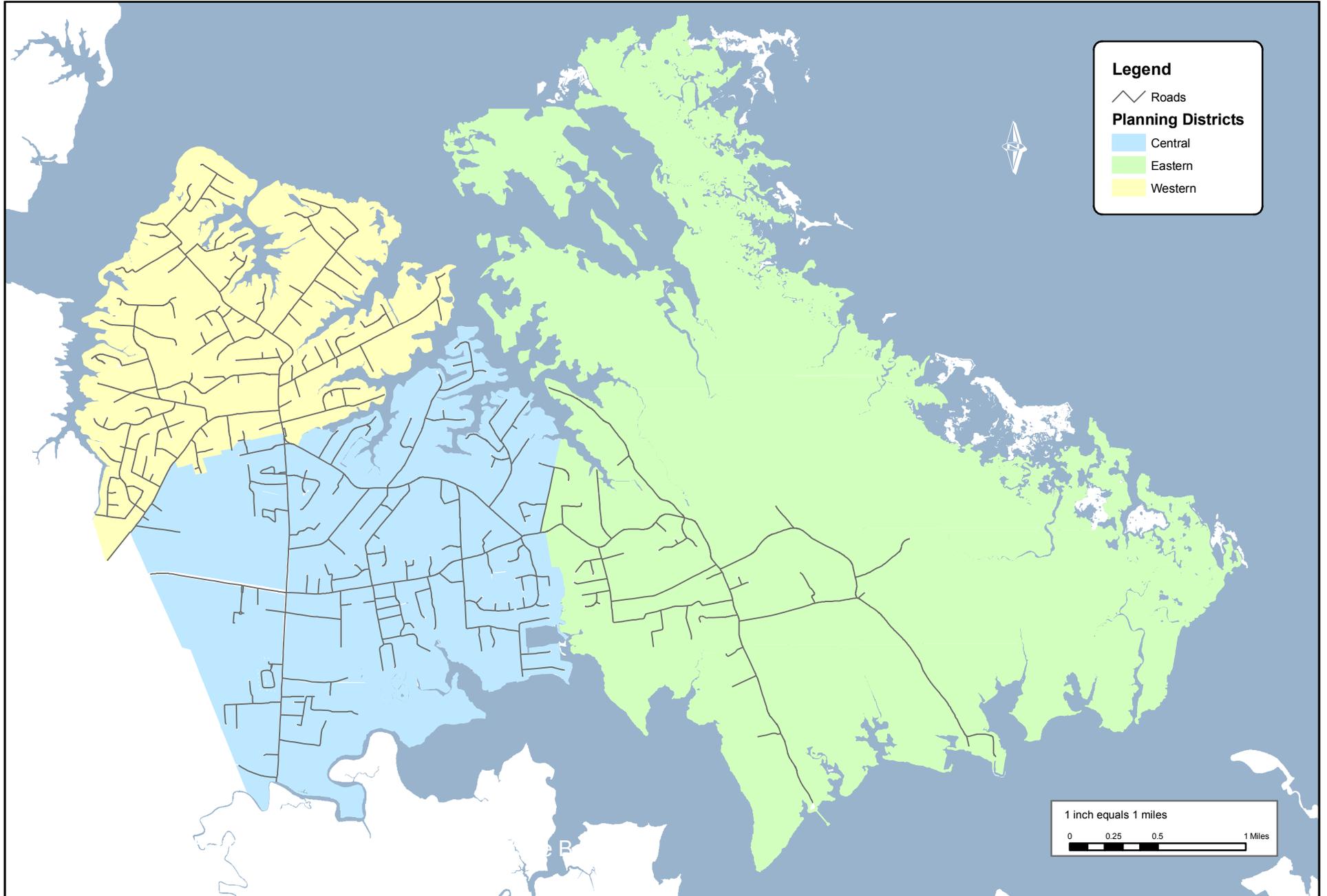
Hunts Neck Public Boat Landing

There have been discussions to improve the public boat landing at the end of Hunts Neck Road. Data has been collected regarding a plan for the site; however, formal plans have yet to be prepared. The City of Poquoson is striving to protect public access to State waters.



Map 8-1

City of Poquoson, Virginia



Legend

- Roads
- Planning Districts**
 - Central
 - Eastern
 - Western

1 inch equals 1 miles

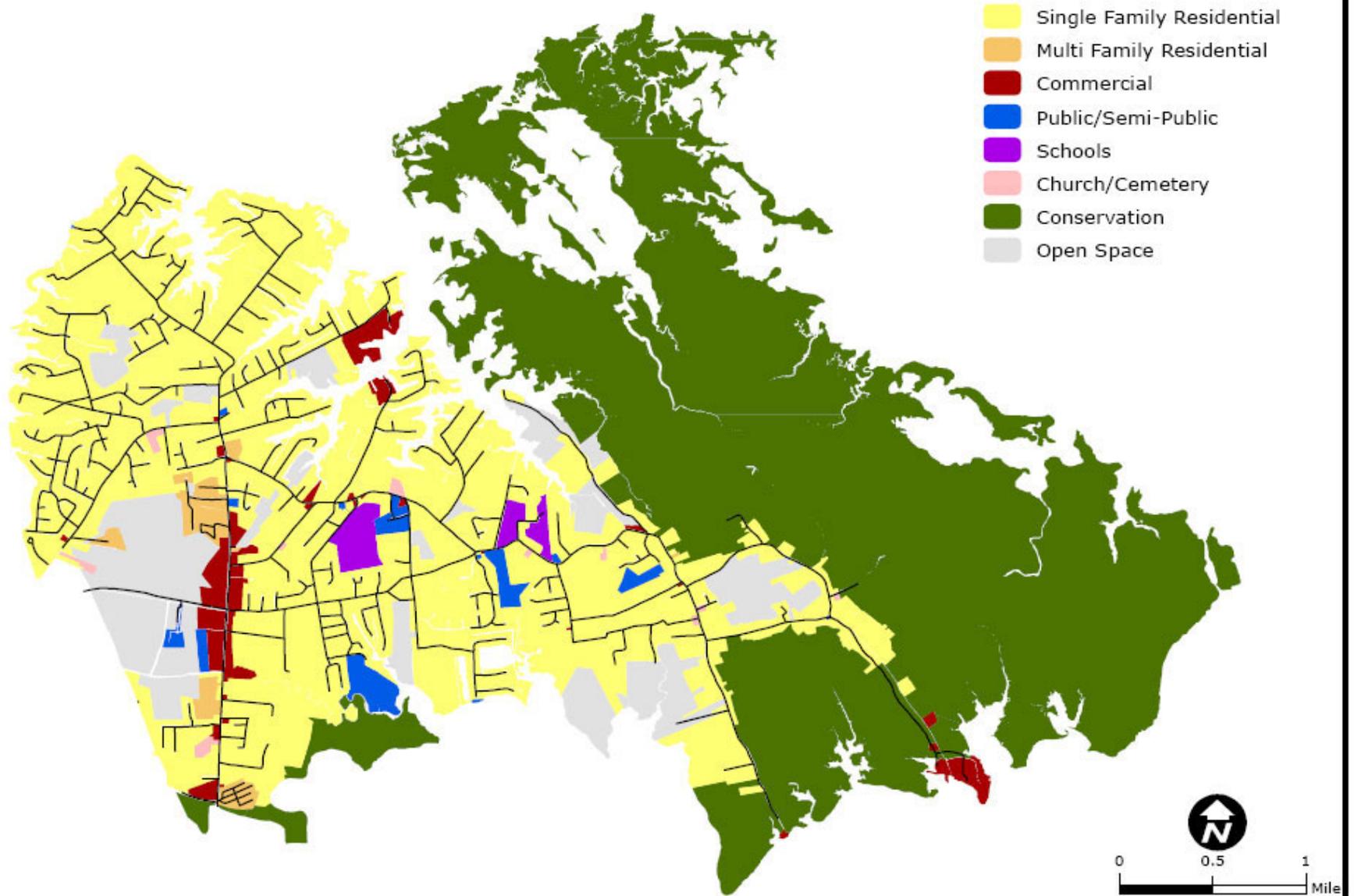
0 0.25 0.5 1 Miles



Planning Districts

Map created by City of Poquoson GIS Staff, May 2008
Data source: City of Poquoson

Map 8-2



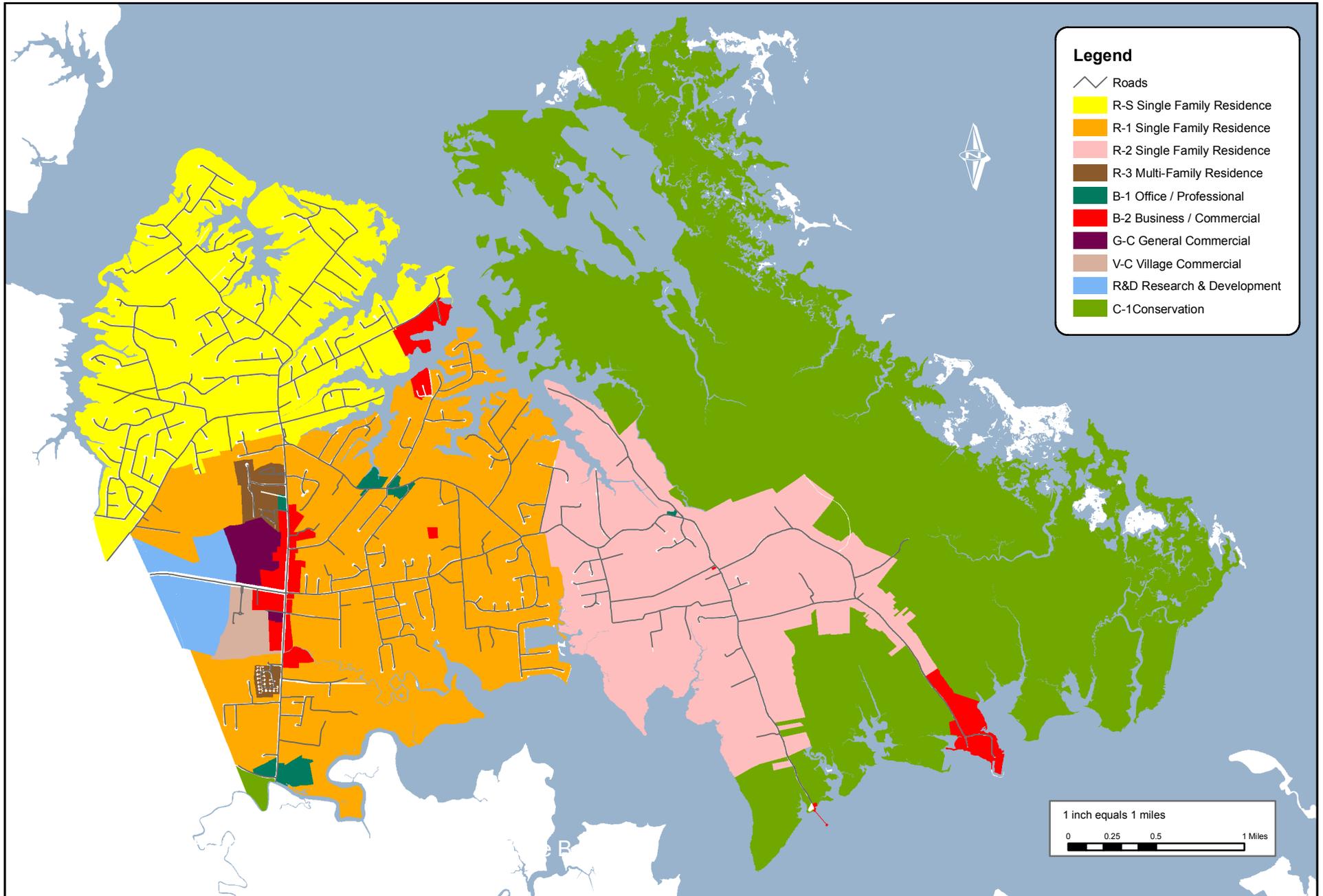
Existing Land Use

Map Created by HRPDC GIS Staff, August 2006
Data Source: City of Poquoson



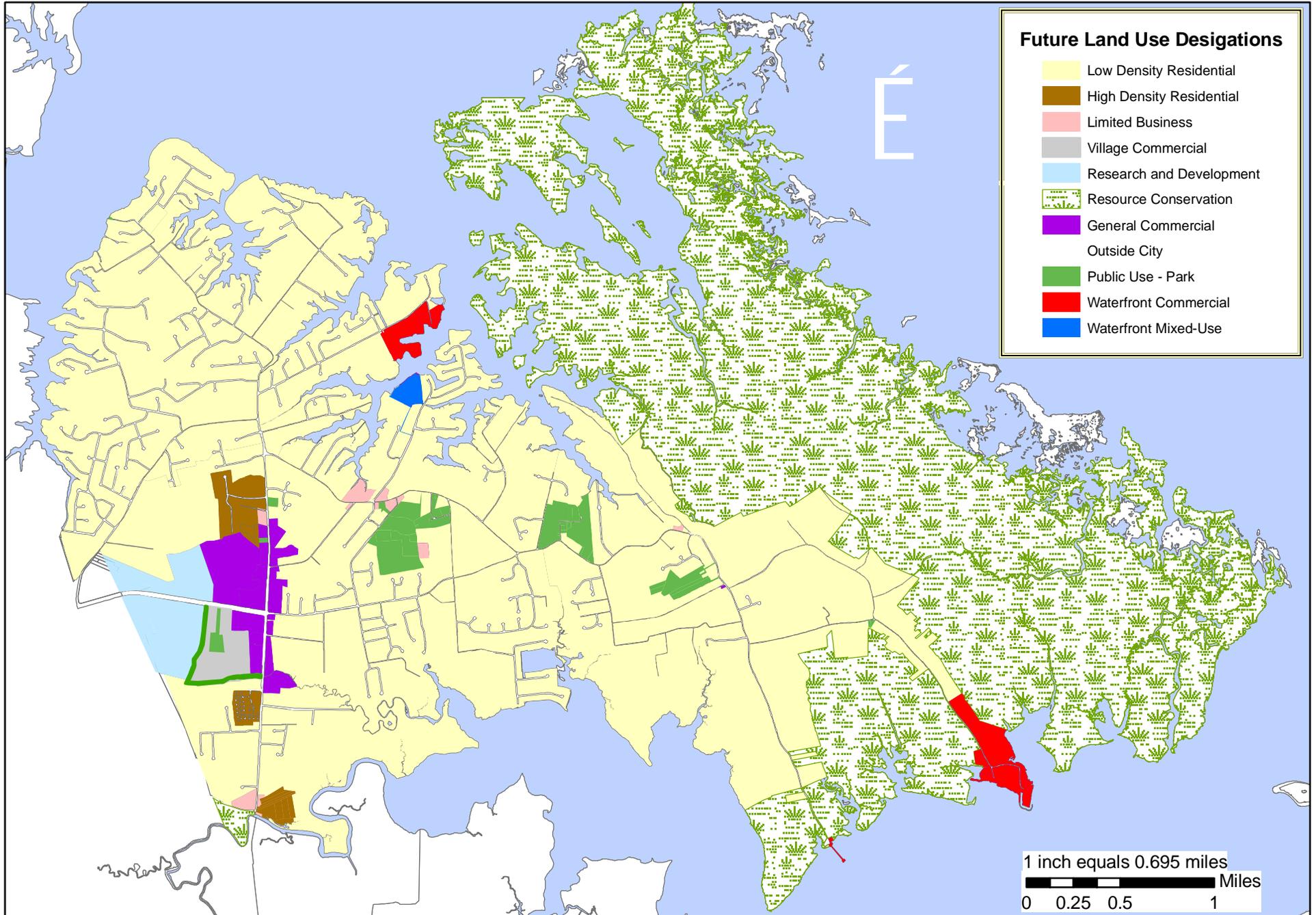
Map 8-3

City of Poquoson, Virginia



Current Zoning for Land Use

Map created by City of Poquoson GIS Staff, May 2008
Data source: City of Poquoson



Future Land Use Map

City of Poquoson Comprehensive Plan
CHAPTER 9- Section I: Work Program

2008-2028

TASK TO BE COMPLETED (INCLUDES SUBORDINATE TASKS IN COMP PLAN NEEDED TO PERFORM TASKS LISTED)	RESPONSIBLE DEPARTMENT(S), or PARTY	ANTICIPATED TIMELINE FOR INITIATION AND COMPLETION				REFERENCE IN COMPREHENSIVE PLAN		
		Immediate Year 1	Short-term Year 2-5	Mid-term Year 6-10	Long-term Year 11-20	CHAPTER - ELEMENT	SECTION (if applicable)	TEXT REFERENCE
Establish Workforce Housing Committee	Planning & Building Inspections, or Outside Consultant	X	X			3 - Housing		Page 3 - 10 thru 3 - 22
Develop ordinances that promote affordable housing types using Comprehensive Plan and Workforce Housing Committee recommendations	Planning & Building Inspections, or Outside Consultant		X	X		3 - Housing		Page 3 - 10 thru 3 - 22
Develop an Economic Development Plan that includes reevaluating initiatives and incentives that foster business development and relocation in Poquoson.	City Council, Industrial Development Authority, City Manager & IDA Staff and/or Outside Consultant	X	X			4 - Economics	Section III: Economic Development	Page 4 - 47, 4 - 48.
Revisit Feasibility Studies for IDA-owned property. Commission additional study if warranted.	City Council, Industrial Development Authority, City Manager & IDA Staff and/or Outside Consultant	X				4 - Economics	Section III: Economic Development	generally recommended
Revise Chapter 4- Economics to reflect FY2010 numbers for Financial Analysis	Finance or Outside Consultant	X				4 - Economics	Section II: Public Finance	Page 4 - 20
Develop an Waterfront Redevelopment Master Plan that evaluates underdeveloped waterfront properties in the City holistically and accounts for public access.	Planning or Outside Consultant			X		4 - Economics	Section III: Economic Development	Page 4 - 45
Develop and Implement Transportation Demand Management (TDM) Plan	Planning, Engineering, Public Works or Outside Consultant			X		5 - Environmental Management	Section I: Environment	page 5-22, Strategy #1
Develop a Shoreline Management Plan	Engineering & Planning or Outside Consultant			X		5 - Environmental Management	Section II: Shoreline	page 5 - 41, Goal #2
Develop and Implement Fire and Rescue Services Master Plan	Fire and Emergency Medical Services	X	X			6 - Community Services & Facilities	Section I: City Government	page 6-14, Strategy #4
Develop and Implement Parks & Recreation Long Range Plan	Parks & Recreation, Parks Advisory Board	X	X			6 - Community Services & Facilities	Section II: Parks & Recreation	page 6-25
Develop a Public Safety Section for the Comprehensive Plan that addresses Public Safety directly	Police, Fire, and Emergency Medical Services		X	X		6 - Community Services & Facilities	Section IV: Public Safety	Space Reserved

City of Poquoson Comprehensive Plan
CHAPTER 9- Section I: Work Program

2008-2028

TASK TO BE COMPLETED (INCLUDES SUBORDINATE TASKS IN COMP PLAN NEEDED TO PERFORM TASKS LISTED)	RESPONSIBLE DEPARTMENT(S), or PARTY	ANTICIPATED TIMELINE FOR INITIATION AND COMPLETION				REFERENCE IN COMPREHENSIVE PLAN		
		Immediate Year 1	Short-term Year 2-5	Mid-term Year 6-10	Long-term Year 11-20	CHAPTER - ELEMENT	SECTION (if applicable)	TEXT REFERENCE
Develop and Implement Infrastructure Improvement Plan	Public Works & Engineering, or Outside Consultant	X	X			7 - Infrastructure	Utilities	page 7-35
Widen Wythe Creek Road from Huntlandia Way to City limit	Public Works & Engineering			X	X	7 - Infrastructure	Transportation	page 7-19
Widen Victory Boulevard from Wythe Creek Road Intersection to City limit.	Public Works & Engineering				X	7 - Infrastructure	Transportation	page 7-18
Perform Buildout Analysis with 2010 Census information to determine Ulitmate Population	Planning or Outside Consultant		X			8 - Land Use	City-wide	page 8-6 & 8-7
Revise Zoning Ordinance	Planning or Outside Consultant	X	X			8 - Land Use	City-wide	page 8-18, Goal #3
Revise Subdivision Ordinance	All departments involved with Development Review or Outside Consultant	X	X			8 - Land Use	City-wide	page 8-18, Goal #3
Revise Site Plan Ordinance	All departments involved with Development Review or Outside Consultant	X	X			8 - Land Use	City-wide	page 8-18, Goal #3
Revise Sign Ordinance	Planning		X			8 - Land Use	City-wide	page 8-18, Goal #3
Create and adopt a Tree Canopy Protection or Tree Preservation Ordinance	Planning or Outside Consultant	X	X			8 - Land Use	City-wide	page 8-18, Goal #3
Optimize GIS technology with upgrades and additional data	Outside Consultant		X			8 - Land Use	City-wide	page 8-18, Strategy #1
Study Land Use Taxation Practice and provide findings to Council	Commissioner of Revenue, Assessor & City Manager or Outside Consultant		X			8 - Land Use	City-wide	page 8-17
Develop Sea Level Rise Adaptation Strategies	Planning or Outside Consultant		X			8 - Land Use	City-wide	page 8-16

Location of Changes	Date of City Planning Commission Recommendation	Date of City Council Adoption	Resolution Number	Planning District
Map 5-3 Chapter 5 – Environmental Management	3/15/2010	3/22/2010	3628	City-wide
Chapter 6, Section II: Parks & Recreation Sub-Element Maps 6-1, 6-2, 6-3 and Table 6-1	6/20/2011	6/27/2011	3726	City-wide

Location of Changes	Date of City Planning Commission Recommendation	Date of City Council Adoption	Resolution Number	Planning District
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Location of Changes	Date of City Planning Commission Recommendation	Date of City Council Adoption	Resolution Number	Planning District
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