

2.0 The Foundation for the Future

2.1 Introduction

The purpose of the Comprehensive Plan is to guide the physical development of our County. The Comprehensive Plan is a policy document that lays out a vision of the future with specific recommendations, including a Future Land Use Plan and changes to zoning and land use regulations to implement the Future Land Use Plan. It is a guide to land use decision-making in Stafford.

2.2 Goals, Objectives and Policies

The goals, objectives and policies provide a framework to guide physical development and change in Stafford County. They set a standard for the County and its residents to meet and provide a benchmark for evaluating the progress of the implementation of the Plan.

The goals are the general aims of Stafford County. The objectives are more specific, providing mid-range strategies to accomplish the goal. Policies are operational actions, usually for the purpose of relatively short-term implementation.

Community Economic Development

Economic Development is about encouraging, leveraging, and facilitating private investment and job growth. Community Development is about building a sense of place, a culture, and programs that foster quality of life. There is no “and” between Community and Economic Development.

Community Development is about community assets, services, and programs. It includes assuring quality water, sewer, broadband, safety, education, and the bricks and mortar that support a quality of life. Community development helps define “Place.” Community Development are the softer (that does not suggest less important) aspects for building a cohesive community and Place.

Economic Development is about the economics of Place. Economic Development is about generating income and, thus, more focused on business. It is about supporting and encouraging existing business growth. It is about attracting new business growth, and the tools to do so. It’s about attracting investment (capital) into the community. New investment is private capital in the form of a new business, capital to help finance business opportunities, and the attraction of dollars from community visitors (tourism).

To encourage economic development, Stafford focuses on helping its existing business expand, fostering entrepreneurship in those existing and potential “startup” businesses, and attracting new business. As important and to support these primary community economic development activities is the “messaging” the County and its Commissions send to the business and investment community—a message of encouragement and invitation while sustain and improving the quality of life for its residents.

Economic growth in Stafford County will have two distinct benefits: it will diversify and expand the tax base and it will provide jobs closer to home for Stafford residents. Over the past two decades, the percentage of workers commuting out of the County for employment has gone down. In 2000, 71 percent of Stafford workers commuted out of the County for work. In 2008, this number decreased to approximately 58 percent, and by 2019, it further decreased to 55.5%, according to the U.S. Census Bureau’s American Community Survey. Continuing to provide more jobs closer to home would have a collateral benefit of taking pressure off the overstressed regional transportation network.

Goal 1. Support the economic vitality of Stafford County through land use policies.

Objective 1.1. Establish targets for commercial and business growth for development and re-development.

Policy 1.1.1. Minimum floor area ratios (FAR) should be established, and maximum FAR requirements should be relaxed for commercial development within mixed use redevelopment and Targeted Development Areas (TDAs), previously referred to as “Targeted Growth Areas (TGAs)”. Encourage an appropriate mix of uses, with a minimum of 25% land and/or building area designated for commercial or business use, depending on the land use.

Objective 1.2. Ensure that land use policies are consistent with attracting and retaining high quality employment options for Stafford residents.

Policy 1.2.1. A rezoning to a commercial or industrial use on land adjacent to the Urban Services Area will support approval of an expansion of the Urban Services Area boundary to extend water and/or sewer to the commercial or industrial zoned property.

Policy 1.2.2. Encourage the continued promotion of the County's Technology Zone Ordinance, which provides incentives for economic growth that will foster the development, maintenance, and expansion of commercial and industrial businesses engaged in technological research and design.

Policy 1.2.3. The County will encourage the development of accessible, convenient and attractive commercial and industrial locations within the Urban Services Area.

Policy 1.2.4. Retail and other commercial nodes in mixed use areas and office and industrial parks will serve local residential communities and be accessible to transportation including roads, rail and air.

Policy 1.2.5. For the purpose of attracting and retaining businesses that offer highly skilled and well-paying jobs, the County will continue to market and promote its many assets including a highly educated workforce, excellent school system, abundant interstate access, a state-of-the-art regional airport, a variety of shopping, lodging, dining and recreation opportunities, and its many heritage tourism assets.

Objective 1.3. Promote alternative rural economic development (i.e., agri-tourism, eco-tourism, home-based businesses, and telecommuting.).

Policy 1.3.1. Land use policies should establish incentives for rural economic development and facilitate the development of these economic opportunities.

Policy 1.3.2. The County will capitalize on its location and wealth of cultural, historical and natural resources.

Sustainability

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. A sprawling growth pattern of low-density development, which disperses residents over a wide area and consumes resources at a rate greater than can be replenished would be a detriment to sustainable growth.

"Smart growth" encapsulates a range of development and conservation strategies that help protect our health and natural environment and make our communities more attractive, economically stronger, and more socially diverse. Smart growth is our approach to development based on 10 established principles that encourage a mix of building types and uses, diverse housing and transportation options, and infill development within existing neighborhoods. Smart Growth policies are recognized nationwide and are promoted by the U.S. Environmental Protection Agency and other partner organizations. More information on Smart Growth is available at www.epa.gov/smartgrowth.

The location of roads and infrastructure shapes future development patterns. Builders and developers look for land with good access, water, and sewer extension as major growth-inducing factors. Road improvements, construction of public facilities, and water and sewer service can be used to direct growth into designated development areas.

Good road access and water and sewer utilities are only a part of the picture. Other facilities that serve a community include schools, emergency services, parks, and libraries. Communities strive to maintain adequate public facilities as they grow. Providing adequate facilities while accommodating growth and development is a balancing act. New development creates additional demand on public infrastructure. Newly developing areas may lack the necessary infrastructure to adequately serve citizens in these areas. Certain essential facilities such as water and sewer utilities and road access are required for new development in the Urban Services Area (USA). Other facilities, that are not essential for the individual development, but are important to achieve a high quality of life, often occur later as buildout and needs increase. Many of these facilities benefit an entire area, such as a school or regional park and most often extend beyond that of an individual project. While it is unfair for individual projects to carry the burden of upgrading facilities for an entire area, allowing development to occur prior to adequate facilities in place can have negative consequences, such as unsafe roads or overcrowded classrooms. **The County should strive to ensure that adequate public facilities throughout the County are provided at a pace commensurate with the level of growth.**

Goal 2. Manage growth and development in a smart and sustainable manner.

Objective 2.1. Make development, land use, transportation, utility and other public facility decisions consistent with the Comprehensive Plan.

Policy 2.1.1. Review of all development proposals should include an analysis on consistency with the Comprehensive Plan. Proposals that are inconsistent with the Comprehensive Plan should be revised or denied.

Policy 2.1.2. Stafford County should encourage development proposals that are consistent with the Comprehensive Plan, and land use and other regulations.

Policy 2.1.3. Future development proposals should strive to incorporate the following characteristics, many of which are consistent with Smart Growth principles:

- Maintains or improves the quality of life for all residents.
- Is sustainable or enhances sustainability
- Serves a range of transportation needs
- Protects natural, cultural and historic resources
- Considers aesthetic values
- Provides adequate provisioning of public facilities necessitated by the development
- Minimizes impact to the environment, including conservation of green space and tree preservation.
- Provides appropriate mitigation for degraded levels of service
- Incorporates energy conservation measures
- Contributes to a pleasing community character
- Minimizes land use conflicts

Policy 2.1.4. Plans that are incorporated as elements in this Plan by reference should be updated to be consistent with the goals, objectives and policies of this Plan.

Policy 2.1.5. Amendments to the Comprehensive Plan should be made to serve the general public interest. Amendments should be based on a general need in response to the current context of development patterns and community vision, and not based solely on a specific development proposal.

Policy 2.1.6. The Erosion and Sediment Control, Stormwater Management, Water, Sewer and Sewage Disposal, Wetlands, Subdivision and Zoning and any other relevant chapters of the Code of Stafford County should be updated to be consistent with the goals, objectives and policies of the Comprehensive Plan.

Policy 2.1.7. This Plan should be implemented with respect to and in consideration of private property rights.

Objective 2.2. Direct growth into the Urban Services Area.

Policy 2.2.1. Establish a clear Urban Services Area boundary in a location that is suitable to accommodate residential and commercial development characterized by the presence of public facilities, utilities, and government services.

Policy 2.2.2. The County will establish measures to direct new development within the USA to reduce the growth pressure in the rural parts of the County.

Policy 2.2.3. Expansion of the USA boundary is discouraged. However, any increase of the USA boundaries that expands areas of higher density development and extension of or connection to public water and sewer should only be permitted after demonstration of conformance with the following criteria:

- The new boundary is consistent with the goals and objectives of the Comprehensive Plan;
- The proposed expansion would not lead to extension of water and/or sewer to additional lands outside the USA;
- The boundary change and associated land use will have minimal impact on land, land uses, public facilities or transportation outside of the new boundary;
- There is a presence of adequate services -OR-
- Extensions to sewer lines would provide the benefit of minimizing the potential impact of existing failing septic drainfields on the watershed -OR-
- The land area in whole or in part must have been zoned commercial or industrial as of the original date of adoption of this Plan.
- And in all cases, with consideration of input from area residents and property owners.

Policy 2.2.4. The County shall designate Targeted Development Areas (TDAs) in locations appropriate to accommodate higher density residential, and more intense commercial, mixed-use, or industrial development, in proximity to adequate transportation facilities, and within the current USA. The TDAs in total should be sufficient to accommodate half of the projected residential and commercial growth for the 20-year planning period. Each TDA may have its own appropriate type of targeted “development”, be it residential, commercial (retail), office, or more intense industrial uses.

Policy 2.2.5. The County shall establish mixed-use districts and design standards for development in the TDAs. These districts should have a residential density of at least four dwelling units per acre, and minimum commercial floor area ratio of 0.40. The design standards should incorporate principles of smart growth, new urbanism and traditional neighborhood development.

Policy 2.2.6. The County shall encourage within the TDAs pedestrian-oriented neighborhoods and town centers composed of a variety of housing types and densities, incorporating shopping and workplace opportunities, and public facilities.

Policy 2.2.7. Dense, compact mixed-use developments should meet the following criteria:

- Preferably be within the Targeted Development Areas
- Have a sufficient density and scale to support a mix of uses, walkability, and public transit
- Be designed, located, and programmed to offer alternatives to single occupancy vehicle trips, by enabling safe and effective pedestrian and bicycle access to multiple uses and activities and by being accessible to public transportation
- Be sensitive to existing environmental features and protect natural resources
- Incorporate sustainable design features
- Include a mix of housing types for all income levels
- Mitigate its impacts to County services, ensuring acceptable levels of service are maintained

- Ensure safe ingress and egress from new developments onto major arterials and collector roads.

Policy 2.2.8. To the extent possible, feasible and consistent with other goals of the Comprehensive Plan, the County may adopt financial and other incentives to direct development into the TDAs.

Policy 2.2.9. New development projects for residential neighborhoods and commercial sites located within the Urban Services Area should be connected to the public water supply and the public sewer system.

Policy 2.2.10. At least 80 percent of the future cumulative residential growth should be located inside the Urban Services Area. The progress toward this policy should be evaluated on an annual basis through the tracking of building permit activity. Appendix C of the Comprehensive Plan outlines the 2021 evaluation of this policy.

Policy 2.2.11. Cluster subdivisions within the Urban Services Area, including those with increased density should meet the criteria established in Section 3.9 of the Land Use chapter of the Comprehensive Plan.

Objective 2.3. The County will consider infill development and redevelopment within the USA, including TDAs. Infill development includes the process of development on vacant, bypassed and underutilized land within built up areas of existing communities where infrastructure is already in place, and redevelopment of sites in these areas.

Policy 2.3.1. Redevelopment and infill development should be of an appropriate building scale and compatible character with surrounding uses.

Policy 2.3.2. The County will work with the private sector in efforts to revitalize commercial, office and industrial areas and corridors.

Policy 2.3.3. In-fill and redevelopment efforts will be considered in appropriate areas in the Urban Services Area, and the County's consideration will focus on Boswell's Corner, Downtown Stafford, Falmouth Village, Falmouth Gateway (east of I-95), and Berea (west of I-95). Special Area plans should be adopted as elements of this Comprehensive Plan for these areas for the purpose of establishing future land use patterns, types, and intensities, and circulation and building design.

Policy 2.3.4. The County shall, where appropriate, consider alternatives to conventional zoning regulations to support a development pattern consistent with the goals and objectives of the Redevelopment Areas and allow infill development that minimizes impact on adjacent uses. Examples include performance and incentive zoning, sometimes referred to as form-based codes.

Objective 2.4. Discourage growth in the Rural areas outside the Urban Services Area.

Policy 2.4.1. Areas outside of the USA will be characterized by large lot residential subdivisions, agricultural activities, and open land. These rural areas will have limited public services, utilities and facilities.

Policy 2.4.2. Water and/or sewer should not be extended beyond the current boundaries of the USA with the following exceptions:

- Allow for the extension of public sewer utilities outside of the USA only where there has been documented risk to public health due to a failure of an on-site septic system or known failures to septic systems in the nearby area, and where there is limited potential for future expansions of the public sewer system, and application of the current pump and haul policy would be financially excessive to County Utility rate payers.
- Allows for the extension of public water utilities outside of the USA only to improve water quality by completing loops for water lines previously constructed.
- Allow the extension of public sewer and water utilities outside of the USA for industrial zoned properties only in cases where such utilities had previously been extended to the properties and/or are located adjacent to the property.
- On a case by case basis, allow for the extension of public water and sewer utilities outside the USA for data center sites.

Policy 2.4.3. Road improvements should be focused on the TDAs, and to a lesser extent on the USA to support the areas of targeted growth. Safety and general welfare of the public should be the primary consideration for road improvements outside the USA.

Policy 2.4.4. The subdivision and zoning ordinances should be updated to incorporate the highest standards allowable under Virginia statutes for building and developing in agricultural areas.

Policy 2.4.5. The County should educate residents and developers that public facilities and access to public services may be limited outside the Urban Services Area.

Objective 2.5. The County may from time to time establish water and sewer service areas in locations outside of the designated Urban Services Area where a documented need exists for the protection of public health, safety, and welfare relative to existing uses and developments, and not to promote new development.

Policy 2.5.1. Allow for the extension of public water and sewer utilities to established rural residential neighborhoods and crossroads that may not be contiguous with the main Urban Services Area and where the sizes of lots preclude the construction of new systems and aging private systems are no longer sustainable.

Policy 2.5.2. Designate limited water and sewer utility service areas in the vicinity of Lake Arrowhead, Hidden Lake, and the Roseville neighborhoods, and the Hartwood Elementary School area as defined within this Plan. The mapping should be amended if the need arises in additional areas.

Policy 2.5.3. Funding for the utility lines to serve the areas referenced in Policy 1.5.2 shall be achieved by obtaining grants, establishing service districts, or by other means, and not at the expense of the utility rate payers.

Policy 2.5.4. Public water and sewer lines may need to be located outside of the Urban Services Area or Water and Sewer Service Areas to reach the designated service areas. This policy does not support the rezoning of land along these lines that would increase the intensity of development outside of the designated service areas nor does this policy support the extension of utility lines to serve by-right residential subdivisions or commercial development.

Objective 2.6. Preserve rural and agricultural areas of Stafford County and establish mechanisms for ensuring their continued protection from development.

Policy 2.6.1. The County should continue to monitor progress of the Transfer of Development Rights (TDR) Program.

Policy 2.6.2. The County should continue support of the Purchase of Development Rights (PDR) program, and other land conservation programs.

Policy 2.6.3. The County should encourage private landowner dedication of conservation easements and provide educational opportunities regarding land conservation.

Policy 2.6.4. Calculations to establish the number of development rights for a parcel should exclude areas located on slopes of 25% or greater, hydric soils, and 5% of the gross tract size for right of way dedication.

Policy 2.6.5. The County supports the preservation of rural character through the clustering of residential development. Cluster development would permit smaller lot sizes in exchange for preservation of open space, farmland, sensitive resources, and forested areas and should be designed in accordance with the criteria established in Section 3.9 of the Land Use chapter of the Comprehensive Plan.

Policy 2.6.6. Cluster developments are recommended in the areas designated in Figure 3.9 of the Land Use chapter of the Comprehensive Plan. These areas are within or near the USA, public facilities and services.

Policy 2.6.7. Utility scale solar energy facilities should avoid development of lands with prime agricultural soils, significant forest tracts, and lands with limited natural buffers for screening, and/or in close proximity to residential developments and public drinking water sources.

Objective 2.7. Phase growth to coincide with the establishment of necessary public infrastructure and services.

Policy 2.7.1. Implementation of TDAs should be phased based on the availability of public services and adequate infrastructure, projected population growth and projected residential and commercial growth.

Policy 2.7.2. New development proposals for projects that require a zoning reclassification and are located within the USA boundaries, that are dependent upon future infrastructure and services, should not develop until the projected infrastructure and services have been implemented or are under construction. Provision of future improvements can be achieved through proffered contributions.

Objective 2.8. Integrate land use and transportation decisions.

Policy 2.8.1. The County shall apply the requirements of Virginia Administrative Code Chapter 527, the traffic impact analysis regulations, to all projects potentially eligible under the statute to properly understand the impacts that land use changes may have on the transportation network. Land use proposals that have a negative impact on the transportation network should fully mitigate impacts to achieve adequate levels of service.

Policy 2.8.2. The County will prioritize road, pedestrian and transit improvement within the Urban Service Areas to include consideration of Levels of Service as well as Transportation Bond Projects.

Policy 2.8.3. Prior to constructing new roads or adding capacity to roads outside the Urban Services Area, the County should conduct an impact assessment of the potential for increased development as a result of the road project.

Policy 2.8.4. The County should maintain its Traffic Model to gauge the effect of growth, development, road improvements and changing transportation patterns on the transportation network.

Fiscal Responsibility

Residential development, although sometimes necessary to accommodate population growth, on average does not pay for itself. As of calendar year 2008, on average, each new “by-right” single-family dwelling in Stafford County (developed without cash proffers to mitigate the cost of public services) creates capital infrastructure costs of an estimated \$185,446. Infrastructure includes roads, schools, parks, and other public facilities. The dollar amount is based on a linear projection, showing that as population increases all future facilities would be developed to achieve a desired service level without consideration for deficiencies or excess capacity. The number may vary based on inflation and construction costs. This does not include operating costs, such as maintenance cost and personnel salaries.

In contrast, depending on how it is maintained, open space is budget neutral or “gives back” more in revenues than it uses in public services, and commercial development generates more revenues than the cost of public services that it consumes.

Exploding housing growth creating an imbalance of residential to commercial development can have the effect of decreasing acceptable levels of public services and increasing County debt.

Goal 3. Ensure that growth and development is managed in a fiscally responsible manner.

Objective 3.1. Adopt a land use plan and establish a growth management system that will accommodate the projected year 2036 population of 198,815.

Policy 3.1.1. To the extent possible, the future land use map should limit potential residential growth to the number of dwelling units needed to accommodate forecasted population growth.

Policy 3.1.2. Amendments to the Comprehensive Plan, including the Land Use Map, should not create additional excess residential capacity.

Policy 3.1.3. The County will maintain and update population and housing data and future projections that will be used to:

- Evaluate development proposals
- Provide adequate housing opportunities for all residents
- Assure that adequate levels of service are met
- Deliver adequate public services
- Generate employment opportunities to meet the needs of a growing population
- Ensure adequate transportation planning
- Measure growth trends against the Comprehensive Plan

Objective 3.2. Stafford County should use Level of Service Standards to assist in identifying which existing lands, facilities or services should be extended, widened, removed, relocated, vacated, narrowed, abandoned, or changed due to current or future developments.

Policy 3.2.1. At a minimum, the Level of Service standards should address roadway systems, transit, libraries, storm water quantity and quality, parks and recreation, solid waste collection and disposal, public safety, schools, water, sanitary sewer and administration.

Policy 3.2.2. The Comprehensive Plan should incorporate Levels of Service Standards for which the inputs are now known.

Policy 3.2.3. The County should identify missing information needed to establish some Levels of Service Standards and implement a plan to obtain this information. The Board of Supervisors should initiate an amendment to the Comprehensive Plan to incorporate additional Levels of Service Standards as needed.

Objective 3.3. The Board of Supervisors should use the Public Facilities Plan, as included in Chapter 5 of this document, as a needs assessment for the annual Capital Improvements Plan (CIP).

Policy 3.3.1. The Public Facilities Plan should assess existing and future public facility needs, forecasting when and where expanded and new public facilities will be needed to most efficiently and conveniently serve all County residents.

Policy 3.3.2. The Public Facilities Plan should be implemented to apply the Levels of Service Standards for public facilities and services.

Objective 3.4. Identify the public costs of residential growth and development, and its potential impact on the County's budget and property taxes.

Policy 3.4.1. The County should adopt a Financial Impact Model as an element of the Comprehensive Plan and prepare and present an annual update to the Board of Supervisors.

Policy 3.4.2. The Financial Impact Model should incorporate the Levels of Service Standards, and model for a period of twenty years the projected revenues and expenses for the County based on projected population growth, and projected residential and commercial development.

Policy 3.4.3. The Comprehensive Plan should estimate the incremental capital costs of new residential units.

Objective 3.5. Ensure that impact statements are complete and incorporated into the development review process.

Policy 3.5.1. Where not specified by state statute, the County should establish standards for impact statements.

Policy 3.5.2. Development proposals or amendments to the Comprehensive Plan that do not include required and complete impact statements should be rejected.

Objective 3.6. Use infrastructure as a tool to guide development into locations where the land is most cost effectively served.

Policy 3.6.1. Future public facilities should be encouraged to be located within the USA. Exceptions may be made when the only way to meet Level of Service Standards or location criteria contained in the Public Facilities Plan is to locate the facility outside the USA or when land is dedicated to the County and the development of the site and any required infrastructure would not be cost prohibitive.

Policy 3.6.2. Priority should be given to meeting capital improvement, road and other infrastructure needs within the TDAs, and to a lesser extent the remainder of the USA.

Objective 3.7. To the maximum extent possible, the County should collect funds from land development projects to pay for the costs of growth and development.

Policy 3.7.1. The County should maintain an up-to-date assessment of the capital costs of residential and non-residential development.

Policy 3.7.2. The County should maximize the collection of transportation impact fees pursuant to Virginia Code Sec. 15.2-2317 et seq.

Policy 3.7.3. The County should collect proffers on rezoning applications to the extent possible and as allowed by Virginia Code to meet capital improvement needs.

Policy 3.7.4. Providing adequate monetary proffer contributions for a development proposal shall not be the sole deciding factor when considering a zoning reclassification.

Policy 3.7.5. For land development located within a dam break inundation zone, the County should establish a system for collecting fifty percent of the costs for necessary upgrades to impounding structures, pursuant to Sec. 15.2-2243.1.

Policy 3.7.6. The County should regularly update and/or recalculate transportation impact fees based on an updated transportation model to reflect future costs and mitigate degraded transportation Levels of Service.

Policy 3.7.7. Consider the need to develop, amend or repeal proffer guidelines pursuant to the latest State Code directives.

Environment

Our decision to occupy and alter Stafford County's landscape has resulted in increased volumes and concentrations of specific pollutants in the air, in surface and ground waters, and in the soil. These pollutants can harm both the natural and the human environment.

Although Stafford County does not have to contend directly with the more serious forms of pollution associated with heavy industry, discharges from factories in other parts of the region and country and pass-through traffic on Interstate 95, U.S. Route 1, and U.S. Route 17 have indirectly created a negative effect on air and water quality in the County. Within the County, the conversion of land to urban uses and our dependence on the automobile have resulted in increased amounts of pollution.

- The County has attained National Ambient Air Quality Standards as part of the Clean Air Act.
- Some streams and lakes in Stafford County, and the Potomac River, are characterized by poor water quality.
- Removal of natural vegetation along stream banks and shorelines has increased stream bank erosion. Land use and development activities have altered stream flows, and transported pathogens and pollutants into streams, wetlands and lakes.
- The County continues to lose open space, much of which is significant for protecting environmental resources. It is desirable to conserve portions of the County's land in a condition that is as close to a predevelopment state as is practical.
- Development impacts have led to increased light and noise pollution as well as an increase of flooding on low-lying roads.
- The County is located in the Chesapeake Bay watershed and as such, its' tidal water bodies are subject to sea level rise which can adversely affect water dependent activities and waterside properties.
- Roads in the County subject to recurring flooding, including, but not limited to Brooke Road, Andrew Chapel Road, and Harrell Road, create a public safety hazard and require regular costly maintenance.

Although faced with many threats, Stafford is rich in diverse, natural resources. These resources present opportunities for education, recreation, eco-tourism and buffers to the impacts of development. Chief among these resources are the Crow's Nest and Widewater peninsulas. Located approximately seven miles east of the County Courthouse, Crow's Nest encompasses 3,884 acres of contiguous forestland. It is bounded by Brooke Road (Rt. 608) on the West, Accokeek Creek to the North, and Potomac Creek to the South. The confluence of these creeks and the Potomac River is at the eastern tip of the peninsula. Similarly situated, the Widewater peninsula is located on the Potomac River and Aquia Creek. Widewater State Park, situated on approximately 1,200 acres, comprises most of the peninsula.

In addition to natural assets, there are significant cultural and historical resources on the Peninsulas. The continued protection of the Crow's Nest peninsula as a public Natural Area Preserve and development of Widewater State Park will provide public access for low-impact educational and recreational activities; provide additional public water access points in the Chesapeake Bay watershed; preserve important historical and archeological sites; and protect natural/open spaces. Suitable uses for the parks include fishing, wildlife observation and photography, environmental and historical education, hiking, and limited deer hunting dependent upon needs for deer population maintenance and control.

Shoreline and Streambank Erosion

Stafford County contains miles of tidal and non-tidal shoreline. These shorelines provide valuable environmental and economic assets to the County. Erosion can contribute to the sedimentation and pollution of streams, rivers, and the Chesapeake Bay, resulting in the loss of wildlife habitat and reduced water quality and, when severe, threatening property. The increased rate and volume of stormwater runoff associated with development can accelerate the natural process of erosion. Protecting these assets from erosion is important. Monitoring and management of the shorelines has occurred and will continue to occur to prevent degradation of the County's shoreline assets.

As of 2015, 53% of the land use along county shoreline riparian areas is forested, with nearly a third of this forested area being along the Rappahannock River. About a quarter of the land use is residential with nearly 83% of residential land use occurring along the Potomac River and its tributaries. This means that homeowners are largely given the burden of shoreline management in developed areas. Typically, when shorelines exhibit erosion, property owners have hardened the shoreline.

Historically, shoreline erosion rates have been very low across the county. However, there are some areas of critical erosion such as the Potomac River and the lower reaches of Aquia Creek and Potomac Creek tributaries. Erosion in these areas is caused by the fetch and energy of the particular water body, the topography, condition of the existing shoreline, and previous alteration of the shoreline.

Erosion is common among non-tidal streams in the county. Streambank erosion has resulted from increased development pressures. As the amount of impervious surfaces increase on developed land, rainfall gets routed directly off-site rather than getting a chance to permeate through the ground. This increases water volumes in streams and causes erosion along the stream bank.

Proper monitoring and mitigation of erosion along streambanks ensures the County remains in compliance with the Chesapeake Bay Act regulations. Protecting the assets the shorelines provide ensure a healthy economy. A healthy economy and a healthy Chesapeake Bay are integrally related.

Goal 4. Stafford County encourages its citizens and businesses to preserve and protect Stafford's natural and environmental resources through voluntary efforts.

Objective 4.1. Ensure that environmental protection efforts meet federal and state mandates with minimal impacts on the County.

Policy 4.1.1. Stafford County recognizes that certain environmental requirements are mandated by federal and state regulations, including, but not limited to, the state Chesapeake Bay Preservation Act, Wetlands Code, the federal Clean Water Act, Clean Air Act, and National Flood Insurance Program and planning for sea level rise. When trying to meet the objectives of state and federal mandates and a menu of options are provided to meet objectives, emphasis should be placed on incentive-based measures.

Policy 4.1.2. Stafford County should encourage and support community and staff level education programs to educate the public, its citizens and businesses about green programs, environmental best management practices, risks of flooding and sea level rise and other federal and state environmental mandates and requirements.

Policy 4.1.3. Development proposals that are projected to cause a substantial increase in auto related air pollutants should provide a transportation management strategy which minimizes dependence on single occupant automobiles. This shall apply to residential and non-residential development proposals that meet the requirements to submit a traffic impact analysis in accordance with VDOT criteria. The types of strategies employed may include, but not be limited to:

- Provision of an interconnected street network within a development and to adjoining property to potentially shorten trip lengths
- Incorporation of pedestrian and bicycle facilities into the design of the development
- Promotion of ride sharing programs by employment centers
- Design commercial projects to limit vehicle trips within the shopping complex
- In mixed use developments, focus residential uses within ¼ mile of shopping and employment opportunities, with the design, configuration, and mix of uses emphasizing a pedestrian oriented environment.
- Enhancement of telecommunications infrastructure to promote work from home opportunities
- Provision of shuttle buses to transportation nodes.

Objective 4.2. Preserve and improve air quality.

Policy 4.2.1. Establish land use patterns and transportation facilities that encourage the use of public transportation and reduce trip lengths to reduce emissions of nitrous oxide, carbon monoxide, and hydrocarbons from automobiles.

Policy 4.2.2. Implement transportation strategies that reduce auto travel and improve traffic flow, thereby reducing auto emissions.

Policy 4.2.3. Encourage the application of state-of-the-art technology toward the reduction of emissions from stationary sources of air pollution.

Objective 4.3. Prevent and reduce pollution of surface and groundwater resources. Protect and restore the ecological integrity of streams in Stafford County.

Policy 4.3.1. Continue to study and evaluate the need for the establishment of a Stormwater Utility.

Policy 4.3.2. Maintain a best management practices (BMP) program for Stafford County, ensure that new development and redevelopment complies with the County's BMP requirements and recommended BMP practices from the Virginia Institute of Marine Sciences (VIMS) Center for Coastal Resources Management, and monitor the performance of BMPs. Update BMP requirements as newer, more

effective strategies become available.

Policy 4.3.3. Preserve the integrity and the scenic and recreational value of stream valleys when locating and designing storm water detention and BMP facilities. In general, such facilities should not be provided within stream valleys unless they are designed to provide regional benefits or unless the stream has been significantly degraded.

Policy 4.3.4. When facilities within the stream are appropriate, encourage the construction of facilities that minimize clearing and grading, such as embankment-only ponds, or facilities that are otherwise designed to maximize pollutant removal while protecting, enhancing, and/or restoring ecological integrity.

Policy 4.3.5. Update erosion and sediment regulations and enforcement procedures as new technology becomes available. Minimization and phasing of clearing and grading are the preferred means of limiting erosion during construction.

Policy 4.3.6. Where practical and feasible from a design and cost standpoint, retrofit older stormwater management facilities to perform water quality functions to better protect downstream areas from degradation.

Policy 4.3.7. Protect water resources by maintaining high standards for discharges from point sources.

Policy 4.3.8. Establish a program to monitor Stafford County's surface and groundwater resources.

Policy 4.3.9. Encourage land use activities to protect surface and groundwater resources.

Policy 4.3.10. For new development and redevelopment, apply better site design and low impact development (LID) techniques, and pursue commitments to reduce stormwater runoff volumes and peak flows, to increase groundwater recharge, and to increase preservation of undisturbed areas.

Policy 4.3.11. Encourage watershed management planning and consider any watershed management plans that are adopted or endorsed by the Board of Supervisors as a factor in making land use decisions.

Policy 4.3.12. Optimize stormwater management and water quality controls and practices for redevelopment consistent with revitalization goals.

Policy 4.3.13. Natural wetlands should not be used as silt ponds, or serve as the receiving area for stormwater.

Objective 4.4. Protect the Potomac Estuary, the Rappahannock, and the Chesapeake Bay from the avoidable impacts of land use activities in Stafford County.

Policy 4.4.1. Ensure that new development and redevelopment complies with the

County's Chesapeake Bay Preservation Ordinance, as applied to Chesapeake Bay Preservation Areas adopted by the Board of Supervisors.

Policy 4.4.2. Evaluate the need to strengthen the County's Chesapeake Bay Preservation Ordinance by amending the Ordinance to include, but not be limited to, additional protection of streams as allowed under the State statute. Implement all recommendations contained in the *Chesapeake Bay Preservation Area Plan* element of the Comprehensive Plan.

Policy 4.4.3. Where tidal shoreline erosion control measures are needed, consider recommendations contained in the "Shoreline Protection Policies" in the *Chesapeake Bay Plan* element of the Comprehensive Plan dated November 2001.

Policy 4.4.4. Boating and other tidal shoreline access structures should be sited, designed, and constructed in a manner that minimizes adverse environmental impacts and account for storm surges and sea level rise. Where County approval of tidal shoreline access structures is needed, the following guidelines should be consulted and considered in the decision-making process: the Chesapeake Bay Program's document entitled "Chesapeake Bay Area Public Access Technical Assistance Report;" and the following guidelines issued by the Virginia Marine Resources Commission; "Shoreline Development BMPs," "Wetlands Guidelines," "Subaqueous Guidelines," and "Integrated Guidance for Tidal Shorelines;" and utilize VIMS Decision Trees for onsite review and subsequent selection of appropriate erosion control/BMPs:
<http://ccrm.vims.edu/decisiontree/index.html>

Policy 4.4.5. Support efforts to mitigate or compensate for losses of wetlands impacted by shoreline structures and development through mechanisms such as in-lieu fees for tidal wetlands impacts and preserving open spaces adjacent to marsh lands to allow for inland retreat of the marshes under rising sea level.

Objective 4.5. Conserve and restore tree cover on developed and developing sites.

Policy 4.5.1. Establish and implement tree cover requirements, prioritizing tree preservation over tree planting where existing tree cover exists, specifically on new site developments.

Policy 4.5.2. Protect or restore the maximum amount of tree cover on developed and developing sites consistent with planned land use and good silvicultural practices.

Policy 4.5.3. Use open space/conservation easements as appropriate to preserve woodlands, monarch trees, and/or rare or otherwise significant stands of trees, as identified by the County.

Objective 4.6. Establish mechanisms to protect scenic and/or sensitive environmental resources in perpetuity.

Policy 4.6.1. Create open space and conservation easement policies.

Policy 4.6.2. Create an Environmental Quality Corridor (EQC) system to identify, protect and restore areas that have a desirable or scarce habitat; provide “connectedness” for wildlife movement; desirable aesthetic features; and/or pollution reduction capacities, prioritizing stream valleys.

Policy 4.6.3. Encourage incentives for private placement of land in open space and conservation easements, and within a protected EQC.

Policy 4.6.4. Preserve and protect the natural beauty of Stafford County’s topography, including its view sheds, waterways and signature rolling hills and valleys.

Objective 4.7. Encourage parks and natural areas to include low-impact recreational and educational uses.

Policy 4.7.1. Incorporate plans for natural areas and parks for low impact uses into the Parks and Recreation Master Plan.

Policy 4.7.2. Permanently protect the remaining portions of the Crow’s Nest peninsula in the areas designated on the Land Use Map.

Policy 4.7.3. Incorporate requirements and standards for open and green spaces and natural areas into land use districts.

Objective 4.8. Minimize light emissions to those necessary and consistent with general safety.

Policy 4.8.1. The County should establish the use of lighting plans to reduce glare, eliminate over-illumination and reduce sky glow, and follow Crime Prevention Through Environmental Design (CPTED) principles.

Policy 4.8.2. Light sources for parking lots and signage should use the minimum intensity necessary to accomplish the light's purpose.

Policy 4.8.3. Full cutoff fixtures should be used in exterior lighting for development and redevelopment projects.

Policy 4.8.4. Lighting plans should incorporate the latest technology in lighting that provides effective illumination and enhanced energy efficiency whenever possible.

Objective 4.9. Prevent and reduce shoreline and streambank erosion resulting from natural or man-made occurrences.

Policy 4.9.1. Update County GIS maps to show shoreline/streambank conditions and areas of concern.

Policy 4.9.2. Promote the use of the Shoreline Erosion Advisory Service (SEAS) administered by the Virginia Department of Conservation and Recreation to provide technical assistance for shoreline erosion problems.

Policy 4.9.3. Utilize the Stafford County Coastal Resource Management Portal provided by the Virginia Institute of Marine Sciences (VIMS) to monitor and manage the shoreline erosion problems within the County.

Policy 4.9.4. Encourage future development projects to mitigate any streambank erosion problems that may exist.

Objective 4.10. Integrate environmental planning and implementation efforts into a single Master Environmental Plan.

Health, Safety and Welfare

Maintaining and improving the health, safety and welfare of the residents of the County improves the overall livability of a community. In ensuring that Stafford is a great place to live, work, learn, and play, the County must be mindful of the challenges involved in maintaining a high quality of life and in response establish policies to address these issues.

Unlike some parts of the United States, Stafford County has not experienced widespread destruction due to natural disasters. However, the County is not free from being impacted by natural events and manmade hazards.

The geologic conditions in Stafford create a variety of challenges. There are hazards to property in some areas of the County posed by wet or unstable soils. Marine clay soils found in the eastern part of the County and shrink-swell clay soils found primarily in the western area can cause foundation failures, cracked and shifting walls, and in extreme cases, catastrophic slope failure. Asbestos bearing soils may pose a health risk to construction workers requiring special precautions during excavation.

Increasing urbanization often creates an imbalance between developing important natural resources and protecting quality of life and overall community values. The location of mineral resources, such as sand and gravel, and crushed stone, depends upon geological reserves. As residents locate nearer to these areas, extraction of these resources may threaten their safety and well-being.

Stafford must be mindful of its ability to sustain basic needs during short term natural events, as well as in the long term. In the short term, emergency preparedness will allow residents to better deal with disruptions to food, water, power, and fuel supplies, as seen during past hurricane or major snow events. In the long term, the County shall be mindful of its water resources, to ensure land use practices do not impact surface and groundwater reserves.

The County offers a superb network of parks, abundant recreation opportunities, and unique natural areas. As the County continues to grow, a challenge will be to ensure proper resources are provided to maintain adequate recreational opportunities and open space. Parks, recreational facilities and open space are designed to improve the health of the residents of Stafford County by providing for their need for exercise and relaxation, but they also help to protect the County's natural resources and environment. Because of its dramatic growth, Stafford County must be particularly mindful of the need to set aside land for future parks and open space as well as provide adequate facilities for the active and passive recreational requirements of its current and future population.

Goal 5. Ensure the health, safety and well-being of Stafford County residents.

Objective 5.1. Through land use policies, maintain and enhance the capacity of Stafford County to meet the basic needs of citizens during times of crisis and in the face of diminishing resources.

Policy 5.1.1. Establish mechanisms to encourage continued active agricultural uses, and to re-establish active agricultural uses outside the Urban Services Area.

Policy 5.1.2. Encourage the local production and purchase of food and fiber through establishment and support of viable farmers markets and agri-tourism events, establishment of standards for community gardens in major residential developments, and promotion of individual garden plots.

Policy 5.1.3. To ensure an adequate supply of energy resources, promote conservation measures such as property tax credits for use of alternative energy sources or use of high efficiency appliances or building practices including Leadership in Energy and Environmental Design (LEED) standards.

Objective 5.2. Protect drinking water resources.

Policy 5.2.1. Encourage that development and redevelopment sites that may have been subject to contamination by toxic substances or other hazardous materials be remediated to the extent they will not present unacceptable health or environmental risks for the specific uses proposed for such sites.

Policy 5.2.2. Implement a groundwater management ordinance in accordance with the Groundwater Management Plan element of the Comprehensive Plan.

Policy 5.2.3. Ensure the quality of drinking water reservoirs is maintained through a pre-treatment monitoring program. If water quality degradation is detected, then appropriate mitigation measures should be implemented.

Policy 5.2.4. Establish reservoir overlay district standards for the long-term protection of the County's public water supplies.

Policy 5.2.5. Ensure development proposals that include the use and storage of hazardous materials comply with all state and federal regulations.

Policy 5.2.6. Support education to minimize the application of fertilizers, pesticides, and herbicides to lawns and landscaped areas through, among other tools, the development, implementation, and monitoring of integrated pest, vegetation and nutrient management plans.

Objective 5.3. Minimize development on erodible, hydric, and other soils deemed unsuitable for development.

Policy 5.3.1. Discourage development on erodible and hydric soils, and cluster development away from steep slopes and potential problem areas.

Policy 5.3.2. Require new development on problem soils such as shrink swell and low pH (acidic) soils to provide appropriate engineering measures to minimize geotechnical hazards.

Objective 5.4. Minimize the potential impacts of flood hazards, storm surges, and high-water levels.

Policy 5.4.1. Create awareness of Stafford County waters that may be susceptible to a rise in tidal water levels and storm surge and assess the potential impacts through implementation of Flood Insurance Rate Map “V” zones.

Policy 5.4.2. Discourage development of new buildings and structures within dam inundation zones.

Policy 5.4.3. The Comprehensive Plan should include a map identifying all parcels wholly or partly within dam break inundation zones.

Policy 5.4.4. With assistance from the Virginia Institute of Marine Sciences pursuant to Virginia Code provision 15.2-2223.2 and 15.2-2223.3 the Comprehensive Plan should include coastal resource management guidance and strategies to combat projected sea-level rise, recurrent flooding, and shoreline erosion.

Objective 5.5. Support the expansion of electric and pipeline utilities in a manner that minimizes the exposure of County residents to potential pipeline ruptures and visual impacts and environmental hazards associated with electrical generation transmission, and distribution facilities.

Policy 5.5.1. The Comprehensive Plan should include a map designating major gas and petroleum pipelines, and electrical transmission and distribution facilities.

Policy 5.5.2. Public Service Corporations should have their easements and facilities well marked and they should provide regular public education on the location and hazards associated with major gas and petroleum pipelines, and electrical transmission and distribution facilities.

Policy 5.5.3. The County should identify critical surface and ground water resource areas in the vicinity of pipelines, and the pipeline operators should share with the County contingency plans for emergency response in case of an accident.

Policy 5.5.4. Electric utility and telecommunication providers should design their systems to minimize electromagnetic field impacts on nearby residential uses, schools, and businesses.

Policy 5.5.5. Above ground transmission lines, sub-stations, and switching stations should be sited and designed in a manner to minimize visual and environmental impacts on adjacent land uses. Within the Urban Services Area, the County strongly encourages the underground placement of all electric transmission lines when new lines are installed or existing lines relocated. Above ground transmission lines of 150 kilovolts or more, and associated facilities such as sub-

stations and switching stations should provide adequate screening and buffering.

Policy 5.5.6. The County discourages future residential development from locating in the vicinity of existing and future electric transmission lines of 150 kilovolts or more, and associated facilities such as substations and switching stations without adequate screening and buffering.

Policy 5.5.7. Utility scale solar facilities should be sited within one thousand (1,000) feet of major electrical transmission lines, not in close proximity to public drinking water sources, and adequate setbacks and screening should be provided to ensure compatibility with nearby agricultural viewsheds and residential uses.

Objective 5.6. Minimize potential impacts of mineral extraction on nearby properties.

Policy 5.6.1. To meet future demands, allow mineral extraction activities, including, but not limited to, sand, gravel, stone, and rock, to occur only in areas of known geological reserves, as determined by the Virginia Department of Mines, Minerals and Energy, Division of Mineral Resources.

Policy 5.6.2. Encourage existing mining/ extraction operations to fully utilize adjoining areas that have suitable mineral resources by relocation of existing operations at the appropriate time, rather than relocate to other sites within the County.

Policy 5.6.3. Require proposals for mineral extraction to obtain a Conditional Use Permit (CUP) to mitigate impacts to nearby properties.

Policy 5.6.4. Require berms and/or other screening measures to minimize visual intrusions.

Policy 5.6.5. Restrict operating hours to preclude disturbances from vehicles and equipment.

Policy 5.6.6. Encourage existing mining/extraction operations to provide for appropriate re-use of mined areas, after mining and reclamation procedures have been completed. Appropriate re-use may include dedication of portions of the reclaimed site for public infrastructure needs such as parkland and/or reservoirs.

Objective 5.7. Create a diversity of recreational opportunities for Stafford residents of all ages.

Policy 5.7.1. The County will evaluate its future need for public parks, recreational facilities and passive open space on an on-going basis and identify areas for acquisition to fill this need to conform to the County's Level of Service Standard incorporated into the Comprehensive Plan.

Policy 5.7.2. Where practical, expansion of existing parks should be considered when a future need is identified. Development proposals should consider donation of land to adjacent parks if a need exists and the need is reasonably related to the development proposal.

Policy 5.7.3. Criteria for parks and recreation will be guided by the Virginia Outdoors Plan and National Recreation and Parks Association standards.

Policy 5.7.4. A Parks and Recreation Master Facilities Plan should be updated every three years and be incorporated as an element of the Comprehensive Plan.

Policy 5.7.5. The recommendations of the Bicycle and Pedestrian Facilities Plan should be implemented to increase recreational opportunities, and to enhance non-motorized access to public parks.

Objective 5.8. Ensure the noise impacts, vibration impacts, and potential safety hazards generated by the live fire ranges and aircraft overflight and aviation impacts in general at Marine Corps Base (MCB) Quantico are well known to developers.

Policy 5.8.1. Amend the existing Military Facility Impact Overlay District boundary map to include the following areas as depicted in the Marine Corp Base Quantico Joint Land Use Study, dated June 2014:

- All land shown within the Military Influence Area zones.

Policy 5.8.2. Amend the Military Facility Impact Overlay District ordinance to encourage the following residential densities within the District in areas outside of the County's Urban Services Area:

- Within the Military Influence Area Zones 2.1 and 2.4, reduce or maintain a density at one (1) dwelling unit per six (6) acres.

These densities should be accomplished through means such as conservation easements, Purchase of Development Rights, Transfer of Development Rights, and continuation and establishment of agricultural uses and coordination with the Base on their encroachment control plans.

Policy 5.8.3. Amend the Military Facility Impact Overlay District ordinance to include Noise Level Reduction (NLR) requirements in building codes for structures within the District.

Policy 5.8.4. Require written noise disclosure, as permitted by law, for potential purchasers and lessees within the Military Facility Impact Overlay District of military operation impacts through means that include, but are not limited to, the requirement of a note on subdivision plats or exploring the possibility of revisions to the County's Noise Ordinance.

Policy 5.8.5. Amend the zoning ordinance to establish a maximum height restriction of 450 feet above mean sea level for towers, structures, buildings or objects in areas within the Quantico MCB Range Safety Zone C depicted in the Quantico MCB 2006 RCUZ Study.

Policy 5.8.6. Evaluate the need to adopt regulations that promote compatible land uses in areas outside the Military Facility Impact Overlay District, but within

sufficient proximity to MCB Quantico to experience noise and/or vibration impacts.

Policy 5.8.7. Designate the boundaries of an Airport Impact Overlay Zone for the approach to the MCB Quantico air facility. The primary approach to the landing strip at Quantico, known as Turner Field, is a north south orientation located over the eastern portion of the County, including areas such as Crow's Nest and the Widewater peninsula. It is illustrated in Figure 5.14 of this document.

Policy 5.8.8. Notify the Commander and Community Plans and Liaison Officer of MCB Quantico and the Civilian-Military Community Relations Council, of any proposed extension of water or sewer service outside the Urban Services Area on lands within five miles of the boundary of MCB Quantico.

Policy 5.8.9. Work cooperatively with MCB Quantico to limit land uses to those compatible with military training activities within the Military Facility Impact Overlay Noise Zones and Range Safety Zones as recommended in the June 2014 Joint Land Use Study and included in Chapter 3 of this document.

Objective 5.9. Minimize the noise impacts and potential safety hazards generated by general aviation at public and private airfields in the County.

Policy 5.9.1. The County should develop land use compatibility standards for new development to conform to within the aircraft approach patterns of airports and landing strips.

Objective 5.10. Provide appropriate public safety resources, properly distributed, to maintain community safety standards and to respond to threats to life and property.

Policy 5.10.1 Plan for and locate public safety facilities to maintain or improve public safety service standards.

Policy 5.10.2. Provide Public Safety Plans to support the delivery of community public safety service standards.

Housing

Home ownership expands individual opportunities to accumulate wealth, enables a family to exert greater control over their living environment, creates incentives for households to better maintain their homes, and may benefit children of homeowners. Homeownership also benefits local neighborhoods since owner-occupiers have a financial stake in the quality of the local community.

Stafford County's housing stock continues to grow. The US Census Bureau in 2020 determined that there were 52,793 dwelling units in the County. This is an increase of 20 percent or 8,815 dwelling units since the year 2010. 38.7 percent of those homes were built in the past 20 years. Single family detached homes comprise the largest percentage of housing in the County at 74.5% followed by 14.1% single family attached units, 7.4% multi-family and 4.0 percent manufactured homes. Homes within the County are fairly large with the median dwelling unit having 8 rooms and 45.2 percent of dwelling units having 9 or more rooms. Another likely indicator that the County has large homes is that 40% of households have 3 or more cars. Homes with extensive driveways and garages tend to be larger lots and can take up a larger footprint than homes on smaller lots. The median home price for an owner-occupied dwelling in 2019 was \$366,000. The median mortgage payment is \$2,199 per month and the median gross rental payment is \$1,383 per month.

In Stafford County, increases in housing costs have the effect of limiting opportunities for affordable home ownership. Affordable housing is safe, decent housing where costs (mortgage or rent plus utilities) do not exceed 30 % of gross household income. This should apply across the spectrum of income levels. The mid-range income level, known as "workforce housing" applies to households that earn between 50% and 120% of the median household income, or between \$55,223 and \$132,535 based on a median income of \$110,446 in 2019. The lower end of this level includes the community's sheriff deputies, firemen, school teachers, nurses and retail associates who often are priced out of the market. Households that spend more than 30% of their gross income on housing costs are considered to be cost burdened. These households may also be classified as Asset Limited, Income Constrained, Employed (ALICE). They make enough money not to be classified as being in poverty but may have difficulty affording essentials such as childcare, healthcare and housing. Nearly half of all renters in the County (45.2%) are ALICE.

A key component of attracting new business and the expansion of existing business is the ability of those enterprises to attract a qualified workforce. We are blessed with a wide variety of skilled labor in our larger labor market region that may sustain new business expansions. Much of that labor force may desire to live closer to their places of work in Stafford and new residents may too choose to do so if there is a wider variety of housing types. Stafford should consider how to encourage a wider variety of housing types, for a wide range of incomes, to continue to foster existing and new business growth.

Stafford County is a member of the George Washington Regional Commission (GWRC). GWRC adopted a 2020 Housing Affordability Study and Action Plan in November 2020. The major findings of the Study were:

- Rental housing will continue to be unaffordable without intervention. One in two renters in the region are cost-burdened. An overwhelming majority of those cost burdened renters are low-and moderate-income households.

- There is little rental housing that is dedicated to low-and moderate-income households in the region. Only 7% of all the new homes built in the region over the past decade use public assistance to provide below market rents.
- The price of homeownership continues to increase as supply dwindles. Over the past five years, the price of a home has risen nearly 20%.
- First-time homebuyers are being priced out of the market. As of June 2020, 1 in 5 home resales were below \$250,000. Of all new construction sales in 2019 and 2020, only 3% were below \$250,000.
- Homebuyers are looking for homes that aren't being built. The average new home constructed is over 3,000 square feet, but the highest demand is for smaller homes.
- The Covid-19 Pandemic increased the desire and need for multigenerational housing, flexible living spaces, and broadband access.
- Senior housing needs will be a significant portion of the future housing demand. One in five residents in the region will be 65 years or older by 2040.
- Active duty military and veterans have bolstered homeownership over the past decade. The growth in VA home loans since 2008 is twice that of conventional loans.

Goal 6. Promote affordable and quality housing.

Objective 6.1. Identify need for and potential solutions to creating new and maintaining existing affordable housing.

Policy 6.1.1. Provide ongoing support to Regional Affordable Housing efforts.

Policy 6.1.2. Incorporate criteria in the County's monetary proffer guidelines that offer credit for providing affordable housing.

Policy 6.1.3. Consider adopting a local ordinance to waive specified development application fees for affordable housing as permitted by State Code.

Policy 6.1.4 When new development proposals would displace aging and affordable housing stock, the means to relocate the residents to other affordable housing should be considered, including, but not limited to:

- Assisting with relocation search and costs
- Including affordable dwelling units within the new development.
- Payment into an affordable housing fund.

Objective 6.2. Identify opportunities for private/public partnerships to increase the stock of affordable housing where sustainable home ownership can be achieved that will not create a burden on the County. The types of units may include townhomes, multi-family units, and reasonably sized detached homes.

Policy 6.2.1. Create land-use incentives for private development of affordable housing.

Policy 6.2.2. Identify publicly owned properties that could be redeveloped as housing for public employees.

Policy 6.2.3. Encourage developers and land owners to work with organizations such as the Greater Fredericksburg Habitat for Humanity and Virginia Statewide Community Land Trust to increase the number of affordable homeowner dwelling units in the County.

Objective 6.3. Promote housing opportunities for all income ranges and ages, including housing for elderly, disabled and low-income residents, workforce housing, and executive housing.

Policy 6.3.1. Community areas should include a mix of housing types and have access to local services, infrastructure, community facilities and employment opportunities.

Policy 6.3.2. Affordable housing will be encouraged in TDAs, as designated on the Land Use Plan Map.

Policy 6.3.3. Development and redevelopment proposals should promote housing choices for those who own or rent, and where residents have the opportunity of a livable home at an affordable price that promotes opportunity and a better quality of life in a secure and attractive environment.

Policy 6.3.4. Housing should include universal design features to be accessible to the elderly and handicapped allowing residents to age in place.

Policy 6.3.5. Pedestrian facilities in communities should be appropriately designed and well lit for safe accessibility.

Policy 6.3.6. The County should promote the conservation of stable neighborhoods, revitalization of older neighborhoods, and maintenance of quality housing and property values through entities such as the Virginia Statewide Community Land Trust and available grant funding.

Transportation

Adequate transportation systems promote a high quality of life by ensuring the ability of residents, workers, students, shoppers, tourists and others to move freely between home, work, school, recreation, commerce and other venues.

The growth in Stafford County and the surrounding region has contributed to roadway congestion and resulted in a need for transportation solutions that will meet current and future demand for better, safer and less congested roads.

Goal 7. Create an intermodal system of transportation which implements the Land Use Plan by providing a safe, efficient and affordable means for our people and products to move safely in and through Stafford County.

Objective 7.1. Maintain a safe road system.

Policy 7.1.1. Road safety improvements can be prioritized over capacity improvements.

Policy 7.1.2. Prioritize secondary road funds for small, spot safety improvements that can be completed within a year and lead to immediate benefits.

Policy 7.1.3. Road improvements should improve safety by incorporating features that ensure protection from unhealthful levels of transportation related noise.

Policy 7.1.4. Emphasize and encourage inter-parcel connections and reverse frontage streets to minimize vehicle conflict points onto busy streets.

Objective 7.2. Provide and maintain a multi-modal public transit system.

Policy 7.2.1. The County should establish incentives for development proposals to include support for alternative modes of transportation including bus, rail, commuter parking, and car/van pooling.

Policy 7.2.2. Encourage the future expansion and development of an efficient transit system inside the Urban Services Area and Targeted Development Areas to serve higher density employment, retail and residential areas and sectors of the population with limited mobility. Where practical, transit systems should provide access from residential areas to commuter rail stations and park and ride lots.

Policy 7.2.3. Promote regional rideshare and para-transit programs.

Policy 7.2.4. Continue to support the development of the Stafford Regional Airport to serve economic development interests.

Objective 7.3. Create a system of sidewalks, bike paths and trails to provide non-motorized transportation alternatives.

Policy 7.3.1. Residential and Commercial development proposals should establish sidewalks and greenways to connect local neighborhoods with activity centers such as shopping, employment, and schools and with one another.

Policy 7.3.2. Support development of bicycle and pedestrian facilities that connect to local, regional and statewide trail and park systems.

Policy 7.3.3. The Comprehensive Plan should designate inter- and intra-County bike networks.

Policy 7.3.4. The County will support public and private organizations in their efforts to develop and fund inter- and intra-County bike route networks.

Policy 7.3.5. The County should explore the creation of bicycle and pedestrian trails in pipeline, electrical and other easements, particularly when the use of easements for non-motorized movement will create connectivity between open space areas and neighborhoods.

Policy 7.3.6. Encourage development to construct pedestrian access points where public streets do not connect.

Policy 7.3.7. Support the implementation of trails and sidewalks along road improvements and new roads.

Objective 7.4. Create more efficient patterns of traffic flow and circulation.

Policy 7.4.1. New residential subdivisions should provide more than one point of ingress/egress and should conform to the VDOT secondary street acceptance regulations.

Policy 7.4.2. New residential subdivisions should provide inter-subdivision connectivity based on the number of units in the subdivision. Connections should be designed to minimize the effects of cut-through traffic using measures such as constructing spine roads that utilize reverse frontage, multiple means of access through neighborhoods and street alignments that provide indirect travel routes between neighborhoods.

Policy 7.4.3. Circulation systems within commercial developments should be adequate to handle peak loads internally and at traffic lights and provide inter-parcel connectivity.

Policy 7.4.4. Continue the use of Highway Corridor Overlay Districts and promote the use of access management principles along main thoroughfares.

Policy 7.4.5. Promote alternative routes to relieve congested corridors.

Objective 7.5. Retain and enhance the visual landscape along major transportation corridors to acknowledge the unique culture and historical development patterns.

Policy 7.5.1. Future improvements to roadway corridors should be done in a manner that provides transportation functionality while not detracting from or significantly altering the cultural landscape of the roadside viewshed.

Policy 7.5.2. Design transportation facilities to avoid encroachment upon historic resources where possible.

Policy 7.5.3. Ensure that roadside signage and lighting is sensitive to the existing development pattern while including necessary safety and traffic control.

Objective 7.6. Provide transportation facilities that promote economic development.

Policy 7.6.1. Plan for sufficient access and adequate transportation facilities to serve existing and future business and industry.

Policy 7.6.2. Support the expansion of funding programs that facilitate the development of business and industry.

Policy 7.6.3. Consider alternative means of financing for existing and future economic centers such as public and private partnerships, community development authorities, tax increment financing, and service districts.

Objective 7.7. Plan future transportation facilities that can be implemented from a physical, fiscal, and community standpoint.

Policy 7.7.1. Plan and develop transportation facilities to minimize destruction of environmental assets such as wetlands, floodplains, unique forest areas and wildlife habitats, prime agricultural lands and environmentally sensitive soils.

Policy 7.7.2. Plan future transportation facilities that are financially feasible through identified funding sources such as federal and state allocations, transportation service districts, transportation impact fees, and grant opportunities.

Policy 7.7.3. Design transportation facilities such that communities are not physically divided or otherwise adversely impacted and that are supported by the citizens and business community.

Policy 7.7.4. Construct utilities such that they are located outside of the ultimate right-of-way design to prevent costly relocations when roadways are widened.

Policy 7.7.5. Coordinate construction of transportation facilities with federal, state, regional and local agencies to minimize undesirable community impacts.

Policy 7.7.6. Ensure that development provides necessary transportation improvements in a timely manner.

Policy 7.7.7. Transportation facility improvements to be constructed with development projects should be designed to maintain a Level of Service (LOS) C for impacted intersections and/or road segments. Where achieving a LOS C is not practical given existing transportation deficiencies, improvements should be designed to not further degrade the LOS.

Education

Stafford County prides itself on having a superb public school system. The citizens of Stafford County expect and support a quality educational system. As the 3rd fastest growing locality in the state, Stafford County is challenged to construct and maintain adequate facilities for all students while continuing the quality educational programs Stafford residents expect.

Our students score above the state and national averages on standardized tests and earn awards at the regional, state and national levels. Approximately 71% of our high school graduates continued their education by enrolling in post-secondary education (college, trade, or technical school) within 16 months of graduation.

Goal 8. Support Stafford County as a community for superior education.

Objective 8.1. Land use policies and the Comprehensive Plan should support education in Stafford County.

Policy 8.1.1. Education facilities, including technical skill training centers should be incorporated into the Levels of Service Standards.

Policy 8.1.2 Construction of future schools should be completed to ensure no school operates at more than 100% program capacity for elementary schools and 100% design capacity for middle and high schools.

Policy 8.1.3. Future schools should be located within the Urban Services Area (USA). The Board of Supervisors and School Board will work together to acquire school sites in advance of Stafford County Public School's short and long-term future needs.

Policy 8.1.4. When considering new school locations, the safety and well being of the students should be a priority, with consideration of the following factors:

- Locate near existing and planned residential areas to promote walking zones and/or minimize the length of bus trips.
- Locate schools proximate to other public facilities and services necessary to the site (i.e. potable water, etc.) and means to assure safe access to schools (i.e. sidewalks, turn lanes, signalization, etc.).
- Locate schools away from major electric transmission lines.

Policy 8.1.5. With the limited availability of large tracts of land within the Urban Services Area, the County should focus on maximizing the use of usable available land to meet educational needs.

- Consider relaxing of minimum size standards for school sites.
- Ensure school sites are suitable for development with gentle topography, good soils, and limited sensitive resources.
- Ensure that estimates of public infrastructure costs are included in location decisions.

Heritage Resources

Stafford County is rich in heritage resources, which are central to the community's identity and culture. Protection and preservation of our heritage resources are fundamental to sustaining Stafford County's uniqueness, sense of place, and economic sustainability.

Heritage resources are those buildings, sites, structures, objects, or districts, including their physical settings that exemplify the cultural, architectural, economic, social, and political heritage of the County and its communities. Such sites or buildings are 1) listed on, or are eligible for listing on, the National Register of Historic Places or the Virginia Landmarks Register; 2) contributing resources within a historic district listed on, or eligible for listing on, the National Register of Historic Places or the Virginia Landmarks Register; 3) resources located within a Stafford County Historic Resource Overlay District; or 4) resources listed on, or eligible for listing on, the Stafford County Cultural Resource Inventory, as determined by the Stafford County Historical Commission Architectural Review Board, or Historic Preservation Planner.

Goal 9. Promote Stafford County's heritage and maintain a sense of place by identifying, protecting, preserving, and interpreting Stafford County's historic and cultural resources.

Objective 9.1. Establish County land use policies that protect and preserve Stafford County historical and cultural resources.

Policy 9.1.1. The Stafford County Cultural Resource Management Plan should be updated and implemented as a part of the Stafford County Comprehensive Plan.

Policy 9.1.2. Stafford County should maintain its Cultural Resources Inventory. The inventory should be updated as new resources are discovered.

Policy 9.1.3. Applications for reclassification, conditional use permit, preliminary subdivision or site plan, major site plan, or grading plan should determine the possible presence, extent, and significance of heritage resources and prepare follow-up archeological and/or historic structures reports. A historic preservation ordinance should be adopted that creates development plan review procedures based on the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation and/or Virginia Department of Historic Resources "Guidelines for Conducting Cultural Resource Survey in Virginia".

Policy 9.1.4. Certificate of Appropriateness applications should be submitted to the Stafford County Architectural Review Board to review proposed exterior alteration, relocation, or demolition of heritage resources located within Stafford County Historic Resource Overlay Districts.

Policy 9.1.5. Development and redevelopment, including the construction of buildings, site improvements, or land clearing and grading, should be completed in such a way that protects and enhances, rather than harms, heritage resources and cultural landscapes.

Policy 9.1.6. The Cemetery Ordinance should be updated to protect all Stafford County cemeteries. The ordinance should include procedures for identifying, preserving, interpreting, and maintaining all cemeteries.

Policy 9.1.7. Stafford County should encourage the use of federal, state and local programs to ensure long term preservation of heritage resources, such as the Stafford County Historic Tax Abatement Program.

Policy 9.1.8. The design guidelines for the Stafford County Historic Resource Overlay Districts and Historic Overlay Corridors should be updated to protect heritage resources and their viewsheds.

Objective 9.2. The County should establish and maintain a long-term stewardship program to care for all County-owned historical and cultural resources.

Policy 9.2.1. Long term management and stewardship plans should be written for all County-owned heritage resources with the assistance and recommendations from the Stafford County Architectural Review Board, Historical Commission, and designated Planning staff.

Policy 9.2.2. Comprehensive architectural and archaeological studies should be conducted on all County-owned heritage resources to determine historic integrity, significance, and best treatment plan for each resource.

Policy 9.2.3. Easements or other protective measures should be placed on all County-owned heritage resources, as determined by the results of architectural and/or archaeological studies.

2.3 Implementation

Chapter 7 of this document serves as the Implementation Plan for the Comprehensive Plan Goals, Policies and Objectives. The Implementation Plan contains: Concrete actionable steps; Identifies responsible parties; Identifies available and needed resources, and Completion dates. The actionable steps are prioritized in order of importance for implementing the Plan. The highest priority shall be given to aligning elements of the Comprehensive Plan and ordinances to comply with the goals, objectives and policies of this document. Priorities are identified as short term, mid-term and long-term actions. Short term actions are items that can be accomplished within one year of plan adoption. Mid term items can be accomplished within two to five years. Long term actions may take five to ten years to complete.

The Planning Commission, other boards and commissions, staff and Board of Supervisors shall review the Implementation Plan periodically to determine its applicability in the current context of community desires and needs and amended as needed.