

# 5.0 The Public Costs of Growth and Development

## 5.1 Introduction

Stafford County anticipates increases in population and business growth within the next 20 years. Although the County may not grow as quickly as projected on a continuous basis, the County is mindful of its continued responsibility to provide adequate levels of public services for residents and businesses. Increased residential growth requires adequate school facilities, social services, health service, and recreation facilities. All residents, businesses and commuters require sheriff and fire and rescue protection and support. Some growth will require expansion of existing public utilities. This chapter details expected Level of Service Standards, estimated capital costs of growth, and actions that can be taken to ensure that new development pays its share of the additional costs to meet expected Level of Service Standards. This chapter also projects out future public facilities needs (the Public Facilities Plan) based on projected population growth and land use, and identifies how the financial impact of growth can be estimated with a Financial Impact Model that takes into account anticipated revenues and expenses. The information in this chapter may be used to assess the impact of proposed development projects, and to support planning for capital improvement projects.

### MAIN SECTIONS OF CHAPTER 5

<i>LEVEL OF SERVICE STANDARDS</i>	<i>P. 5-2</i>
<i>CAPITAL COSTS PER RESIDENTIAL UNIT</i>	<i>P. 5-14</i>
<i>PUBLIC FACILITIES PLAN</i>	<i>P. 5-17</i>
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## 5.2 Level of Service Standards

### 5.2.1 Background

Pursuant to Section 15.2-2223 of the Code of Virginia, Stafford County may identify which existing lands, facilities or services should be extended, widened, removed, relocated, vacated, narrowed, abandoned, or changed in use as the case may be. Level of Service (LOS) Standards can assist in this effort.

The LOS Standards is designed to clearly articulate expectations for County service delivery in terms of staffing and the construction and/or improvement of public facilities. The location, size and timing of needed improvements are directly related to the development patterns identified in the Comprehensive Plan.

Generally, LOS Standards for capital facilities can be measured based on size of facilities, carrying capacity, services provided, and location and design criteria.

The LOS Standards is the basis for inputs that can be used to calculate the capital costs per residential unit, to develop a public facilities plan and to estimate the financial impact of growth and development over the twenty year course of the Comprehensive Plan.

### 5.2.2 Definition

LOS Standards are benchmarks by which to measure the quantity and/or quality of service provided by a government agency. The types of services that are measured include schools, transportation, parks, libraries, emergency services, water utilities, wastewater utilities, and solid waste management. There are two types of LOS Standards; capital capacity and operational effectiveness. Capital capacity is geared towards ensuring there are an adequate number of facilities while operational effectiveness addresses issues such as staffing levels or response times. Although they are different, one has an effect on the other.

### 5.2.3 Purpose and Intent

Level of Service (LOS) standards are measured on a Countywide basis for services. The LOS Standards provide an objective justification for assessing and mitigating the impacts of proposed development projects. Proffers, are the most common method for mitigating impacts, and can be based on established LOS. LOS can be integrated into the methodology for determining recommended proffers, calculating comprehensive impact fees, projecting future public facility needs, estimating the financial impact of growth, and the funding mechanism of the Capital Improvement Plan (CIP). Location, size and

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timing of needed improvements are directly related to the future development patterns identified in the Comprehensive Plan. LOS standards will ensure the connection between growth and its consequences and will ensure that adequate facilities are or will become available to support development.

The CIP is a dynamic document that is updated annually as part of the adopted budget; in this way, it reflects the capital capacity projects that are deemed necessary to meet and maintain the LOS Standards. The Proffer Guidelines are also updated annually and utilize a methodology which reflects the capital capacity projects on the CIP.

### **5.2.4 Benefits**

- Establishing Level of Service Standards in a community is a beneficial tool in providing adequate public facilities consistent with citizen and business needs.
- The location, number, and type of facilities can be directly related to future development identified in the Comprehensive Plan.
- Allows for the prioritizing of projects in the Capital Improvements Program.
- Sound fiscal policy through planned debt service based on capital facility needs
- LOS Standards can be integrated into the methodology for determining recommended proffer guidelines and required transportation impact fees to mitigate impacts from new development.
- High service levels may be used as selling points to promote Economic Development.
- Meeting these goals by providing adequate facilities can foster civic pride and a positive impression of the community.

### **5.2.5 Facilities**

#### 5.2.5.1. Schools

The Stafford County Public School System is currently comprised of seventeen elementary schools, seven middle schools, five high schools and the Gary Melchers complex, which includes Head Start and alternative education programs. Rapid residential growth in the County impacts the capacity of the public school system and increases the demand for new schools. Subsequently, new school construction has become a standard component of the County's capital budget and Capital Improvement Plans. Nevertheless, during the 2008-2010 timeframe, residential growth increased at a much slower pace than in previous years. In certain schools, the average number of students decreased during this period. Thus, the School Board has considered closing down schools temporarily until residential growth rebounds to previous levels. As the County's residential growth rebounds and new census figures

are released, future school facility planning needs must be addressed and planned for with LOS Standards in mind.

The estimated average daily membership for the 2009-2010 school year, elementary school enrollment was at 78.6% of capacity, middle schools were at 75.8% and high schools were at 98.8%. Out of all the public schools in the County, only two high schools (Colonial Forge and Stafford) exceeded their design capacity.

GOAL: Ensure school capacity is capable of meeting the expected increase of students from residential development.

Policies to achieve this goal include:

1. The desired design capacity for elementary schools should be a minimum of 88,000 square feet on at least 20 acres; for middle schools a minimum of 146,000 square feet on at least 40 acres and for high schools a minimum of 265,000 square feet on at least 70 acres.
2. Schools shall not exceed their design capacity of 950 seats for elementary, 1,100 seats for middle and 1,800 seats for high school students.
3. In order for schools to operate at their most efficient point for each educational level, student enrollment should not exceed 90 to 95 percent of the design capacity of the schools.
4. Maintain attendance zones and when necessary, make adjustments to relieve overcrowding of facilities; minimize disruptions to families and communities whenever possible
5. Consider realignment of attendance zones to best utilize existing facilities to accommodate student population before constructing new school facilities (maximize use of existing space)
6. Expand permanent seat capacity at existing schools as the first response to student growth rather than construct new schools or realign school attendance zones (new facilities or additions to existing facilities are warranted when no other viable solutions exist to address overcrowding)
7. Establish new attendance zones based on the safest and shortest school bus routes in order to transport students to and from school in a timely manner while minimizing travel distances
8. Reduce land costs for new schools through advance acquisition (also to secure optimal locations)
9. Where possible, seek to cluster schools together to take advantage of benefits derived from economies of scale such as shared facility or athletic field use
10. Provide varied and viable instructional alternatives for students and their families

### 5.2.5.2. Parks and Recreation

The Parks and Recreation Department provides leisure services and facilities to all citizens in order to improve social, mental and physical development. In addition, the Parks and Recreation Department coordinates cost effective, year round management and maintenance of parks and facilities, aquatics, gymnastics, community recreation, youth and adult sports and senior citizen programs. The Parks and Recreation Department is divided into six divisions: Sports, Gymnastics, Aquatics, Community Recreation, Administration and Parks Maintenance. The Parks Maintenance Division is responsible for managing over 1,000 acres of County-owned recreation and parkland (767 acres of parks and 533 acres of recreational facilities), not including school athletic fields.

It is the intent of the County to provide an appropriate balance of both active and passive recreation opportunities for the community. The County recognizes that an ideal park system provides a wide variety of multi-use recreation facilities that accommodate the varied recreation needs of all the community's citizens. Existing recreational facilities should be used as a base for future development. As additional parks are developed, consideration of the balance between conservation and preservation of open space and the provision of active recreation becomes an important ingredient in the park development process.

GOAL: Provide a highly rated parks and recreation system for the enjoyment of the citizens of Stafford County.

Policies to achieve this goal include:

1. Satisfy a LOS standard of 20 acres of developed parkland for each 1,000 county residents, consistent with standards established in the County's Development Control Policy for Parks and Recreation.
2. Develop a system of Parks and Recreation facilities distributed throughout the community, providing equitable opportunity for all citizens to utilize recreational programs, recognizing that unique County features, attractions and landscape may dictate in some areas the location of certain facilities.
3. Develop a system of greenways, water trails, and bicycle, pedestrian and vehicular trails throughout the County, with connections to other regional systems; relate the system to an ecotourism initiative.
4. Develop relationships with quality youth and adult sports organizations to improve and enhance the quality and opportunity for County youth and adults to participate in recreational sports.

5. Adopt development guidelines and policies that support the Parks and Recreation system and master plan to produce compatible public amenities and open spaces.

#### 5.2.5.3. Libraries

Central Rappahannock Regional Library (CRRL) provides library services within Stafford and Spotsylvania Counties as well as the City of Fredericksburg. Stafford County provides financial assistance for operations based upon the County population usage. As of March 2010, forty-five percent (45%) of the total 79,072 cardholders within the CRRL library system resided in Stafford County with the majority of them located in the southern portion of the County. The County will be providing maintenance to two County-owned branch facilities when the newest library opens.

The CRRL Headquarters Library is located in Fredericksburg. The John Musante Porter Library Branch is located on Parkway Boulevard in the northern portion of Stafford County. A new Falls Run Branch, proposed for the Fall of 2010, will be located on Lyons Boulevard in the southern portion of the County. Based on a current LOS standard of 1 square foot of library floor area per person, Stafford County has a need for approximately 124,166 square feet of public library space. The square footage of Porter (approximately 23,000 square feet) and Falls Run (approximately 30,000 square feet) combined with 45% of the Headquarters space (approximately 17,000 square feet, based on 45% of the total cardholders residing in Stafford County) results in a total of 70,000 square feet. The square footage provided has a direct impact on the collection counts provided.

GOAL: Provide adequate library services to meets the needs of the current and future residents.

Policies to achieve this goal include:

1. Provide and maintain a LOS standard of 1.0 square foot of library floor area per capita, consistent with national and state standards.
2. Provide and maintain a LOS standard collection of 2.5 books/materials per capita.
3. Locate libraries within a 5 to 15-minute drive of the population they serve
4. Build new facilities at a 30,000 square footage standard in order to provide enough space to meet the demand for services "close to home"
5. Locate future facilities to allow equitable distribution of services among the population

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6. Recognize the changing role of the library as a provider of information technology services and space for community meetings, classes and training.

### 5.2.5.4. Fire and Rescue

LOS Standards allow the County to plan for the number and location of facilities that meet the service needs of the residents. Standards are applied to an anticipated growth pattern (from the Land Use Plan) to determine facility needs. The intent is to identify these standards within the Comprehensive Plan. LOS Standards are defined as travel/response time as well as work load capacity that has been quantified as building square footage, acreage and equipment needed to provide fire and rescue service that meets local service standards for urban and rural populations expressed as cost per capita for residential development. New development presents demands for County-wide fire and rescue service that affects the ability of facilities to meet established LOS Standards. It is important, therefore, that Stafford County provides fire and rescue services countywide that address these demands.

Response and ISO Rating: Stafford County is rated by the Insurance Services Office (ISO) which has a direct impact on insurance premiums established by private insurance companies for residential, commercial and industrial structures. ISO is an independent company that serves insurance companies, communities, fire departments, insurance regulators and others by providing information about risk. ISO's expert staff collects information about municipal fire suppression efforts in communities throughout the United States. In each of those communities, ISO analyzes the relevant data and assigns a Public Protection Classification (PPC) – a number from 1 to 10. Class 1 represents an exemplary fire suppression program and Class 10 indicates that the area's fire suppression program does not meet ISO's minimum criteria. In October of 2008, ISO established the latest PPC rating for Stafford County at a Class 5/9 level. This "split" classification applies the rating of "5" to properties within 5-road miles of a recognized fire station and within 1,000 feet of a fire hydrant or alternate water supply. The rating of "9" then applies to most all other properties in Stafford County.

GOAL: Ensure adequate fire protection response and emergency medical services for the County's residents, businesses and tourists.

Policies to achieve this goal include:

1. Maintain and improve upon a LOS Standard of an ISO Rating of 5 countywide.
2. The LOS standard is to respond to 90% of all fire and emergency medical service calls within 8 minutes or less after being dispatched to incidents within the County.

3. The service areas of fire and rescue facilities exceeding 2,000 calls annually should be evaluated.
4. Strive towards manning all Fire and Rescue facilities 24 hours a day, 7 days a week.

#### 5.2.5.5. Law Enforcement

The Stafford County Sheriff's Office operates from the Ford T. Humphrey Public Safety Building located in the Stafford Courthouse area. The Office is organized into seven primary divisions: Field Operations, Administrative Services, Criminal Investigation, Civil Process/Court Security, Emergency Communications, Animal Control and Professional Standards Unit. In 2008, there were 240 total authorized positions, of which 165 positions are sworn officers and 75 positions are civilian. Of the 165 sworn officers, 112 are devoted to law enforcement activities. The rest are devoted to court services and school resources. Of the 75 civilian positions, 37 are assigned to Emergency Communications and the remaining 38 are distributed throughout the agency.

In 2006, a study was conducted by the International Association of Chiefs of Police (IACP) that indicated a need for additional sworn law enforcement officers. The IACP based its recommendation upon a formula using operational and administrative workload time and proactive time. The set standard is no more than 60% of a law enforcement officer's time should be devoted to operational and administrative workload time and no less than 40% of their time should be devoted to proactive time. Operational workload and administrative time is defined as the time dedicated to responding to calls for service or initiation of criminal investigations, time to meet fair labor standards, service vehicles, report documentation, case preparation, meeting, training, etc. Proactive time is defined as the time used to solve potential crime problems, engage the community, patrol, traffic safety, etc. The IACP study revealed that the County's present operational and administrative workload comprises 78% of a law enforcement officer's time, leaving only 22% of their time for proactive policing.

Response Time: The Sheriff's Office records all "Calls for Service" as workload. These calls are prioritized into five individual categories:

- A. Priority 1: Emergency call life threat or similar; respond with all haste generally lights and siren.
- B. Priority 2: Emergency but not quite to the level of #1; respond expeditiously.
- C. Priority 3: Urgent non-emergency; respond ASAP
- D. Priority 4: Non-emergency respond; within a certain time frame.
- E. Priority 5: Non-emergency respond; when you are free from other duties.



The “gold standard” for response time to emergency and “in-progress” calls for service is 3 minutes. The national recommended average for emergency response time has been set at under 5 minutes and is a more realistic goal for the County. Due to traffic congestion, distances in some areas and personnel constraints, the response time to these types of calls has averaged almost 8 minutes over the past 3 years. In the same area response time for non-emergency calls for service is recommended to be under 10 minutes. Over the past 3 years, the County’s field response time for all calls for service averaged over 11 minutes.

GOAL: Ensure a higher level of public safety protection by the Sheriff’s Office for the County’s residents, businesses and tourists.

Policies to achieve this goal include:

1. Respond to 100% of all emergency calls for service within 5 minutes or less, on average, of being dispatched.
2. Respond to 100% of all non-emergency calls for service within 10 minutes or less, on average, of being dispatched.
3. Decrease the percentage of a law enforcement officer’s time dedicated to operational and administrative workload activities to 70%.
4. Increase the percentage of a law enforcement officer’s time dedicated to proactive activities to 30%.

### 5.2.5.6. Water Utilities

The Stafford County Department of Utilities is the sole provider of public water service to the County. The public water service area is the entire Urban Service Area (USA) of the County and certain areas outside of the USA.

The County’s water supply and treatment system consists of two surface water reservoirs and two water treatment facilities. The Abel Lake reservoir has a safe yield of 6.1 million gallons per day (mgd). It is the sole source of raw water to the Abel Lake Water Treatment Facility which has a maximum treatment capacity of 6.0 mgd. The Smith Lake reservoir has a safe yield of 7.7 mgd. It is the sole source of raw water to the Smith Lake Water Treatment Facility which has a maximum treatment capacity of 14.0 mgd. The County currently has under construction the Rocky Pen Run reservoir with a planned capacity of 5.3 billion gallons which will be sufficient to provide water supply to meet the buildout needs of the County. A new water treatment facility with an initial capacity of 5 mgd and an ultimate capacity of 25 mgd will be constructed adjacent to the new reservoir. These facilities are scheduled to be completed by the Spring of 2013.

The water transmission and storage system consists of two ground level water storage tanks, 12 elevated water storage tanks, four major water pumping stations, and approximately 570 miles of water mains ranging in size from 2 inch to 24 inch diameter. The County currently has 6 individual pressure zones.

GOAL: Provide an adequate and quality public drinking water supply, treatment, transmission, storage, and distribution system which serves the existing and proposed development as reflected in the County's Land Use Plan (LUP). The public drinking water system is to be economically feasible and environmentally sensitive.

Policies to achieve this goal include:

1. Design and construct all water supply, treatment, and distribution facilities in accordance with the Stafford County General Water Improvement Plan. Water facilities shall be planned and designed in accordance with the land uses, densities, intensities and locations as shown in the Land Use Plan.
2. Water system improvements shall be constructed in accordance with the schedule shown in the Stafford County General Water Improvement Plan.
3. The capital costs of system expansions and increases in system capacity shall be the responsibility of new development.
4. The County's water supply and water treatment capacity shall be monitored and shall be increased as required in order to provide a sufficient water supply within Stafford County on an as needed basis.
5. Expansions of the service area and improvement of the water transmission system shall be done in accordance with criteria set forth in the Comprehensive Plan.
6. User Fees, Availability Rates, Pro Rata Rates, and other fees will be reviewed on an annual basis.
7. All future development within the USA shall be required to utilize the public water system.
8. Only developments within the USA will be allowed to connect to the public water system, except for those properties that satisfy Policy 1.4.2.
9. Extension and improvements of public water facilities shall not be used as a justification for increasing the residential densities beyond what is shown in the Land Use Plan.
10. Operate the water system at a LOS so that it is in full compliance 100% of the time with the maximum contaminant levels and the treatment techniques of the National Primary Drinking Water Regulations.
11. Design the water distribution system to meet a LOS that has a normal operating pressure of between 40-80 psi.

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12. Provide fire protection to the USA in accordance with the Stafford County Water and Sewer Standards. It is recognized that currently portions of the county do not have this standard of fire protection. Upgrading the entire service area to this level will require a minimum of 10 years.
13. Design Standards shall meet the following LOS:
  - a. Water treatment facilities shall be designed to provide a maximum daily water demand that is 1.5 times the annual average daily water demand.
  - b. Water pumping stations shall be designed to pump the maximum daily water demand with one pump out of service.
  - c. Pipelines shall be designed to provide:
    - i. The maximum hour domestic flow plus fire flow
    - ii. A maximum velocity of 5 fps
    - iii. A maximum head loss of 2-5 feet/1000 feet of pipeline.

### 5.2.5.7. Wastewater Utilities

The Stafford County Department of Utilities is the sole provider of public sewer service to the County. The public sewer service area is the entire Urban Service Area (USA) of the County, and includes very limited areas outside of the USA.

Stafford County has two wastewater treatment facilities. The Little Falls Run facility serves the southern portion of the USA and currently has a capacity of 6.0 mgd. The County is currently upgrading the facility to meet the requirements of the Chesapeake Bay Program and is expanding it to 8.0 mgd. This project is scheduled to be completed by December 2010.

The Aquia facility serves the northern portion of the USA and currently has a capacity of 6.5 mgd. The County is currently upgrading the facility to meet the requirements of the Chesapeake Bay Program and expand it to 12.0 mgd. This project is scheduled to be completed by December 2010.

There are five major interceptor sewer systems that are defined by the drainage basins they serve. The Claiborne Run and Falls Run Interceptors serve the Little Falls Run Facility. The Accokeek Creek, Austin Run, and Aquia Creek Interceptors serve the Aquia Facility. Smaller drainage areas are pumped into these major interceptors.

GOAL: Provide a quality wastewater treatment, conveyance, and collection system which serves the existing and proposed development as reflected in the County's Land Use Plan (LUP). The system is to be economically feasible and environmentally sensitive.

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Policies to achieve this goal include:

1. Design and construct all wastewater treatment, transmission, and collection facilities in accordance with the Stafford County General Sewer Improvement Plan. Sewer facilities shall be planned and designed in accordance with the land uses, densities, intensities, and locations as shown in the LUP.
2. Sewer system improvements shall be constructed in accordance with the schedule shown in the Stafford County General Sewer Improvement Plan.
3. The capital costs of system expansions and increases in system capacity to serve new development shall be the responsibility of new development.
4. The County's wastewater treatment capacity shall be monitored and shall be increased to accommodate projected needs as required.
5. Expansions of the service area and improvements of the wastewater transmission system shall be done in accordance with criteria in the Comprehensive Plan.
6. User Fees, Availability Rates, Pro Rata Rates, and other fees will be reviewed on an annual basis.
7. All future development within the USA shall be required to utilize the public wastewater system.
8. Only developments within the USA will be allowed to connect to the public wastewater system, except for those properties that satisfy Policy 1.4.2.
9. Extension and improvements of public sewer facilities shall not be used as a justification for increasing the residential densities that are shown in the Land Use Plan.
10. Operate the wastewater system so that it is in full compliance 100% of the time with the requirements of the Virginia Pollutant Discharge Elimination System (VPDES) permits for each treatment facility.
11. Design Standards:
  - a. Wastewater treatment facilities shall be designed to treat the maximum daily flows which are 1.5 times the annual average daily flows.
  - b. Pipelines and pumping stations shall be designed to provide:
    - i. Dry weather flow of 64 gpd per capita (80% of average residential water demand).
    - ii. Infiltration allowance of 500 gpdidm (gallons per day per inch-diameter mile) for existing pipes.
    - iii. A peaking factor of 3.5 to account for diurnal flow variations and inflow.

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### 5.2.5.8. Solid Waste Management

The mission of the Rappahannock Regional Solid Waste Management Board (R-Board) is to provide professional, courteous, and intelligent service and solutions to the waste disposal needs of citizens residing in Stafford County and the City of Fredericksburg.

The R-Board's vision is to operate the best landfill in Virginia. Being the best landfill includes environmentally sound solid waste management policies, having an active Reduce, Reuse, and Recycling program, all coupled with outstanding customer service. The R-Board intends to continually strive to be a leader in the waste management industry and to set an example for others to emulate.

GOAL: Provide for efficient collection and disposal of solid waste while maintaining an adequate waste disposal capacity.

Policies to achieve this goal include:

1. Establish a LOS for land-filled waste based on a daily generation rate of 4.4 pounds per day per person, which is to be used in designing landfill capacity.
2. Continue to maintain or exceed 25%, measured by weight, as a recycling goal for residential and nonresidential waste stream.

### 5.2.5.9. Transportation

All public roads in the County should operate at a Level of Service of C or better. All new public roads should be built to Virginia Department of Transportation design specifications. Additional Level of Service Standards may need to be established to address specific situations within designated areas.

### 5.2.5.10. Stormwater Facilities

LOS Standards for stormwater management should be established.

## 5.3 Capital Costs per Residential Unit

### 5.3.1 Introduction

As population and commercial growth continues in the County, the demand increases for public facilities. This section presents a summary of the capital costs per type of residential unit, and the mechanisms available to the County to recover a portion of these costs, with the goal of ensuring that development pays its share of the impact.

Table 5.1: Summary of Capital Costs by Residential Unit Type

Housing Unit Type	Parks and Recreation	Schools	Libraries	Fire and Rescue	Transportation	Law Enforcement	Government	Total Monetary Contribution
Single Family	\$10,667	\$15,410	\$1,243	\$1,762	\$44,572	\$1,325	\$560	\$75,539
Townhouse	\$9,917	\$13,878	\$1,155	\$1,638	\$31,200	\$1,231	\$521	\$59,540
Multi Family	\$8,758	\$6,791	\$1,020	\$1,447	\$17,829	\$1,087	\$460	\$37,392
Mobile Home	\$6,440	\$11,053	\$750	\$1,064	\$21,395	\$799	\$338	\$41,839

Appendix 1 provides the methodology for calculating these costs. Proffers and impact fees may be used to recover a portion of these capital costs.

This data is based on a trend analysis assuming linear growth and cost increases. Growth projections are bound by state estimates, which may fluctuate. Fire and Rescue costs are based on assumed fixed population per fire and rescue station, rather than response times, which is a driving factor in determining facility need. Desired Parks and Recreation levels are based on public parkland and do not account for private recreation facilities which may fill some of the community needs.

### 5.3.2 Proffers

Proffers are voluntary contributions made by an applicant to offset the impacts of a change in land use through a rezoning. A locality cannot unilaterally impose proffers. They are offered by the applicant and the locality votes on whether or not to accept them as part of the rezoning. Proffers may be in the form of cash contributions, land dedication for a public facility, or construction of a public facility, and may also include restrictions on the intensity and type of the development. The Board of Supervisors periodically reviews its guidelines for proffers. The Proffer Guidelines will be updated annually and utilize a methodology which reflects the capital capacity projects on the CIP.

### **5.3.3 Transportation Impact Fees**

The County presently collects transportation impact fees in two areas of the County, generally in Hartwood and White Oak. Impact Fees for transportation may be collected Countywide for both residential and non-residential uses. The fee rates in the two existing areas vary in cost, as the rates depend on the growth potential in the area and the corresponding facility needs.

GOAL: Collect impact fees to ensure new development pays its share of the capital costs to build or expand transportation facilities to serve that development.

Policies to achieve this goal include:

1. Evaluate the potential to apply impact fees Countywide and update and revise the two existing areas.
2. Impact fees should be established to capture the public facility needs generated by each new residential dwelling unit and non-residential uses.
3. The impact fee areas and potential for new projects should be reevaluated on a 2-year cycle.

Action Strategies:

1. Adopt new ordinance and/or amend existing ordinance in order to maximize collection of transportation impact fees.
2. Continue to track affected parcels and collect impact fees as required.
3. Establish guidelines for the appropriate expenditure of collected impact fees.
4. Establish a process to regularly reevaluate and adjust the impact fee amounts.

### **5.3.4. Payments for upgrading impounding structures (Dams)**

Sec. 15.2-2243.1 of the Code of Virginia provides localities with the ability to collect funds from developers and subdividers to offset 50% of the costs of upgrading dams, effective July 1, 2009. These funds may be collected by the locality if the Department of Conservation and Recreation (DCR) determines that a plan of development proposed by a developer or subdivider is wholly or partially within a dam break inundation zone and would change the spillway design flood standards of an impounding structure pursuant to Sec. 10.1-606.3.

These payments are collected on a project specific basis, and must be used to improve the specific project within six years. The County may issue an

extension of up to an additional four years for the use of the funds if the dam owner shows that sufficient progress is being made.

If the County chooses not to collect these payments, then the developer or subdivider must make payments to the Virginia Dam Safety, Flood Prevention and Protection Assistance Fund instead.

GOAL: Collect payments for upgrades to dams when new development or subdivisions in a dam break inundation zone create the need for improvements to the dam.

Policies to achieve this goal include:

1. Developers and subdividers of land within dam break inundation zones should share in the costs of maintaining dam safety.
2. The County should explore the possibility of collecting payments to offset the costs of upgrading dams when these upgrades are needed because of development within the dam break inundation zone.

Action Strategies:

1. The County shall identify dam break inundation zones within the County.
2. The County shall create a system for identifying plans of development that lie within a dam break inundation zone and obtaining DCR review as required.
3. The County shall amend its subdivision and zoning ordinances to require applicants to provide an engineering study in conformance with the Virginia Soil and Water Conservation Board's standards under the Virginia Dam Safety Act (§ 10.1-604 et seq.) and the Virginia Impounding Structure Regulations (4 VAC 50-20) when DCR determines that the proposed plan lies within a dam break inundation zone.
4. Establish a payment system for collecting 50% of costs of improvements needed to meet spillway design flood standards and charging associated administrative fees.



## 5.4 Public Facilities Plan

### **5.4.1 Goal of the Plan**

To provide the public facilities and services needed to serve the existing population and new growth through efficient, equitable, safe and accessible delivery of public services as well as forecast when and where expanded and new public facilities will be needed.

### **5.4.2 Background**

The anticipated economic and population growth of Stafford County will require an increased level of public services. More population will mean more school-aged children as well as more health services, social services and recreation facilities. Economic growth will require expanded utilities, improved fire and rescue protection and coordination with the business community.

### **5.4.3 Purpose and Scope**

The purpose of the Public Facilities Plan is to assess the current and future public service and facility needs and provide a plan for addressing these needs in an efficient and cost effective manner. The Plan seeks to aid county staff when considering site selection and acquisition, facility location and timing of facility development. The plan will aid the county in the site selection process, reclassification and comprehensive impact fee processes as well as assist the county in the development of the Capital Improvement Program (CIP).

The County's Plan must be carefully coordinated with land use and transportation plans to integrate the provision of services with anticipated growth, revenues and available funding. The principal goals of this Comprehensive Plan regarding the provision of public facilities and utilities are:

- Provide community facilities/services to serve existing and new development in an efficient and cost effective manner;
- Provide emergency services and law enforcement to protect citizens and allow them to enjoy a safe and secure environment;
- Promote an integrated information system for the County, supporting the education and the enrichment of all of its citizens;
- Serve the recreational needs of the community through a comprehensive system of recreational facilities and programs;
- Provide a system of high quality educational opportunities that meet the future educational needs of all citizens;
- Provide safe and adequate facilities and educational programs for the removal, disposal and reduction of solid waste; and

- Provide a sufficient supply of high quality drinking water and a distribution system to serve the domestic, recreational, industrial, commercial and fire protection needs of the community at the most economical price possible.

#### **5.4.4 Key Objectives**

The Public Facilities Plan should serve as the foundation for future decisions concerning the location and timing of public facilities. In making these decisions, the following objectives should be considered:

- Locate new facilities within the existing Urban Services Area. Exceptions may be made when the only way to meet LOS Standards or locations criteria contained in the Public Facilities Plan, is to locate the facility outside the USA
- Locate new facilities to provide convenient service to the greatest number of users;
- Construct or expand facilities in accord with established Level of Service Standards;
- Coordinate the location of public facilities with the recommendations of the Comprehensive Plan;
- Provide equitable distribution of public facilities between established and developing parts of the county;
- Consider maintenance or replacement needs in established areas to encourage healthy communities;
- Acquire sites for future facilities in advance of, or in conjunction with, development;
- Provide co-located facilities wherever possible to provide greater efficiency and cost savings; and
- Use this plan to determine whether proposed facilities are in accord with the Comprehensive Plan as required by state law.

It is not the intent of the Comprehensive Plan to address funding availability, debt capacity or other financial concerns. The plan also does not address facility design, equipment or operation factors, unless such factors directly relate to system-wide facility planning.

The Plan recommends construction of the following new (and expansion to existing facilities which are not built to the County's current standards) public facilities by facility type by 2030. The Plan references the Public Facilities Impact Model (PFIM) to help keep track of the capital needs with the growth population on an annualized basis. The PFIM is based on Virginia Employment Commission population projections for Stafford County to the year 2030.

The PFIM tracks the amount of building square footage by facility type as well as the number of acres of County parkland needed based on the year's projected increase. Using the County's current standards for each facility

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type, especially the building size of which County facilities are constructed, the PFIM can determine the total number of facilities needed by 2030. Where standards have not been established, the PFIM uses current data to establish the provided service level by the County. This service level is assumed to be provided by the County as the population increases over the next 20 years. During the twenty-year period of 2010-2030 covered by this Comprehensive Plan, there is a projected need for the following, additional public facilities:

- Eight elementary schools;
- Four middle schools;
- Five high schools;
- Five Fire and Rescue stations for a total of 100,135 square feet of space;
- 1,892 acres in land for parks and recreational facilities;
- Three libraries for a total of 94,606 square feet of space; and
- Other government facilities totaling 147,148 square feet of space.

As of this revision of the Comprehensive Plan, the Public Facilities Plan does not address the need to upgrade existing facilities to the Level of Services Standards. The Public Facilities Plan background is provided in Appendix B.

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## 5.5 Financial Impact Model

A financial impact model (FIM) is a simplified representation of public revenue and expenditure flows. It estimates in a systematic manner how economic, land use and population changes affect government finances. The model can be used to estimate the impact of residential and non-residential growth and development over the twenty year period of the Comprehensive Plan.

Objective 2.4 of this Plan recommends the County adopt a Financial Impact Model. The Financial Impact Model should be designed to facilitate analysis of future trends or forecasts in population, expenses and revenues for the county and show the financial impact of alternate scenarios. The FIM is only a part of the total planning process. It is designed to show the potential fiscal result of planning choices, not what those choices should be. It does not address land use, environmental impact, transportation, health and safety, community design or economic development except as a reflection of how decisions in those areas might impact the County's fiscal condition.