

## **Chapter 4**

### **PUBLIC FACILITIES PLAN**

## INTRODUCTION

The projected population growth of Spotsylvania County will require additional public facilities. A larger population translates to more school students as well as more health services, social services, recreation facilities, and increased demands on emergency services and law enforcement. 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 County's public facilities must be carefully coordinated with land use and transportation plans to integrate the provision of services with anticipated population and economic growth, revenues, and available funding. The principal needs identified within the 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 businesses 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 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.

Current and future needs should be addressed through existing facilities whenever possible. Where this is not possible, new facilities may be warranted. By identifying criteria for the development of public schools, water or sewer lines, fire and rescue stations, and other facilities, the County can encourage development in appropriate areas and discourage development in inappropriate areas. Appropriate here is meant to be consistent with adopted policies in the Comprehensive Plan. It must be recognized that areas of the County are different and levels of service within these areas will vary. Coordination of County land use, transportation and public facilities development is the key to providing equitable, efficient, and cost effective government services for current and future County residents and to support the business community.

The Public Facilities Plan recommends the general timing and location of future County facilities based on desired service levels. It is designed to function as a needs assessment supporting the establishment of specific project priorities through the annual Capital Improvement Program. A

comprehensive approach integrates facility needs, siting criteria, and design issues with adopted land use plans and other planning concerns. The Plan will guide the acquisition of public facility sites through the rezoning process and advance purchase or optioning. The Public Facilities Plan does not address funding availability, debt capacity, or other financial concerns; nor does it address facility components, equipment, building design, and numerous other factors best left to the expertise of the operating departments. In addition, the location recommendations are general and should not be interpreted as site specific.

This plan is one element of the Spotsylvania County Comprehensive Plan. As with all components of the Comprehensive Plan, it is intended to function as guide for decision-makers; flexibility is required when fundamental conditions change or analysis based on new data reaches differing conclusions. The Comprehensive Plan and each of its components should be reviewed and, if necessary, updated periodically based on new data and analysis.

#### Relationship to the Comprehensive Plan and County Growth Management Strategy

The adoption of the Public Facilities Plan as part of the County's Comprehensive Plan provides an important implementation tool for the County's overall growth management strategy. Articulated through the recommendations of the Comprehensive Plan, this strategy encourages sustainable and orderly growth in designated areas of the county while supporting the overall desires and aspirations of the community.

A key aspect of the growth management strategy involves the appropriate timing and location of future land development.

#### Relationship to the Capital Improvements Plan

The County's annual Capital Improvement Plan (CIP) addresses short-term facility planning. The CIP proposes a specific schedule for acquisition, development, enhancement or replacement of public facilities over a five (5) year period. It shows the arrangement of selected projects in priority order, and establishes cost estimates and anticipated funding sources.

### **OVERVIEW OF THE PUBLIC FACILITIES PLAN**

The Public Facilities Plan is organized into six (6) sections: 1) Public Schools; 2) Parks and Recreation; 3) Fire and Rescue Services; 4) Libraries; 5) Solid Waste Management; and 6) Water and Sewer Facilities. These should not be construed as the only public facilities which exist within the County, but rather the ones with the largest direct need for increased facilities as the County's population increases. In the near term, general government facilities are largely able to be provided within existing County structures while the needs of judicial services are largely determined by the State. The absence of a section devoted to these public services should not be construed as indicating that the County will have no additional needs as its population grows, but rather a recognition that these needs will likely be specific in nature and best addressed at the time they arise.

In preparing the Public Facilities Plan, each of the above categories has been addressed in terms of existing conditions, evaluation criteria, future expectations and future plans. In this way the Plan will provide a baseline for future planning, evaluating existing development policies and creating new policies where appropriate.

#### General Evaluation Criteria

An evaluation of existing public facilities and a determination of needs for future facilities involves several related criteria. These criteria cannot be static or absolute because particular needs and existing conditions vary greatly throughout the County.

#### Location

Location must be considered in relation to various elements of the Comprehensive Plan, such as existing and future population distribution, zoning, major transportation arteries, topography, and utilities. A centralized location is appropriate for facilities that provide services to intermittent visitors where a time and distance factor is not critical or where the services are highly specialized. Decentralized locations are desirable for facilities that serve day-to-day needs of citizens and where a time and distance factor becomes more important.

#### Accessibility

The site should be accessible to major transportation routes providing the best possible access to the greatest number of citizens expected to use the facility.

#### Proximity to Related and Supporting Facilities

There are advantages to the grouping of related or complementary facilities within one complex or area. Convenience to the public is thereby enhanced, operational economics are achieved, and less land is required to provide shared facilities such as parking. Some facilities are also more effective when located adjacent to a business district or shopping center, thereby assuring the greatest convenience to the largest number of people.

#### Condition and Obsolescence Assessment

In order to determine how to address a facility need, the present state of repair for the particular facility needs to be determined. Existing building space arrangements and special mechanical equipment requirements to meet the function needs of the facility must be considered. The operational efficiency of the facility and its possible adaptation to change or enlargement are factors that must be reviewed to determine the relative obsolescence of the building plan. Poor condition and high levels of obsolescence may indicate a need for replacement.

#### Site Adequacy

The site for each building should be adequate to provide for: (a) the space needs of the building and any probable future additions, (b) parking space for vehicles of both visitors and employees, and (c) convenient and safety access.

### Supportive of Adopted Planning Policies

The proposed project should support adopted County policies and plans. Without reference to an overall framework for development of the County, projects can be inconsistent and counterproductive. If a project appears justified, even though it is not consistent with adopted policies, then a change in policy should be proposed and reviewed through the planning process.

### Public Facilities Map

Public facilities which form an integral part of the County's land use pattern are shown on the Public Facilities Plan Map (Map 1); these include the schools, parks and recreation facilities, and various other buildings, structures and sites needed to provide public services. Only existing and known future locations are indicated on the map. The criteria established in this Plan shall form the basis for determining future needs and appropriate sites. The locations of existing and future water and sewer systems are identified within the Water and Sewer Master Plan.

## **KEY GOALS OF PUBLIC FACILITIES PLAN**

The principal goals of the Comprehensive Plan regarding the provision of public facilities and utilities are:

1. Provide community facilities/services to serve existing and new development in an efficient and cost efficient manner;
2. Provide emergency services and law enforcement to protect citizens and allow them to enjoy a safe and secure environment;
3. Provide a system of high quality educational opportunities that meet the future educational needs of all citizens;
4. Serve the recreational needs of the community through a comprehensive system of recreational facilities and programs;
5. Provide safe and adequate facilities and educational programs for the removal, disposal, and reduction of solid waste; and
6. 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.

## **KEY POLICIES OF THE PUBLIC FACILITIES PLAN**

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

1. Locate new facilities to provide convenient service to the greatest number of residents.

2. Construct or expand facilities in accord with established criteria and level of service standards.
3. Help guide future growth by coordinating the location of public facilities with recommendations in the Comprehensive Plan.
4. Use the plan as a general guide for the County's Capital Improvements Plan.
5. Ensure equitable distribution of public facilities between established and newly developing areas of Spotsylvania County. Consider existing facility maintenance or replacement needs in already developed areas of the county.
6. Mitigate the impact of public facilities on adjacent planned and existing land uses.
7. Acquire sites for future public facilities as soon as possible, ideally obtaining property for facilities many years before there is a need to build.
8. Use the recommendations of the plan, where feasible, to develop multiple use locations (i.e., joint park/school sites).
9. Use the recommendations of this plan to determine whether proposed public facilities are substantially in accord with the Comprehensive Plan, as required by state law.

## **PUBLIC SCHOOLS**

### **Introduction**

The goal of the school system is to provide for the highest quality education for students in the County in the most cost-effective manner.

The Spotsylvania County Public School System offers a comprehensive program for grades pre-Kindergarten-12, in addition to vocational education, programs for gifted students, special education and related services, and alternative education. In addition to vocational courses offered at the local high school, students may take career-based courses at the Spotsylvania Career and Technical Center located adjacent to Courtland High School. The school system operates a federally funded Title One program for children whose math and reading skills are below grade level and houses Headstart and the Virginia Preschool Initiative (VPI) program for preschool children.

The Spotsylvania County Public School System consists of thirty (30) schools: seventeen (17) elementary schools, seven (7) middle schools, five (5) high schools, and the Spotsylvania County Career and Technical Center. Courthouse Academy and the GATES Center provide services to non-traditional secondary students. John J. Wright serves as a center for several alternative education, special education and preschool programs. In addition there is a Maintenance Warehouse Complex and a Joint Fleet Maintenance Facility with the County.

At the start of the 2012-2013 school year, 10,817 elementary and pre-k students, 5,402 middle school students, and 7,506 high school students, for a total of 23,725 students, were enrolled in the school system.

### **Level of Service Standards**

For the purpose of the Public Facilities Plan, school capacity is the key Level of Service indicator. The Plan for school system expansion is based on the County School Board school design capacity as follows:

- Elementary Schools: 930-950 students
- Middle Schools: 940-960 students
- High Schools: 1,900-2,100 students

All applications for a rezoning and/or special use permit for residential dwelling units should contain the following information:

1. Number and type(s) of dwelling unit(s) proposed
2. Anticipated occupancy date for proposed dwelling units
3. Anticipated number of children per household type

### **Facility Design and Location Criteria**

The following criteria should be used in determining appropriate sites and design for additional school facilities.

- Provide new facilities to adequately and equitably serve all areas of the county.
- Schedule school construction to relieve overcrowding and plan for new growth before it occurs.
- Provide up-to-date learning facilities including advances in technology and related instructional software.
- Continue to coordinate school site planning and development with the Parks and Recreation Department in order to maximize community recreational facilities.
- Obtain optimal locations and minimize costs through advance acquisition of suitable sites.
- Provide locations for new schools that minimize travel distance for current as well as future students.
- Elementary, Middle and High Schools site design should minimize impacts of the recreational areas on adjacent residences. Sports facilities and their parking areas should be buffered from nearby homes.
- Pursue acquisition of school sites in projected growth areas of the county.
- School construction should follow the guidelines of the Virginia Department of Education, as outlined within *“Guidelines for School Facilities in Virginia’s Public Schools”*.
- School sizes should be based on not only the design capacity, i.e. the number of students, but also on the program capacity as programs such as Special Education and Career and Technical Education course have mandated federal caps that may not utilize square footage or pupil/teacher ratios.

### **Recommendations**

The following are recommendations for the provision of adequate school facilities.

- Consider realignment of Attendance Zones to best utilize existing facilities to accommodate student population before constructing new school facilities
- Look to constructing additions to existing school facilities before constructing new school facilities for cost efficiency purposes
- Establish new Attendance Zones based on the safest and shorter school bus routes in order to get students to and from school in a timely fashion
- Construct new schools to provide the best educational opportunities for students by preventing overcrowded classroom sizes, unsafe and long bus trips, etc.
- Maintain levels of service by staying consistent with state standards for classroom size by education level and full utilization of school facilities based on building capacity
- Reduce bus travel distances for students going to and from school in a safe manner
- Reduce land costs for new schools through advance acquisition.

## **FIRE, RESCUE, AND EMERGENCY SERVICES**

### **Introduction**

Fire protection and emergency medical service are indispensable services that are essential to the quality of life of every County resident. The overall goal is to ensure adequate fire protection response and emergency medical services for the county's residents, businesses, and tourists.

Fire and rescue services are provided to Spotsylvania County residents and visitors through a system comprised of both volunteer and career personnel. There are three volunteer organizations (rescue squads and fire companies) providing services to the County. They include the Spotsylvania Volunteer Fire and EMS Department, Chancellor Volunteer Fire and Rescue Department and Spotsylvania Volunteer Rescue Squad. The Spotsylvania County Department of Fire, Rescue and Emergency Management provides career personnel who staff fire and rescue stations. The County is currently working towards providing personnel at each station seven days per week, 24 hours per day.

Services provided by the department are divided into five distinct categories as follows:

- 1 Fire - Fire suppression, first responder program, public fire education, and company inspection programs.
- 2 Rescue - Emergency medical treatment and transport and public education.
- 3 Emergency Management/Support Services - Plans for natural or man-made disasters, processes Material Safety Data Sheets (MSDS), responds to hazardous materials spills, investigates environmental issues (illegal dumps, spills, etc.), coordinates search and rescue efforts, provides in house vehicle repair and maintenance for fire and EMS vehicles and provide logistical support for the department.
- 4 Fire and EMS Administration - Provides administrative support for the entire department.  
Develops departmental budget, establishes departmental policy and procedures, processes fire inspections, fire investigations, fire and EMS reports and departmental related permits and administers the Revenue Recovery Program for Spotsylvania County.
- 5 Fire Prevention – Performs plan review (site plan, building plan, and subdivision plat), conducts new construction and existing occupancy inspections to ensure compliance with applicable codes and standards, conducts investigations of fires, issues related permits (blasting, fireworks, burning, etc.)

### **Existing Facilities**

Currently there are 10 Fire Companies and 10 Rescue Stations spread throughout the County. Some facilities are joint facilities and some are stand-alone facilities devoted to either fire or rescue services. The specific stations are listed in the table below. The facilities currently housing Fire Company 5 and Rescue 5 are being consolidated and a new joint use facility will be constructed in the Route 3 corridor in 2014. Plans are also being developed for a new fire and

rescue station (#11) in the vicinity of Mills Drive and Benchmark Road. The existing facilities map shows the locations of current and known future stations.

The County maintains mutual aid agreements with the City of Fredericksburg, and the Counties of Louisa, Orange, Caroline, and Hanover. The Department of Fire, Rescue and Emergency Management (FREM) also seeks to reduce demand for fire and rescue services through a proactive fire prevention and safety program. The program includes numerous public education activities as well as a fire safety inspection program.

The primary indicator of level of service in regard to fire protection is response time. The target response times are 6 minutes for urban and 8 minutes for rural, with an overall average of 7 minutes countywide. The current level of service is measured by distance from the various stations whether the station is fire or rescue only or a joint use location. Approximately 90% of the land area of the County is within the desired five-mile radius of a fire station. An even greater percentage of the existing structures are within the five-mile radius due to the density of development in the Primary Development Boundary. This is a standard commonly used by the Insurance Services Organization (ISO) a group funded by the insurance industry to establish insurance rates on a national level.

Many variables affect response time and the generation of fire/rescue calls by a given population. Among them are geography, road networks, age and density of population, and age and quality of the building stock. The analysis of the department focuses on future population projections and call loading within a fire/rescue district or response zones. A threshold of 2,500 total calls per year is used as the benchmark indicator of full capacity at any single fire/rescue station.

### **Level of Service Standards**

Level of Service is evaluated through multiple means. The alpha measure of service is response time but response time is driven by several factors. The primary factors are station location, equipment availability and staffing levels and availability.

There are four LOS standards for fire and rescue:

1. Respond to 90% of all fire and emergency medical service incidents within 6 minutes of being dispatched when the incident is located in the Primary Development Boundary.
2. Respond to 90% of all fire and emergency medical service incidents within 8 minutes of being dispatched when the incident is located outside the Primary Development Boundary.
3. Achieve a 7-minute average countywide response time for 90% of the county's incidents.
4. Achieve a 1 : 11,000 ratio of stations per capita.

### **Location Criteria**

The following criteria should be used in determining appropriate sites for additional stations in order to provide a consistent level of service across the County.

- Locate stations at points with quick access to a major arterial road. If possible sites should be located near two major arterials that offer both east/west and north/south travel.
- Locate new fire/rescue stations near mixed-use centers where possible, based on key site planning considerations such as access, safety, and response time.
- Response times will also be considered in evaluating and selecting appropriate sites. This will ensure that the targeted response goals are being met.

### **Design Criteria**

The following design criteria should be considered when developing a new site for emergency response stations.

- Co-locate fire and rescue facilities for maximum efficiency. Consider co-locating with other public facilities as well.
- Acquire sites of at least 3 acres in the urban area since there is the availability of county water and sewer lines and 5 acres in the rural area in order to accommodate drainfields in order to provide for co-location of public facilities and future expansion.

### **Recommendations**

The following are recommendations for the provision of adequate Fire and Rescue facilities.

#### **Short Term**

- Study Fire and Rescue calls and responses to determine whether separate facility needs LOS should be established for the two services.
- Build replacement FC/RS 5 on Route 3.
- Secure land for and build FC/RS 11 in the Mills Drive / Benchmark Road area.
- Secure land for and build a new fire and rescue station to split the call volume handled by stations #4 and #6.

#### **Long Term**

- Secure property for the replacement of the FC/RS 3 facilities into a new consolidated use site.
- The land acquisition for fire/rescue joint use sites will need to occur in order to relieve the burden on existing fire/rescue facilities. Possible new locations are in the Shady Grove, Massaponax Church, and Post Oak areas.

## SHERIFF

### **Introduction**

The Sheriff is a constitutional officer of the Commonwealth of Virginia and is elected by the voters of Spotsylvania County. The Sheriff provides law enforcement services to the citizens of the County, including the enforcement of all State and County criminal codes; serves civil and criminal papers; provides for the enforcement of all State and County animal codes and supervisors the operations of the County's animal shelter; and protects and maintains the security of the courts operating in the County.

There are five divisions within the Sheriff's Office that together, serve all law enforcement functions described above: Patrol Operations Division, Criminal Investigations Division, Courts Security/Civil Process Division, Administrative Services Division, and Animal Control Division. Some of the specialty functions within these divisions are the Street Crimes Unit, Crime Prevention Unit, Emergency Response Team, Bicycle Team, Canine Unit, Hostage Negotiation Team, Dive Team, Ground Search and Rescue Team, and Traffic Services Unit.

Emergency Communications is also part of the Sheriff's Office. The Emergency Communications division is a 24/7 operation that serves as the 911 answering point for calls for service and the dispatching of public safety services.

On December 3, 2011, a 58,000 square foot Public Safety Building located at 9119 Dean Ridings Lane was dedicated. The Sheriff's Office, 911 Dispatch Center, and the administrative offices of Fire, Rescue, and Emergency Management are located in the Public Safety Building. The building includes a forensics lab, bay for inspecting vehicles involved in crimes, a physical fitness facility, and an outdoor kennel for police and fire dogs.

The Sheriff's Office maintains one substation, located in the Spotsylvania Towne Centre, and the Animal Shelter, located at 450 TV Drive.

### **Level of Service Standards**

1. Maintain a 1 : 1,500 ratio of Deputies per capita.

### **Facility Location and Design Criteria**

The following criteria should be used in determining appropriate sites and design for additional or expanded Sheriff and Animal Control facilities.

- Provide new facilities to adequately and efficiently serve all areas of the county.
- Provide animal shelter facilities consistent with 2-VAC 5-110 Rules and Regulations Pertaining to A Pound or Enclosure to be Maintained by Each County or City (<http://www.vdacs.virginia.gov/animals/regulations.shtml>)

### **Recommendations**

The following are recommendations for the provision of adequate Sheriff and Animal Control facilities.

#### **Short Term:**

- Enclose outdoor kennel at the Public Safety Building
- Expand Animal Shelter or partner with non-profit animal shelter(s) to provide the service.

#### **Long Term:**

- Substation in Livingston District co-located with other public facilities

## **SOLID WASTE COLLECTION & DISPOSAL**

### **Introduction**

The Spotsylvania County Department of Public Works prepares a Solid Waste Management Plan every five years in accordance with the Virginia State Code. The next update is due in 2015. The Plan is based on a twenty (20) year planning period and deals with all aspects of solid waste management from operation of the landfill to the development of convenience sites to the development of recycling and other educational programs. The objectives of this plan are to protect the health, safety and the welfare of the citizens of Spotsylvania by providing for and planning for the present and future solid waste disposal needs for the County. It is the intent of the County to provide these services as efficiently and economically as possible. The plan minimizes the amount of solid waste disposed of in the County's landfill by providing an integrated plan of recycling and education. This will serve to maximize the life span of the existing landfill and promote the effective and efficient use of limited natural resources. The information contained in this section is derived from that plan.

### **Existing Facilities**

Spotsylvania County operates one landfill facility in the southern part of the County. It is located north of State Route 602 and east of State Route 208 approximately 3 miles southeast of Brokenburg. The entire site covers approximately 538 acres, with 250 acres ultimately proposed for disposal of municipal solid waste. Currently 85 acres are permitted for use as a landfill under the authority of the Virginia Department of Environmental Quality. This is designated as Phase 1 (cells 1 through 6) and approximately 20-25 years of capacity remain. Additional phases will add over fifty (50) additional years to the landfill's estimated facility life.

Of the 85 acres permitted as Phase 1, 55 acres will be actual disposal area with the remainder to be used for roads, drainage area, and buffers. The facility is designed with a capacity of 5.4 million cubic yards. This total includes 310,000 cubic yards of final cover (cap, cushion, and topsoil), 220,000 cubic yards of liner and drainage layers, 968,000 cubic yards of daily and intermediate cover and 3.87 million cubic yards of waste. The current waste stream is approximately 40,000 tons annually or 110 tons per day. The composted tonnage is approximately 23,000 tons annually.

Spotsylvania County maintains a comprehensive solid waste disposal program that includes the disposal of household, commercial, and industrial waste. The residential component of the stream comprises approximately 90% of the waste that is placed in the landfill. The remainder consists of business/commercial/industrial waste (10%).

Currently, residents of the County are provided with 13 convenience sites located at various locations throughout the County. The sites have designated areas for household waste as well as specific containers for different recyclable materials. Table 1 identifies the individual convenience sites.

**Table 1  
Spotsylvania County Convenience Sites**

<b>Convenience Site</b>	<b>Location</b>
The Barn	Lewiston Road
Belmont	Belmont Road
Berkeley Public Use Area	Standfield Road
Chancellor Public Use Area	Harrison Road
Chewning Park	Post Oak Rd
Cole Hill Creek	Partlow Road
Lee Hill	Lee Hill School Drive
Livingston Landfill	Massey Road
Marshall Park	Massaponax Church Road
Mine Road	Mine Road
Post Oak	Post Oak Road
Todds Tavern	Brock Road
Wilderness	Orange Plank Road

Spotsylvania County has been providing voluntary drop off facilities for recycling since 1989. Spotsylvania County built a recycling center in 1992 at a cost of \$63,000. The center is equipped with a loading dock, horizontal bailer and other equipment necessary to process material to market specifications. The recycling operations include the mulching program; tire recycling; CFC recovery; collect, bail, market commodities; and household hazardous waste collection. Virginia mandates a recycling rate of 25%. Spotsylvania currently recycles 31% of the waste generated.

In accordance with the Biosolids Management Plan, Spotsylvania County adopted the composting process as the choice method to stabilize its biosolids. In 2001, the County committed to composting their biosolids, which also requires some materials from the mulching program. The composting facility is located at the Livingston Landfill and was expanded in 2010. The County composes 100% of biosolids produced and maintains 100% diversion of all wood waste out of the landfill. Tree trimmings, logs and brush are collected and periodically ground to provide the bulking agent required for the composting program. In 2003, the compost was registered with the United States Compost Seal of Testing Assurance Program. This program certifies through rigorous testing that the product not only achieves class A criteria according to the US EPA Part 503 regulations, but that it meets growing standards of quality for attributes such as particle size, stability, and soluble salt content to name a few. In that same year, the product was registered as a fertilizer with the Virginia Department of Agriculture. The compost was later trademarked as Livingston's Blend and marketed/distributed with information regarding proper applications. The County was awarded the 2012 Gold Winner Solid Waste Association of North America Composting Division.

### **Future Expectations**

Continued growth in the County whether it is commercial, industrial or residential will put additional pressure on the existing landfill and the convenience sites. Provided the waste stream grows at a similar rate as the population projections, the landfill has capacity to remain open until about 2083-2085. This is subject to change if a large hauler elects to being utilizing the facility.

Additional population will require additional convenience sites that are convenient and readily accessible to the population concentrations. The existing convenience sites may need to be expanded and the remaining collection sites will need to be closed and replaced with convenience sites although not necessarily on a one for one basis.

### **Location Criteria**

The existing landfill will suffice for the next 70-75 years (approximately) and thus will not need replacement during this Comprehensive Plan horizon. Convenience sites should be located according to the following criteria.

- A 5 mile radius level of service standard should be maintained. This means that a convenience site's population should be within 5 miles of the site.
- Convenience sites should not be located on arterial or major collector roads.
- Preference should be given for joint use sites such as with fire/rescue station, parks, and other public facilities.
- The entrance to a convenience site should be readily accessible to the large vehicles required to service them.
- Adjoining land use (current and future) should be considered.
- Individual site use trends and traffic counts should be evaluated when determining new or expanded sites.

### **Design Criteria**

- Convenience sites should be a minimum of two acres in area in order to accommodate parking, stacking and staging areas as well as the waste collection facilities. The sites should be of adequate size to expand if necessary.
- Sites should be located in areas that will allow for adequate screening of the facilities from adjacent land uses. Mitigation measures for the site's impact on adjacent properties should be addressed in the design of the site.
- Site should be planned to accommodate expansion, including site area, entrance design, road improvements, etc.

## **Recommendations**

The following are recommendations for the provision of adequate solid waste facilities.

### **Short term:**

- Develop a full service convenience center in the Massaponax area to replace the Mine Road and Lee Hill sites. Consider one site to include the County's Public Works Center for collection, fleet, recycle processing, material transfer, and mulching.

### **Long term:**

- Update upon completion of the 2015 update to the Solid Waste Management Plan.

## **WATER AND SEWER FACILITIES**

### **Overview**

The Water and Sewer Master Plan, adopted in 2002 as an Element of the Comprehensive Plan, identifies areas for expansion and establishes a timeline for implementation. It is an axiom of planning that development follows water and sewer lines, as well as roads. When these facilities are upgraded in response to growth pressures, their improvement can stimulate further development. That development will increase demands on schools, recreation programs, emergency services, and other services in a continuing cycle of growth, demand, service provision, and more growth. Ensuring that the provision of community facilities and public services is phased with demand is a major aim of any Comprehensive Planning process.

One of the most effective tools for directing the timing and location of growth is the establishment of a **Primary Development Boundary** to define the area within which public utilities will be provided. Utility services will not be provided by the County outside of the Primary Development Boundary, where development is discouraged. By establishing a Primary Development Boundary, the County will encourage more efficient use of the land while preserving the rural character of those portions of the County outside the boundary. The Primary Development Boundary is depicted on the Land Use Map (Map 1). This boundary is not permanent and can be adjusted through the Comprehensive Plan amendment process when conditions warrant.

### **Existing Water Service**

The Spotsylvania County water system, serving more than 29,000 customers with drinking water in the County and providing bulk water to the City of Fredericksburg, has undergone dramatic changes since the acceptance of the original 1994 Water and Sewer Master Plan. Spotsylvania County, in partnership with the City of Fredericksburg, has developed a regional water supply, treatment and distribution system to serve the five pressure zones in Spotsylvania County (Five Mile Fork, American Central, Mine Road, Battlefield, and City) and three zones in the City of Fredericksburg.

The Spotsylvania County water system consists of the following principal features:

#### **Ni Reservoir**

The Ni Reservoir, the raw water supply to the adjacent Ni Water Treatment Plant, was constructed in 1974 and the reservoir has a volume of 1.4 billion gallons with a surface area of approximately 420 acres.

#### **Ni Water Treatment Plant**

The Ni WTP was constructed in 1974 expanded to its current capacity of 6.0 mgd.

### Motts Run Reservoir

The Motts Run Reservoir was built in 1969 and is owned by the City of Fredericksburg, but is jointly operated by the City of Fredericksburg and Spotsylvania County. The total reservoir volume, prior to modifications, is 1.3 billion gallons with a surface area of 160 acres.

### Motts Run Water Treatment Plant and Intake on the Rappahannock River

The Motts Run WTP serves Spotsylvania County and the City of Fredericksburg. The Motts Run water treatment facility and Rappahannock River raw water pumping station were completed in the spring of 2000. The current treatment plant capacity is 15 mgd expandable to 24 mgd.

### Hunting Run Side-Stream Storage Reservoir and Intake on the Rapidan River

The Hunting Run water supply dam and side-stream reservoir was completed in November of 2002. The reservoir volume is 209 billion gallons and the surface area is approximately 420 acres. Water is released into the Rapidan River to supplement the Rappahannock River during periods of low flow to allow continued river intake for the Motts Run WTP.

### **Existing Sewer Service**

Spotsylvania County sewerage system consists of the following principal features:

#### Massaponax Wastewater Treatment Plant

The Massaponax WWTP was constructed in 1975 and has been expanded to 9.4-mgd (million gallons per day) capacity. The plant is a state of the art biological nutrient removal facility. The wastewater treatment plant serves the Massaponax Creek drainage basin and includes the pump-over from the American Central sewage collection system and a small part of the upper Hazel Run drainage basin which is also pumped into the Massaponax Creek basin. Facilities are in place to enable sewage from the Deep Run drainage basin to be pumped to the Massaponax Creek drainage basin. Deep Run wastewater may also be treated at the FMC WWTP. Construction has been completed for the Courthouse Area Sewage Pumping Station that conveys sewage from the Courthouse Area to the Massaponax Creek interceptor.

#### FMC Wastewater Treatment Plant

The original FMC industrial WWTP began operation in 1967 and purchased by the County in 1980 and upgraded to 4-mgd capacity. Sewage from the City of Fredericksburg is treated at this plant.

#### Thornburg Wastewater Treatment Plant

The Thornburg WWTP was constructed in 1972 and has been expanded to a 345,000-gpd capacity.

#### Sewers and Interceptors

The sewer system is broken into collection sewers and four major interceptors. The interceptors are defined by the drainage basins that they serve: Massaponax Creek, Hazel Run, Deep Run, and Long Branch (which is a part of the Hazel Run drainage basin).

A regional pump station to serve the Jackson Gateway service area is being designed and construction will be phased as needed based on demand.

All Spotsylvania County sewers and interceptors have been mapped on the County GIS system.

### **GOALS, POLICIES, AND STRATEGIES**

**Goal:** 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.

**Policy:** Supplement the existing supply of potable water and fire flow for Spotsylvania County citizens.

#### Strategies

1. Utilize the Water and Sewer Master Plan to develop a comprehensive approach for the development of new and/or additional water sources.
2. Utilize the Water and Sewer Master Plan to develop a Capital Improvement Program so as to phase water supply and fire flow improvements for designated County growth areas in a timely and cost effective manner.
3. Continue to promote a Water Conservation Program throughout the County and protect the County's surface and groundwater supplies for the benefit of all.
4. Provide for a cost sharing program with developers to fund water improvements.

**Goal:** Provide for the adequacy of all new and existing sewage treatment that meets the needs of the community in an environmentally safe manner and only in targeted growth areas of the County.

**Policy:** Locate new or upgraded sewer facilities consistent with the Water and Sewer Master Plan to support orderly and efficient development.

#### Strategies

1. Update and utilize the Water and Sewer Master Plan to provide a phased, prioritized program for the extension of the County sewer system to identified development districts.
2. Utilize the Water and Sewer Master Plan to develop a Capital Improvement Program to phase sewer treatment improvements for designated County growth areas in a timely and cost effective manner.
3. Continue to provide for a cost sharing program with developers to fund sewer improvements.
4. Eliminate and consolidate individual pump stations through the provision of regional pump stations or gravity sewer extensions.

## LIBRARY FACILITIES

### Introduction

The Central Rappahannock Regional Library (CRRL) is a regional public library system serving the City of Fredericksburg and the Counties of Spotsylvania, Stafford, and Westmoreland. It is governed by a seven-member Library Board appointed by the participating jurisdictions. The regional library was established in 1969 by the Commonwealth of Virginia as a model system to demonstrate the value of regional resource sharing between cooperating jurisdictions.

The CRRL system consists of a Headquarters facility, six (6) branches, and a bookmobile, connected by daily courier service and an extensive regional catalog and database system. The Headquarters houses special collections for the system including Virginia, Law, and the regional Library of Congress Collection for the visually impaired. The administration is also located in the Headquarters, as well as centralized acquisitions, outreach, cataloging, account services, graphics, network services, and the circulation department. Two (2) of the branches are located within Spotsylvania County. The C. Melvin Snow Branch was opened in 1998 and the Salem Church Branch was opened in 1994.

### Existing Facilities

Below is a listing of the existing library facilities directly serving Spotsylvania County and their capacities in terms of overall floor space together with the current total of materials at each branch, as well as the system holdings available to Spotsylvania residents.

Branch	Gross Sq. Ft. of Floor Space	Total Books/ Materials
A. Spotsylvania Courthouse (Snow Library)	4,500	42,611
B. Salem Church	25,000	99,968
C. Central Library	12,300 <sup>1</sup>	231,544
Total Library Facilities in Proximity (includes Fredericksburg and Spotsylvania)	41,800	374,123

### Standards

The recommended minimum standards for Virginia Public Libraries are approved and adopted by the Virginia State Library and are adopted by the Central Rappahannock Regional Library Board. These standards are the recommended standards for localities in the Commonwealth for the provision of library services in each locality. Spotsylvania County citizens benefit from

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<sup>1</sup> The Headquarters facility, used jointly by residents in the City of Fredericksburg, Stafford, and Spotsylvania Counties is 36,900 sq. ft. For purposes of space analysis, 12,300 sq. ft. is attributed to the total square footage of each jurisdiction.

participation in the Central Rappahannock Regional Library system and as such have the opportunity to access the collections, resources, staff expertise, technology, and databases of a much larger library. The system was recognized in American Libraries Magazine as one of the top ten public libraries in the nation of its size in the cost efficient delivery of a broad range of user services.

The Library of Virginia Board Summary of Standards:

<b>Service</b>	<b>Criteria</b>
A. Collection	2 to 4 books/materials per capita
B. Buildings	0.6 to 1 square foot per capita
C. Computer Workstations	0.33 to 1 public workstation per 1,000 population
D. Location (Rural)	15 - 30 minute drive (15 - 20 mile radius)
E. Location (Urban/Suburban)	10 - 20 minute drive (2 - 8 mile radius)

Location Criteria

The goal of the library system is to provide County citizens convenient access to high-quality library services. The following are location objectives:

- The selection of sites for library facilities should take into consideration geographic obstacles to transportation. All buildings should be on or near heavily traveled roads, or in or near shopping areas and be clearly visible to traffic.
- Provide new facilities to adequately and equitably serve all areas of the County. Schedule library land acquisition and/or construction to respond to both current unmet demand and new growth when it occurs.
- Provide locations for libraries that are within a 10 to 15-minute drive within the Primary Development boundary and within a 15 to 30-minute drive outside of the Primary Development Boundary.
- Sites should be located along main travel corridors with consideration of minimizing users’ drive time. The site should be chosen to support the mission of providing library material and services to the greatest number of people.
- An alternative to construction of new facilities is to establish new libraries in leased commercial spaces such as shopping centers. In Fredericksburg and other locations, public libraries serve as anchor stores and can draw one to two thousand patrons a day. Branches could be located within the proposed mixed-use development areas proposed on the County’s Future Land Use Map.

Recommendations

For the purposes of the Public Facilities Plan, the collection calculation has become less important with the availability of materials electronically. The volume of books and materials available through the Library of Congress has caused the ratio of books and materials per capita to so greatly exceed the identified standard that Spotsylvania County no longer utilizes this measure for planning purposes. This renders library floor space as the level of service indicator. The floor space needs to be divided into the general library floor space need, together with a specific need for public meeting space. While the overall floor space is important, as the County

looks to the future, the availability of public meeting space is the key level of service indicator. The public meeting space need is partially met through the provision of meeting rooms at library facilities, but also through the provision of community centers as identified within the Parks and Recreation portion of this chapter. These combined spaces are considered in the Parks and Recreation portion and evaluated against a level of service standard there.

#### **Level of Service Standards**

- The Level of Service Standard for Library facilities is 0.3 square foot per capita.
- The Level of Service Standard for public meeting space can be found in the Parks and Recreation portion of this chapter.

#### **Future Needs**

It is not anticipated that there will be significant increases in the need for physical space for library services. The space increases that do occur should be aimed at increasing the availability of meeting space for various community groups. Libraries also play an important role in aiding the provision of internet access to the citizens of the County. To this end, the use of wireless hotspots at library and other County facilities should be explored to increase the availability of internet access.

## **PARKS AND RECREATION FACILITIES**

### **Introduction**

The Park's plan combines leisure and recreational objectives with the suitable locations necessary to provide a broad-based recreation and open space program. Parks and recreation facilities provide visual relief from concrete and pavement, make surroundings more habitable, and preserve and protect natural and historical resources. These facilities provide varying recreational opportunities for people of all ages, income levels, ethnic groups and physical abilities. As Spotsylvania County continues to grow, the significance of parks and recreation planning, acquisition and development increases. This chapter provides detailed standards, criteria and polices for provision of recreation facilities.

The County's Department of Parks and Recreation is responsible for maintaining all local parks and community centers. In addition, this Department administers a number of organized activities including baseball, basketball, softball, soccer and football teams, cheerleading squads and a variety of classes, programs and special events. Due to the popularity of its organized sports teams, this Department has identified a need for additional playing and practice fields. Future park development in the County will be aimed at meeting these needs.

Spotsylvania County is fortunate to have the Fredericksburg and Spotsylvania National Battlefield Parks encompassing 5,800 acres within the County to serve some of the passive recreation needs. Lake Anna, a 13,000-acre manmade lake, is one of Spotsylvania's most valuable recreational resources. Water skiing, boating and swimming attracts thousands of visitors to its shores. Anglers can take advantage of the more than 33 species of fish found in its annually stocked waters. Lake Anna State Park with its 2,810 acres is a focal point of Lake Anna. More than 9,900 acres of the County's current land uses are public parklands. The State and Federal parks, however, are not controlled by the County and, therefore, cannot provide some of the recreational opportunities sought by residents.

The County Parks and Recreation Department continues to strengthen its cooperative relationship with the school system in the design, development, use and maintenance of school recreational facilities. This relationship is critical in the overall delivery of park and recreation facilities Countywide and includes recreational land of 76 acres at elementary schools, 175 acres at middle schools and 168 acres at the high school level. Elementary and middle schools make up the majority of the school recreation space consistently available for after school community use.

The County historically has not developed nor maintained any Neighborhood Parks as many Neighborhood Parks exist through neighborhood homeowner's associations. There are estimated to be approximately 1,400 acres of homeowner association owned property in the County, some of which is utilized for Neighborhood Parks.

### **Existing Facilities**

In order to achieve the long range goals of the Parks and Recreation Department, it is necessary to review the inventory of current park lands and facilities to determine acceptable level of service standards for park lands and facilities and to then establish a strategic plan for the identification of new park and recreation facilities as the County grows.

In 2013, 607 acres of County parkland is operated by the Spotsylvania County Department of Parks and Recreation. Additionally, it is estimated that there are approximately 186 acres of School Board community park land that is programmed by the Parks and Recreation Department for community use at elementary, middle, and high school sites.

The Parks and Recreation Department also operates the County's community centers. These centers, in addition to the available spaces within the County libraries, offer a valuable tool to the County population in the provision of meeting space. It is important that provision of these spaces continue to serve the variety of needs of County residents.

### **Classification**

Park and recreation areas are classified according to the facilities (passive and active) that they may offer. A passive park is an outdoor facility, or portion of an outdoor facility that is used for passive recreational activities, such as pedestrian activities, hiking, and jogging, or serves as or features, an historical, cultural, ecological, or archeological attraction. A passive park does not include organized competitive activities, except events for uses allowable within a passive park. Generally a passive park is maintained in a natural state, except for minimal clearing for paths, trails, sitting area, walkways or auxiliary structures. In urban settings, passive parks may have more hardscape, open lawn, and landscaped areas which may be used for informal group activities. Examples of passive park features may include trails or walkways for hiking, walking, horseback riding, bicycling; informal areas used for concerts, areas for photography, nature studies, educational studies, or fishing; ecological areas and nature interpretive programs, nature centers, and picnic areas which may include shelters, scenic overlooks, and restrooms. An active park refers to any outdoor facility that includes the following facilities or facility types: athletic fields, building or structures for recreational activities, concession, community garden, courses or courts, children's play area, dog play area, swimming area, or a bike path. Allows for uses such as organized team sports or serves as or features a cultural, historical or archeological attraction; and is open to the public. Special Use Parks are highly specialized recreation areas that serve the entire county. Generally, they provide unique activities such as marinas, trails, historic areas, golf courses, dog parks, roller skating/skateboarding, amphitheaters, or other facilities generally not offered by the other park categories. These may exist independently or may be developed in combination with other parks.

Meeting spaces are used for a variety of functions ranging from parties and celebrations to strategic planning meetings for members of the local business community. In recognizing the variety of users of the space, it is important to recognize the different needs that they may have for the space. The most important identified needs are the availability of kitchen facilities for the

celebratory type uses of the facilities, and the provision of internet access for the business-related uses of the spaces.

**Existing Public Park & Recreation Areas**

<b>Park</b>	<b>Active</b>	<b>Passive</b>	<b>Total Acres</b>
Hilldrup (Tract) - <i>presently undeveloped</i>	0	65	65
Loriella	61	147	208
Patriot	40	91	131
Arritt	14	12.5	26.5
Virginia Central Trail	2	3.5	5.5
Chewning	7.5	2.5	10
Cosner	9	2	11
Harrison Road	10	12	22
Lee Hill	6.5	13.5	20
Legion Fields/Marshall	22	2	24
Marshall	14	11	25
Mary Lee Carter	3.5	0.5	4.0
Hunting Run Recreation Area	27	0	27
Ni River Recreation Area	1	4	5
Belmont	0	23	23
<b>TOTAL COUNTY PARK ACREAGE</b>	<b>217.5</b>	<b>324.5</b>	<b>607</b>

**Existing Meeting Space Areas**

<b>Facility</b>	<b>Internet Access</b>	<b>Kitchen</b>	<b>Size (sf)</b>
Berkeley Community Center	No	Yes	1,560
Chancellor Community Center	No	Yes	1,230
Cosner Park/Lee Hill Community Center	No	Yes	2,080
Harrison Road Community Center	No	Yes	1,748
Lick Run Community Center	No	No	1,274
Marshall Center Auditorium	No	No	5,000
Marshall Center Activity Room A	No	No	1,080
Marshall Center Activity Room B	No	No	1,080
Marshall Center Activity Room C	No	No	1,080
Marshall Center Activity Room D	No	No	936
Salem Church Library	Yes	2/6 rooms have access	1,932
Senior Center	No	Yes	3,819
Snow Library	Yes	No	1,147
Todds Tavern Community Center	No	Yes	928
<b>TOTAL COUNTY MEETING SPACE</b>			<b>24,894</b>

**Standards**

**Acres Per 1,000 Population:** Utilizing an acres per 1,000 population standard for passive recreation helps to ensure that as the County becomes increasingly suburban and urban, opportunities for citizens to enjoy the natural environment persist.

**Square Feet Per 1,000 Population:** Utilizing a square feet per 1,000 population standard for publicly available meeting space ensures that adequate public meeting space will remain available as the County population continues to grow.

**Facility Standards:** More important than the raw park land acreage needs are standards for recreation facilities which should be formulated to plan for recreation needs and serve as a basis for capital planning. The following chart shows the recommended County facility standards that have been derived from national and state standards.

FACILITY	NATIONAL STANDARD	STATE STANDARD	SPOTSYLVANIA STANDARD	2012 Need (Rounded)	County Provision	Other Provision
Baseball/Softball Diamond	1/2,500	1/2,000	1/3,000	42	48	6
(Lighted Regulation)	-	-	(1/15,000)	8	5	-
(Lighted Little League)	-	-	(1/30,000)	4	7	-
Basketball (Indoor)	1/5,000	1/5,000	1/5,000	25	43	9
(Outdoor)	-	-	(1/5,000)	25	25	-
	-	-	(1/10,000)	13	18	9
Bike/Fitness Trails	1 System/Region	3.5 Miles/1,000	1 Mile/1,000	126	22.8	-
Community Center	-	-	1/15,000	8	7	-
Golf	-	9 Holes/25,000	9 Holes/25,000	45 Holes	0	54 Holes
Horseshoes	-	-	1/10,000	13	0	-
Indoor Recreation Center/ Pool Complex	-	-	1/50,000	3	0	1
Multi-Purpose Fields (Field Hockey, Football, Lacrosse, Soccer, etc)	3/20,000	3/10,000	1/2,000	63	51	10
Playgrounds	1/5,000	-	1/5,000	25	22	-
Swimming Pool	1/20,000	1/15,000	1/20,000	6	1	25
Tennis (Lighted)	1/2,000	1/2,000	1/2,000	63	46	48
	-	-	(1/10,000)	13	6	-

**Level of Service Standards for Parks & Recreation and Public Meeting Space**

New development presents demands for Countywide parks and meeting space facilities. It is important that Spotsylvania County provide both current and future residents adequate recreation services that meet current and future demand according to established levels of service. The future demand for parks, open space, and recreation facilities must be measured, and means must be identified for maintaining the established Countywide level of service for these important services after new development occurs.

- Multi-Purpose Field 1 per 2,000 residents
- Tennis Court 1 per 2,000 residents
- Baseball/Softball Diamond 1 per 3,000 residents
- Basketball Court 1 per 5,000 residents
- Playground 1 per 5,000 residents
- Horseshoes 1 per 10,000 residents
- Community Centers 1 per 15,000 residents
- Swimming Pool 1 per 20,000 residents
- Indoor Recreation Center 1 per 50,000 residents
- Trails 1 mile per 1,000 residents
- Passive Recreation Space 4 acres per 1,000 residents
- Golf 9 holes per 25,000 residents
- Public Meeting Space 200 sf per 1,000 residents

**Recommendations**

Because of this plan's strategy for homeowner association provided recreation facilities together with the uniqueness of sites associated with special use parks, the following short and long term recommendations focus on the current and future needs for public parks including community, school/community use and district parks. Additionally, the joint work of the County Board of Supervisors and the School Board has led to innovative and cost effective approaches to school facility design that serves both the educational needs of our students as well as new facility standards that maximize the cost effectiveness of school construction for after school use.

Although some areas of the County are not served by one or more parks, this does not mean park acquisition efforts in these areas are necessarily warranted. Before a commitment is made to the acquisition of any given park facility, a minimum population base is to be projected within the facility's service radius within 20 years. This is important to ensure that the facility will be sufficiently utilized.

The following are general recommendations for the provision of local public park areas. The general location of proposed public park areas should be based on land acquisition needs, service area needs and the population served.

## **General**

- Encourage VDOT to construct bicycle lanes and/or paths in conjunction with road widening projects, where appropriate.
- Formally adopt a school/park and recreation policy that would include the following:
  - a. Provide for specific facility standards and designs for all community type use facilities at new school sites.
  - b. Provide for the Park & Recreation Department's operational & maintenance agreements.
  - c. Provide for an agreed upon short and long range plan for the improvement and expansion of community use facilities, where feasible, at existing school sites including use of available high school lands.
  - d. Future site acquisitions by either the School Board or the Parks & Recreation Department will be considered for joint or complementary use.
  - e. Strive for a County provision to meet the Level of Service Standards for Multi-Purpose Fields and Baseball/Softball Diamonds as these are specifically needed for programmed Parks & Recreation activities.
- Consider additional public/private partnerships or any other joint opportunities in the delivery of park and recreation service delivery similar to the YMCA/School Board/County partnership at the Patriot Park District Park.
- Provide an annual CIP submission of needed facilities based on adopted standards.

## **Short Term**

Focus on what we have:

- Optimize existing parks that are not built out
- Develop master plans for the Hilldrup and Belmont properties.

An emphasis should be placed on the current utilization of the parks with installation of artificial lighting to enhance and extend the availability of current athletic fields.

An emphasis should also be placed on the acquisition and development of the planned school construction so to include the provision for additional school/community use facilities. The current availability of surplus vacant or underutilized land at existing school sites should be considered for the many parks and recreation facility needs of County residents.

## **Long Term**

- The acquisition and development of parks should occur based on population estimates.
- The acquisition and development of all new schools should include the provision for school/community use facilities.