

SECTION 5 Utilities and Community Facilities

Purpose

Hanover County's Mission is *to be a premier community by providing superior service through creativity, innovation and sound financial practices*. Adequate community facilities are essential to support services for current and future populations and for the local economy. The Comprehensive Plan has been developed with a 20-year horizon for guiding land use development and provides a course for predicting the need for future public facilities. The following section assesses existing facilities, the present design adequacy, capacity, and future demand for those facilities using the growth assumptions discussed in Section 1; specifically a 1.5% growth rate, 2.68 persons per household, and the assumption that 70% of growth will occur within the designated Suburban Service Area.

This section addresses water/wastewater utilities and facilities associated with Public Safety (Fire/EMS, Sheriff's Office, Animal Control), Parks and Recreation, Schools, Libraries, Judicial and General Government Services. References are made throughout this section to policies and documents that include further detail of the planning objectives utilized by a department or agency that administers the particular facility. This Section also provides guidance for accommodating private telecommunication infrastructure and to minimize the land use impacts of new facilities.

Goal

Hanover County citizens and businesses will be provided:

- Superior services through cost-effective public utilities and community facilities
- Strategically located facilities that provide optimal public safety
- Educational, recreational and cultural opportunities that will foster a superior quality of life
- A public communication network that provides optimal protection for citizens and emergency response employees; and a private communication network that can serve all County residents and businesses with fast and efficient wireless service

Utilities: Water and Wastewater Facilities

Objectives

- Provide reliable water and wastewater service in accordance with applicable requirements
- Maintain fiscal integrity to provide for system growth, adequate maintenance, and replacement of capital to ensure quality service, system reliability and to control future costs

- Meet customer capacity needs in support of the County’s Comprehensive Plan and economic development

The County’s Department of Public Utilities owns, operates, and maintains public water and wastewater systems in the Suburban Service Area and a limited number of isolated rural water systems located outside of the Suburban Service Area. Collectively, in this document, these are referred to as the “System”. Public Utilities operates as a self-supporting enterprise fund. In addition to the System operated by the County there are private central systems and individual systems in Hanover County.

The System and Suburban Development Plan

The Department of Public Utilities (DPU) invests in improvements related to water and wastewater treatment capacity, major regional water and wastewater pump stations, trunk sewers, water storage tanks, and water transmission mains to serve areas within the Suburban Service Area. DPU does not typically invest in smaller facilities serving specific areas or neighborhoods. Individual property owners are expected to design, construct and pay for local improvements from the major infrastructure constructed by the DPU. Historically, both existing and new development have paid for the local water and sewer infrastructure necessary to serve them, and when appropriate, also pay for County planned improvements that must be accelerated to meet the needs of these activities.

Public water and sewer are allowed to be extended into the areas within the Suburban Service Area shown on the *Growth Management Conservation and Suburban Development Plan* map. As stated earlier in the Comprehensive Plan, changes in the expansion of the boundaries of the Suburban Service Area could be considered if any of the following conditions exist: (1) for economic development purposes where a private applicant is willing to fund public improvements, (2) where the County has determined the change is consistent with the Comprehensive Plan, (3) where the County has determined there is a demonstrated risk to the public health, safety, and welfare as a result of failing water or wastewater facilities necessary to serve an identified community, and (4) for Hanover County public sites and facilities.

Individual service connections for individual lots to the County’s public water and sewer system may be allowed beyond the boundaries of the Suburban Service Area in limited circumstances. These limited circumstances generally occur where connectable portions of the County’s public water or sewer systems immediately adjoin, are located on, or are located within a right-of-way adjacent to a property located outside of the Suburban Services Area.

Except as stated above, there are no other provisions for public water and sewer to be provided outside of the Suburban Service Area or outside the areas presently served by Public Utilities.

Provision of public utilities is conceptually described in the **Department of Public Utilities Water and Wastewater Facilities Master Plan** (this document can be reviewed by contacting the

Hanover County Department of Public Utilities). DPU updates this plan as required in response to changes in the Comprehensive Plan.

Public Water System

As of June 2017, DPU provided water service to approximately 20,900 customers. This includes approximately 1,730 commercial, industrial, and municipal accounts.

Water is provided by the County's Doswell Water Treatment Plant (4 Million Gallons per Day (MGD)), long term contracts with the City of Richmond (20 MGD), Henrico County (0.775 MGD), and wells (0.2 MGD). The System has a capacity of 25.0 MGD. Average daily water demand in FY17 was 9.2 MGD and peak daily demand was 13.2 MGD.

The County also owns the 2.0 MGD South Anna Water Treatment Plant on the South Anna River. This plant has not been operated since the 1990's and would require substantial upgrades to return to service.

Private Water Systems

Some businesses and residential subdivisions are served by private central water systems. The largest private water purveyor, Aqua Virginia, Inc., owns and operates systems that serve twelve residential subdivisions.

Water Supply

The need for additional future water supplies to support the Comprehensive Plan and growth of the System has been recognized since the 1970's. The findings of numerous studies agree that the groundwater resources of Hanover County are restricted by quantity and quality and are not viable for meeting the County's long-term water resource requirements.

Several alternatives have been reviewed to meet the System's long term needs. The County has identified a reservoir located at the existing Verdon Quarry that could be supplied with water pumped from the North Anna River, the South Anna River and/or the Little River as its most viable source of water for the System. Two options are currently considered the most feasible and are outlined below.

Option 1: Verdon Quarry with Water Treatment Plant at Verdon Quarry

This alternative involves use of raw water storage in the Verdon Quarry a treatment plant adjacent to the quarry and includes:

- 28 MGD (estimated) water treatment plant adjacent to the Verdon Quarry
- 50 MGD (estimated) river intake and raw water pump station at Little River
- 30 MGD (estimated) river intake and raw water pump station at North Anna River

- 28 MGD (estimated) reservoir intake and raw water pumping station at Verdon Quarry
- 28 MGD (estimated) finished water pump station at water treatment plant
- 42-inch (estimated) raw water main from Little River to Verdon Quarry (approximately 400')
- 42-inch (estimated) raw water main from Verdon Quarry to North Anna River (approximately 6,000')
- 36-inch (estimated) finished water main from water plant to the Suburban Service Area (approximately 62,000')

Option 2: Verdon Quarry with Water Treatment Plant in Suburban Service Area

This alternative involves use of raw water storage in the Verdon Quarry, a treatment plant in the southern central portion of the County and includes:

- 28 MGD (estimated) water treatment plant in the southern central portion of the County
- 50 MGD (estimated) river intake and raw water pump station at Little River
- 50 MGD (estimated) river intake and 78 MGD raw water pump station at South Anna River
- 28 MGD (estimated) reservoir intake and raw water pump station at Verdon Quarry
- 28 MGD (estimated) finished water pump station at water treatment plant
- 42-inch (estimated) raw water main from Little River to Verdon Quarry (approximately 400')
- 42-inch (estimated) raw water main from Verdon Quarry to South Anna River (approximately 39,000')
- 42-inch (estimated) raw water main from South Anna River to water treatment plant (approximately 30,000')
- 36-inch finished water main from water treatment plant to the Suburban Service Area (approximately 12,000')

Additional work to fully evaluate these options is needed. A new source of water is projected to be needed sometime after the year 2040. Based on current regulations and anticipated construction timelines, permitting activities and detailed design should start between 2020 and 2025. This schedule will need to be accelerated if an industry requiring large amounts of water were to locate or expand in Hanover County..

Public Wastewater System

As of June 2017, DPU provided wastewater services to approximately 20,340 customers. This includes approximately 1,650 commercial, industrial, and municipal accounts.

Wastewater treatment is provided at Hanover's Totopotomoy Wastewater Treatment Plant (7 MGD), Ashland Wastewater Treatment Plant (2 MGD), Doswell Wastewater Treatment Plant (1 MGD), Hanover Courthouse Sewage Treatment Plant (0.08 MGD), and a long term contract with Henrico County (5.4 MGD). The System has a capacity of 15.48 MGD. Average daily wastewater demand in FY17 was 6.7 MGD.

Private Wastewater Systems

Bear Island Paper Company owns an on-site wastewater treatment plant which treats industrial wastewater prior to combining its discharge with the discharge from the Doswell Wastewater Treatment Plant. In addition, Tyson Foods operates a 1.0 MGD wastewater treatment facility at its facility on Route 33. Other private facilities are located at the Hanover Learning Center, Barrett Learning Center, the Missionary Training Center, and Kosmo Village Trailer Park.

Wastewater Treatment

In the future additional wastewater treatment capacity will be needed as Hanover continues to grow. In addition to requiring additional capacity, Hanover's wastewater treatment plants will need to be updated to meet nutrient limits required by the Chesapeake Bay Total Maximum Daily Load (TMDL) and the associated Virginia Watershed Implementation Plan. The Department of Public Utilities is constantly evaluating its options in an ever changing regulatory environment. At this time no additional treatment facilities are anticipated to be needed, but improvements at any or all of the four existing facilities may be required during the planning period covered by this Comprehensive Plan Update.

Strategies

- Explore additional future water supplies to support the Comprehensive Plan and the growth of the System including the following options
 - Verdon Quarry with Water Treatment Plant at Verdon Quarry
 - Verdon Quarry with Water Treatment Plant in the Suburban Service Area
- Increase wastewater treatment capacity as required for future population growth demands and upgrade facilities to meet nutrient limits required by the Chesapeake Bay Total Maximum Daily Load and the associated Virginia Watershed Implementation Plan

SECTION 5 Libraries

Objectives

- Provide convenient locations to access library materials and services
- Maintain current service levels and look for opportunities to achieve target recommendations established by the State Library of Virginia and the Pamunkey Regional Library Board (PRLB)

The Pamunkey Regional Library serves the Counties of Hanover, King and Queen, Goochland and King William. Hanover County is currently served by six library branches. Libraries currently occupy 51,895 SF, resulting in a SF/capita of approximately 0.5. The County has traditionally been in a range between (0.4) - (0.5) sf/capita; The State Library of Virginia and the Pamunkey Regional Library Board have established (0.6) sf/capita as a target to provide quality service to the citizens. The following table 2 illustrates in five year increments, through 2037, projected population growth, the County’s library space and additional square footage needed to maintain the current service level of (0.5) SF/capita ratio and the (0.6) SF target established by The State Library of Virginia (SLV) and the PRLB.

2017 Existing Library Square Footage	
<u>Library</u>	<u>2017SF</u>
Gillis (Ashland)	10,000
Atlee	13,000
Courthouse	3,000
Mechanicsville	16,000
Wickham (Montpelier)	2,500
Cochrane (Rockville)	7,395
<u>Total</u>	<u>51,895</u>

TABLE 2 Library Facility Space and Per Capita Projections			
Year	Population 1.5%	SF/ratio 0.5 Existing Service	SF/ratio 0.6 SLV and PRLB Service Target
2017	108,706	51,895 sf (Existing)	65, 224 sf
2022	117,107	58,553 sf	70,264 sf
2027	126,158	63,079 sf	75,695 sf
2032	135,908	67,954 sf	81,545 sf
2037	146,411	73,206 sf	87,847 sf

Strategies to support the Pamunkey Regional Library Board

- A replacement for the Atlee Library is a priority for the County. Hanover County and the PRLB expect the future library to be located on a site in the Rutland development. The building design process should occur in FY 2018 with the intent to begin construction in FY 2019
- The next priority for library space will be a replacement for the Montpelier Branch Library. This process should begin FY 2021
- Monitor population and demographic changes to ensure current service levels are maintained, and when appropriate, construct and locate new facilities that will meet the additional service demands
- Explore innovative use of technology that can yield greater efficiencies and have the potential of reducing building or facility square footage
- Where feasible, strive to achieve the library standards established by The State Library of Virginia and the Pamunkey Regional Library Board
- As shown on the table above making use of population growth assumptions, a new library facility could be warranted to maintain the current service level of 0.5 sf per capita or to achieve the target ratio of 0.6 sf per capita. It should be noted that the assumed 1.5% growth rate is averaged over a 20 year period with yearly fluctuations that can affect the scheduling of new construction

SECTION 5 Fire-EMS

Objectives

- Strategically maintain, recondition, and locate facilities to provide optimal services to the citizens, businesses, and visitors of Hanover County by achieving adopted benchmarks
 - Fire Response Goals:
 - Arrive at an emergency inside the Suburban Service Area in less than nine (9) minutes, eighty (80%) percent of the time.
 - Arrive at an emergency outside the Suburban Service Area in less than fifteen (15) minutes, eighty (80%) percent of the time.
 - Emergency Medical Response (EMS) Goals:
 - Arrive at an emergency for Priority one (1) calls in less than nine (9) minutes, eighty (80%) of the time.
 - Arrive at an emergency for Priority two (2) calls in less than thirteen (13) minutes, eighty (80%) of the time.
 - Arrive at an emergency for Priority three (3) calls in less than fifteen minutes, eighty (80%) of the time.
- Adequately staff Fire-EMS facilities with trained personnel to meet the current and future needs of Hanover County.

Hanover County Fire-EMS (Department) is a high-performance, combination department comprised of equally trained career and volunteer staff. The Department is an all-hazard emergency response and mitigation organization that provides fire protection and prevention, emergency medical response, and emergency management service to the citizens and visitors of Hanover County. In addition, the Department partners with regional stakeholders to receive and provide resources through a Regional Mutual Aid Emergency Response Agreement.

The Department achieves current benchmark goals by strategically deploying resources to sixteen (16) Fire-EMS facilities across the county. The Office of the Chief and Administrative Staff are located at the Courthouse Fire Station (Station 5). The administrative staff provides strategic oversight of the Department by handling administrative tasks, volunteer recruitment and programs, training, emergency management, fire prevention, and life safety functions. The Department's training programs are coordinated through the Harman-Taylor Training Center located adjacent to Poor Farm Park. Programs provide critical training to career and volunteer staff in addition to regional partners from Hanover County Public Schools and Reynolds Community College.

The Department's sixteen (16) facilities are listed below. Each facility works in concert with one another to provide fire and emergency medical services (EMS) to the greater community of Hanover County. The facilities have been strategically located to serve the needs of the rural and suburban communities of Hanover County.

Ashland	Station 1	501 Archie Cannon Road, Ashland, VA 23005
Beaverdam	Station 2	16150 Trainham Road, Beaverdam, VA 23015
Eastern Hanover	Station 3	4428 Mechanicsville Turnpike, Mechanicsville 23111
Doswell	Station 4	16242 Washington Highway, Doswell, VA 23047
Courthouse	Station 5	13326 Hanover Courthouse Road, Hanover, VA 23069
Henry	Station 6	9634 Chamberlayne Road, Mechanicsville, VA 23116
Mechanicsville	Station 7	7161 Stonewall Parkway, Mechanicsville, VA 23111
Montpelier	Station 8	16861 Mountain Road, Montpelier, VA 23111
Rockville	Station 9	11445 Rockville Road, Rockville, VA 23146
Chickahominy	Station 10	10414 S. Leadbetter Road, Ashland, VA 23005
Farrington	Station 11	14582 Mountain Road, Glen Allen, VA 23059
Black Creek	Station 12	6397 McClellan Road, Mechanicsville, VA 23111
Ashcake	Station 13	8375 New Ashcake Road, Mechanicsville, VA 23116
East Hanover	Station 14	8105 Walnut Grove Road, Mechanicsville, VA 23111
West Hanover	Station 15	17005 Beaverdam Road, Beaverdam, VA 23015
Ashland	Station 16	203 Duncan Street, Ashland, VA 23005

Strategies

Facility Renovation and Renewal Projects:

- A facilities assessment was conducted to identify critical needs for maintaining existing facilities and expanding services to accommodate the population growth in Hanover County. The purpose of the assessment was to evaluate the condition and functionality of these facilities to meet current and future needs for additional staffing, women's facilities, and Fire-EMS apparatus space. The following stations are in need of renovations to accommodate current and future demands of staff serving the community.
 - Doswell Station 4
 - Montpelier Station 8
 - Rockville Station 9
 - Chickahominy Station 10

New Facility:

- Construct new facilities to meet the current and future demands of the citizens, businesses, and visitors of Hanover County.
 - New facility in the area of the Pole Green and Lee Davis corridor. Current data shows an increased service demand consistent with local growth. Site locations need to be located to allow for immediate access to emergencies without hindrance of congested traffic patterns. The Department will need the ability to control traffic signals along the emergency route.

Future Growth:

- A new facility near the Lewistown Road corridor may be warranted to support the future commercial growth and increased traffic patterns along the I-95 corridor. No time frame is identified for this project.
- The Harman-Taylor Training Center is located on 23 acres adjacent to Poor Farm Park and houses several temporary training facilities and an administrative office. In addition, a permanent burn training prop that simulates actual fire operations under a variety of circumstances. To meet the future training needs of career and volunteer staff, a permanent facility needs to be constructed on the current land. No time frame is identified for this project.

SECTION 5 Parks and Recreation

Objectives

- Promote, advocate and provide quality park and recreation resources and leisure services
- Provide a balance of recreational programs and facilities to meet the needs of the present and planned population of Hanover County
- Preserve, maintain and further enhance public grounds, areas of scenic beauty and areas of historic significance
- Encourage the use of existing recreational and scenic areas

The Parks and Recreation Department (PRD) provides and promotes leisure services to the citizens of Hanover County. Parks are essential to the County's quality of life by providing active and passive recreational activities and offering gathering places that foster a sense of community. Parks also help preserve environmental features such as open space, wildlife habitat and cultural resources affording the population a greater opportunity to appreciate them.

PRD currently administers over 1,228 acres of public parks and has a cooperative agreement with the Hanover School Board for the shared use of school facilities for recreational purposes after school hours. The County is also fortunate to have over 200 acres in nationally recognized battlefield sites managed by the National Park Service, historic sites managed by historical organizations, neighborhood parks managed by homeowners or community associations, and athletic facilities/centers managed by non-profit and private sector groups. These community-based resources are a valuable addition in complementing the County sponsored parks and recreational activities.

The location of park facilities is dependent upon many factors: however, convenient access and areas that are conducive to the types of activities for which the park will be utilized are major factors. To ensure that Hanover County's recreation facilities continue to meet residents' needs, the County adopted the **Hanover County Parks and Recreation Comprehensive Facilities Master Plan** which is a planning guide for ensuring recreational facilities continue to meet residents needs into the future (the Parks and Recreation Comprehensive Facilities Master Plan can be found at <https://www.hanovercounty.gov/149/Parks-Recreation> or contact the Hanover County Department of Parks and Recreation). In developing service level standards, Parks and Recreation relies on a variety of sources: The Virginia Department of Conservation and Recreation (DCR) and the National Recreation and Parks Association (NRPA). Each has standards for the number of acres for types of parks and/or the amenities that such parks should have (e.g., ball fields).

The following chart provides a breakdown of Hanover County's parks as classified by the NRPA and DCR's Virginia Outdoors Plan (VOP) and includes consideration for existing and proposed Hanover County Parks, Town of Ashland Parks, and National Parks.

Hanover County Park Classifications	Parks																				
<p>Regional Parks: 100 - 500 acres, with an abundance of open space for recreational pursuits such as picnicking, hiking, nature study, and general outdoor enjoyment (i.e., lakes, streams, or other outstanding natural features). As much as 80% of the site should be undeveloped usable open space to provide opportunities for hiking, nature study, and other passive activities. An isolated segment of the site may be reserved for day camps.</p> <p>District Parks: 10 - 250 acres that primarily have active recreation facilities (e.g., ball fields, tennis courts, trails, swimming pools, beach area, and/or recreation center). As some of these amenities can be included in the master plans of regional parks as a compliment component of such park, for purpose of presenting such information, district parks are combined together with regional parks.</p>	<table border="1"> <tr><td>Cold Harbor Battlefield Park</td><td>50 acres</td></tr> <tr><td>Courthouse Park</td><td>120 acres</td></tr> <tr><td>Montpelier Park</td><td>50 acres</td></tr> <tr><td>North Anna Battlefield Park</td><td>172 acres</td></tr> <tr><td>Pole Green Park</td><td>217 acres</td></tr> <tr><td>Poor Farm Park</td><td>254 acres</td></tr> <tr><td>Taylor Park</td><td>53 acres</td></tr> <tr><td>Washington Lacy Park</td><td>216 acres</td></tr> <tr><td>Eastern Hanover Park (under development)</td><td>56 acres</td></tr> <tr><td>Total</td><td>1,188 acres</td></tr> </table>	Cold Harbor Battlefield Park	50 acres	Courthouse Park	120 acres	Montpelier Park	50 acres	North Anna Battlefield Park	172 acres	Pole Green Park	217 acres	Poor Farm Park	254 acres	Taylor Park	53 acres	Washington Lacy Park	216 acres	Eastern Hanover Park (under development)	56 acres	Total	1,188 acres
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<p>Community Parks: 3-50 acres, with a wide variety of recreational activities with intensive use (e.g., ball fields, tennis courts, basketball courts, natural areas, trails). School facilities are included in this category and generally include the use of their gymnasiums, playgrounds, tennis courts and ball fields.</p>	<table border="1"> <tr><td>Hanover Wayside Park</td><td>36 acres</td></tr> <tr><td>Little River Park (proposed)</td><td>22 acres</td></tr> <tr><td>Winding Brook Park (proposed)</td><td>39 acres</td></tr> <tr><td>Public Schools</td><td>155 acres</td></tr> <tr><td>Total</td><td>252 acres</td></tr> </table>	Hanover Wayside Park	36 acres	Little River Park (proposed)	22 acres	Winding Brook Park (proposed)	39 acres	Public Schools	155 acres	Total	252 acres										
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<p>Neighborhood Parks: Up to 20 acres, with very limited selection of active recreation facilities (e.g., playgrounds, picnic areas, ball fields, hiking/jogging trails) that are within easy walking/biking distance of residents' homes.</p>	<p>Doswell – Ruritan Park¹ Bethany Park Town of Ashland Parks² Private Residential Parks³</p>																				
<p>Boat Launch: Up to three acres, developed for the purpose of providing a public launching point for boats.</p>	<p>Boat Ramps: Ground Squirrel – South Anna River Littlepage -Pamunkey River North Anna -North Anna River South Anna-South Anna River</p>																				
<p>Greenways/Trails: – > 1 mile in length, utilizing watercourses (streams, rivers, and canals) and rights-of-way (transportation and utility). The purpose is to protect, preserve, and maintain existing natural and cultural corridors and to serve as a link from one area to another.</p>	<p>Ashland Trolley Line</p>																				
<p>Battlefield Parks: The Civil War battlefields managed by the National Park Service (NPS) in the County are connected by Cold Harbor Rd. which runs from Mechanicsville east to the crossing of the Chickahominy River where it enters Henrico County and are part of a larger regional park system that ranges from the North Anna River to Petersburg. These parks contain trails, visitor centers and historic signs, of which Cold Harbor's visitor center is staffed year-round by NPS personnel.</p>	<p>Beaverdam Creek Cold Harbor Gaines Mill Garthwright House Rural Plains/Totopotomoy</p>																				

¹ Doswell and Bethany Parks are operated by non-profit agencies but offer amenities that serve as neighborhood parks

² Population projections include the Town of Ashland, therefore neighborhood parks managed by the Town are included

³ Some residential developments have HOA maintained neighborhood parks and common areas, these are typically limited to residents of the development and are not considered public parks

The following chart summarizes the existing acreage of the different park classifications compared with the VOP recommendations for the ratio of park acreage to projected population in five year increments from 2017 to 2037. The recommended appropriate park acreage ratio/population is based on 4 acres per 1,000 population for District and Regional Parks and 3 acres per 1,000 population for Community and Neighborhood Parks.

Hanover County Park Classification and VOP Standards 1.5% County Population Growth						
Park Class	Year	<u>2017</u>	<u>2022</u>	<u>2027</u>	<u>2032</u>	<u>2037</u>
	Pop.	108,706	117,107	126,158	135,908	146,411
District/Regional Existing 1,188 ac	Recommended 435 ac Exceeded by 753 ac	Recommended 468 ac Exceeded by 720 ac	Recommended 505 ac Exceeded by 683 ac	Recommended 544 ac Exceeded by 644 ac	Recommended 586 ac Exceeded by 602 ac	
Community/ Neighborhood Existing 252 ac (includes proposed acres)	Recommended 326 ac Deficient 74 ac	Recommended 351 ac Deficient 99 ac	Recommended 378 ac Deficient 126 ac	Recommended 408 ac Deficient 156 ac	Recommended 439 ac Deficient 187 ac	
<p>The County currently does not administer any Neighborhood Parks but will continue to seek opportunity to develop this park classification in the future. The County does however have privately maintained residential development parks and common areas; Doswell-Ruritan and Bethany Parks that are maintained by non-profit organizations; public schools offer recreational and sport facilities after school hours; and, the Town of Ashland neighborhood parks, all of which contribute to the recommended standard for this classification.</p>						

While the overall inventory of park athletic fields may seem adequate for the County’s population and number of requests received, the large demand for fields in the heavily populated Mechanicsville area exceeds the quantity available within that regions park sites. Construction of the new Eastern Hanover Park will alleviate many of these issues and allow for a field inventory countywide that meets regional demands and plans for future incremental field growth. Based upon national trends and community input, the focus on future park development will include a greater emphasis on passive recreational amenities with athletic field construction playing a more secondary role.

Strategies

- Recognize the national importance of the NPS Civil War Battlefield Parks and work with the National Park Service to strengthen protective measures to ensure these resources can expand even though minimum standards to serve the local population are more than met in the District and Regional Park category
- Monitor population and demographic changes to ensure current service levels are improved for Community and Neighborhood Parks, including the addition of a new park in far western Hanover
- Upgrade existing public facilities, such as Recreation Centers, to meet growth needs where appropriate and feasible
- Support the addition of public and private Community and Neighborhood Parks and facilities that are appropriately located to serve areas that are now considered deficient
- Require open space with both passive and active recreation facilities as part of new residential development

SECTION 5 Public Schools

Objectives

- Provide facilities of the kind and size that will best support and accommodate the schools division's educational program and the number of students enrolled
- Provide new and remodeled facilities that will offer the best possible physical environment for learning and teaching

Hanover County Public Schools (HCPS) 2017 student enrollment is over 17,000 students in pre-K-12. There are (15) elementary schools, (4) middle schools, (4) high schools, an alternative education center and a center for trades and technology. HCPS is the fourteenth largest of the 134 school districts in Virginia and is among the 300 largest of the 15,500 school districts in the United States.

Residential development is a primary factor contributing to the growth of the public school system's enrollment; therefore it is important for a coordinated planning effort between the County and the School Board to ensure adequately sized facilities are provided for future populations.

The Hanover County Public Schools facility construction philosophy and planning can be found in the **Schools Board's Policy Manual, Section 4-Support Services, III. Facility Planning and Design.** The manual explains how capacity in a specific school is computed. 'Overcrowding' is defined as more than 20 percent above capacity for three consecutive years. Alternatives to school construction such as attendance boundary adjustments, school calendar revisions, and class size increases are the first priority for offering practical solutions to overcrowding in targeted school facility(ies). In the event these measures will not relieve overcrowding, additions to current facilities or construction of new schools would be scheduled for targeted facilities no more than three years after the overcrowding has occurred. The Schools Board's Policy Manual can be found at <http://www.hcps.us/> or by contacting the Hanover County Public Schools.

The following chart utilizes the cohort survival method formulated by the School Board for the 5 years following the actual 2017 student enrollment; the remaining 15 year horizon assumes a 1.5% overall County population growth rate with 2.68 persons per household and 20% being school age children for each of the County schools. Based on those projections the chart indicates sufficient school capacity for the 20-year Comprehensive Plan horizon. It should be noted that the 1.5% growth rate is averaged over a 15 year period (2022 -2037) with yearly fluctuations that can affect the enrollment of a school as well as development that may occur within attendance boundaries of a school. National economic trends can also influence growth and development at the local level as experienced in Hanover County with a lower than average growth rate the past several years; those trends cannot be relied on for long term growth projections. For facility planning purposes it should be recognized that fluctuations in population growth are likely to change over time. Although the forecast does not anticipate a need for any additional schools,

prudent facility planning suggests the County anticipate the need for one additional school within the 20-year planning horizon.

<u>Elementary Schools</u>				
-				-
Year	# of Elementary School Students	Existing Capacity	(Over)/Under Capacity	% (Over)/Under Capacity
2017	7,423	9,747	2,324	23.84%
2022	8,034	9,747	1,713	17.57%
2027	8,655	9,747	1,092	11.20%
2032	9,324	9,747	423	4.34%
2037	10,044	9,747	(297)	(3.05%)
<u>Middle Schools</u>				
-				-
Year	# of Middle School Students	Existing Capacity	(Over)/Under Capacity	% (Over)/Under Capacity
2017	4,289	4,797	508	10.59%
2022	4,242	4,797	555	11.57%
2027	4,570	4,797	227	4.73%
2032	4,923	4,797	(126)	(2.63%)
2037	5,303	4,797	(506)	(10.55%)
<u>High Schools</u>				
-				-
Year	# of High Schools Students	Existing Capacity	(Over)/Under Capacity	% (Over)/Under Capacity
2017	5,896	6,788	892	13.14%
2022	5,861	6,788	927	13.66%
2027	6,314	6,788	474	6.98%
2032	6,802	6,788	(14)	(0.21%)
2037	7,328	6,788	(540)	(7.96%)

Strategies

- Ensure current service levels are maintained by monitoring population and demographic changes, and when appropriate measures do not achieve adequate service levels, construct and locate new facilities that will meet the additional service demands
- Accommodate and facilitate those new organizational and instructional patterns in new and renovated buildings that support the division's educational philosophy and instructional goals
- Meet all safety requirements through the remodeling of older structures
- Provide building renovations as needed to meet requirements on the availability of public school facilities to persons with disabilities
- Design and construct buildings that will yield lower maintenance costs and conserve energy. These two factors will also be given special consideration in the renovation of buildings
- Decisions pertaining to educational specifications of new buildings and those undergoing extensive remodeling will be developed with the benefit of viewpoints of teachers, students, and the community.

SECTION 5 General Government, Administration and Judicial

Objectives

- Provide suitable office space and facilities housing the workforce responsible for County services that will foster high quality customer service
- Meet current and long-term space needs through renovation of vacated courts buildings and other facilities affected by the addition of the New Courts Building

The future office/facility requirements for the County's workforce are difficult to project. Space to provide new and expanded services is dependent on factors such as State or Federal mandates and citizen/Board of Supervisor initiatives that influence the extent and function of the County's workforce. Innovative use of technology can yield greater efficiencies that have the potential of reducing building or facility square footage. The County has periodically performed a facilities space needs analysis encompassing the current space allocation in the County buildings for the workforce, the most recent was completed during FY 2017. Future space needs analysis should be conducted recognizing the changing dynamics of providing superior service and sound financial practices.

The primary location of County office space is located at the Hanover County Government Complex on U.S. Rt. 301. There are additional offices in the Human Services Building on U.S. Route 1, the Fire Administration offices at the Courthouse Fire Station, the Parks and Recreation administrative offices on State Route 54, General Services in the Lakeridge Parkway Fleet Facility and the Economic Development offices in the Rutland Center Commercial Condominiums off Atlee Road.

The General District Court and Circuit Court are located in the New Courts Building opened in January 2017 in the Hanover County Government Complex. The approximately 116,000 sq. ft. is located adjacent to the Vaughn Bradley Building.

Sheriff's Office: Law enforcement in Hanover County is provided by the Sheriff's Office. The Sheriff's office is divided into three divisions: Patrol Operations, Administrative Support Operations and Investigative Operations. As their various divisions and specialized training units are primarily invested in those personnel deployed on the road, their space needs are a combination between those support and related personnel who need such office space to conduct their work and those deputies who primarily utilize their vehicle for their office. The Sheriff's office facility is in the 29,896 sf Vaughn-Bradley building located at the Hanover County Government Center. The Sheriff's Office Training Complex includes a 6,000 sf specialty vehicle storage facility and firing range site adjacent to the Pamunkey Regional Jail. The Firing Range facility contains two training buildings that are used as support for training done at this range. The Sheriff's Office also relies upon the Rappahannock Regional Criminal Justice Academy for

training needs. Other long-term training needs and space assessments for such training will be further reviewed for how best to provide the training needed for the Sheriff's sworn officers. As additional demands arise for specialty training and/or current space is not conducive to the demands of training needs, then the Sheriff's Office will perform the necessary analysis to propose such additional facility needs.

Animal Control: The department is now organizationally part of the Sheriff's Department. The existing Animal Control facility is located on Rt.54 at the Taylor Complex and provides for the safety and security of animals as well as the administrative needs for the Animal Control Department. It currently has 158 cages in a 5,143 sf building that is designed for an additional 50% capacity. Animal Control has a Memorandum of Understanding with the Richmond SPCA to help facilitate animal placement. A small animal hospital is also located within the facility enabling spaying/neutering.

Pamunkey Regional Jail: This jail is operated by a regional authority that is located adjacent to Courthouse Park on Rt. 301 and charges a bed rental fee to all authority members and outside entities that house inmates at this facility. The priority to inmate space is given to authority members, of which the County represents approximately 80% of such inmate population.

Middle Peninsula Juvenile Detention Commission (MPJDC): The MPJDC is operated by a regional authority that is located in Williamsburg and charges a bed rental fee to all authority members that house juveniles at this facility. The County is also the location for two State juvenile detention centers.

Community Services Board (CSB) Programs: The CSB has facility space dedicated for employment and business programs for its clients including a recycling program located at Atlee Commons and rehabilitation programs at the Old Mechanicsville Library and Bell Creek Office Park.

Strategies

- Explore innovative use of technology that can yield greater efficiencies and have the potential of reducing building or facility square footage
- Monitor population and demographic changes to ensure current service levels are maintained and when appropriate construct and locate new facilities that will meet the additional service demands
- Conduct future space needs analysis recognizing population changes, sound financial practices and the changing dynamics of providing superior service
- Plan for an approximate 118,000 sq. ft. future Courts building located on County property adjacent to the Vaughn Bradley Building in the Hanover County Government Complex

Telecommunication Infrastructure

Objectives

- Ensure that public safety employees are able to effectively communicate with each other to provide optimal public safety
- Ensure County policies and regulations provide private companies opportunity to optimize infrastructure that serve all citizens and businesses of the County with wireless technology services while carefully evaluating the impact communication structures and facilities have on neighboring properties

County Communications System: The Emergency Communication department serves as the 911 answering point and emergency dispatch center for Hanover County and the Town of Ashland. These services, as well as many other support activities, are provided to citizens and the various public safety and public service agencies and departments on a 24/7 basis. The Department uses modern technology, including a 15 site, twelve channel 800 MHz trunked radio system, enhanced wireline and wireless 911 systems, a computer aided dispatch system, CAD mapping, digital recording system, and interoperable communications systems.

Private Telecommunications Networks: Growth in the industry providing mobile telephones, paging equipment and wireless Internet has created considerable demand for new facilities and structures in order to ensure a cohesive telecommunications infrastructure. Assessment of future sites for facilities and structures supporting private telecommunications networks must include an evaluation of the impact on surrounding land uses and the desire to enhance the telecommunications infrastructure throughout the County. Site evaluation should include an assessment of the safety, aesthetics, security, access, and technological needs for the area in close proximity to the facility or structure and the County as a whole.

Strategies

- Research, evaluate, and pursue equipment, technology, facilities, services and systems that will enhance the emergency communications operations
- Allow construction of communication facilities in all land use designations that are designed and located in a manner that is compatible with the character of the surrounding area
- Use a tiered method evaluation structure impacts based on zoning classifications and structure form
- Telecommunications facilities and structures should be located and designed in such a manner as to protect the safety of individuals nearby
- All telecommunications facilities should be located, designed and operated in a manner that avoids interference with County communication networks