



ENVISION HANOVER
COMMUNITY FACILITIES
Draft Text (July 8, 2023)

Goal

Hanover County will provide superior services in a cost-effective manner by strategically locating community facilities to most effectively serve public needs and foster a superior quality of life.

Why It Matters

The Comprehensive Plan has been developed with a 20-year horizon for guiding development and provides a course for predicting the need for future public facilities. This section of the plan assesses existing facilities and future demand for those facilities using the following growth assumptions (which were used throughout the planning process):

- 1% annual growth rate
- 2.61 persons per household (gradually decreasing to 2.56 by 2045)
- 70% of residential growth will occur within the Suburban Service Area (SSA)

The Comprehensive Plan provides general, high-level recommendations regarding the provision of public services and the general location of existing and proposed public facilities. These high-level recommendations are further developed and detailed in other local facilities planning documents:

- Capital Improvement Program (CIP)
- Water and Wastewater Facilities Master Plan
- Parks and Recreation Master Plan
- Airport Master Plan
- Space Needs Analysis and Facilities Assessment

The recommendations in all of these planning documents are intended to provide the Board of Supervisors and staff with direction on how to provide high-quality public services in a fiscally-responsible and effective manner, improving residents' quality of life and meeting the needs of the business community.

Metrics

- Utility Capacity Above Current Demand
- % of Calls Meeting Fire Response Goals
- % of Calls Meeting Emergency Medical Response (EMS) Goals
- Acreage of Parkland
- Library Square Footage Per Capita
- Percentage Over/Under School Capacity
- Percentage of Households with Broadband Access

Quick Facts

- The Department of Public Utilities (DPU) owns, operates, and maintains public water and wastewater systems within the Suburban Service Area (SSA), along with a limited number of isolated rural water systems inside and outside of the SSA. As of June 2022, DPU provided water service to approximately 22,930 customers and wastewater (sewer) services to approximately 22,370 customers.
- The Fire-EMS Department responds to emergency calls in the County. There are 17 stations countywide (including Laurel Meadow: Station 17 that is under construction in the Mechanicsville area), along with a training facility.
- The Parks and Recreation Department administers over 1,228 acres of public parks and has a cooperative agreement with the Hanover County School Board for the shared use of school facilities for recreational purposes after school hours.
- The Pamunkey Regional Library serves Hanover, King and Queen, Goochland, and King William counties and is overseen by the Board of Trustees, which includes representatives from each county. Hanover County is currently served by six libraries.
- In 2022, Hanover County Public Schools had over 17,000 students in pre-K through Grade 12. There are fifteen elementary schools, four middle schools, four high schools, an online school, an alternative education center, and a center for trades and technology.

Public Utilities (Water and Wastewater Facilities)

The County's Department of Public Utilities (DPU) owns, operates, and maintains public water and wastewater systems within the Suburban Service Area (SSA), along with a limited number of isolated rural water systems inside and outside of the SSA. Collectively, in this document, these facilities are referred to as the "System". DPU operates as a self-supporting enterprise fund. In addition to the System operated by the County, there are private central systems and individual systems.

The System and the Suburban Development Plan

DPU invests in the following types of improvements to serve areas within the SSA:

- Water and wastewater treatment capacity;
- Major regional water and wastewater pump stations;
- Trunk sewers;
- Water storage tanks; and
- Water transmission mains.

DPU typically does not invest in smaller facilities serving specific areas or neighborhoods. Individual property owners are expected to design, construct, and pay for local improvements that connect to major infrastructure constructed by 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. Typically, each individual lot connected to the public sewer system is required to be served by a publicly-owned gravity sewer lateral located on or immediately adjacent to the lot. Exceptions to this requirement can be approved by the Director of Public Utilities in limited and unique situations.

Public water and sewer are allowed to be extended into areas within the SSA (as shown on the *Growth Management, Conservation, and Suburban Development Plan* map). Projects or individual properties outside of the SSA will not be served by public water and sewer, except in very limited circumstances described below:

- **Serving Public or Private Development/Communities Outside of the SSA**
Expanding the public utility system to serve public projects, private development, or existing communities outside of the SSA 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 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/or
 3. For Hanover County public sites and facilities.

In the instances listed above, public water and/or sewer will only be extended outside of the SSA with approval of the Board of Supervisors.

- **Individual Service Connections Outside of the SSA**
Individual service connections to the County's public water and sewer system for individual lots may be allowed beyond the boundaries of the SSA in limited circumstances, such as when an existing home or business has a failing well and/or septic system. 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 SSA. In these instances, public water and/or sewer will only be extended outside of the SSA with approval of the Director of Public Utilities and Director of Planning.

Except as stated above, there are no other provisions for public water and sewer to be provided outside of the SSA or outside other areas presently served by DPU.

Areas within the SSA Unserviceable by Gravity Sewer
Public Utilities normally requires that a gravity lateral, owned by Hanover County, be constructed to each individual lot to be served by the public sewer system. Private on-site sewer systems that pump to the County's gravity lateral are currently allowed.
A few small areas within the SSA have been identified where properties cannot be served by a gravity lateral from the existing sewer system or the anticipated future sewer system.
Hanover County will explore developing policies that would allow the use of low-pressure sewer systems to serve these small limited areas within the Suburban Service Area.

The 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 2022, DPU provided water service to approximately 22,930 customers. This includes approximately 1,850 commercial, industrial, and municipal accounts.

Water is provided from the following sources:

- Doswell Water Treatment (Hanover County): 4 Million Gallons Per Day (MGD) Capacity
- City of Richmond (Long-Term Contract): 20 MGD Capacity
- Henrico County (Long-Term Contract): 0.775 MGD Capacity
- Wells: 0.2 MGD Capacity

In total, the System has a capacity of 25.0 MGD. Average daily water demand in FY22 was 8.6 MGD and peak daily demand was 13.5 MGD.

The County also owns the 2.0 MGD South Anna Water Treatment Plant on the South Anna River. This plant has not operated since the 1990s 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 provider, Aqua Virginia, Inc., owns and operates systems that serve twelve residential subdivisions.

Long-Term Water Supply

The need for future water supplies to support the Comprehensive Plan and growth of the system has been recognized since the 1970s. 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.

A new source of water is projected to be needed sometime around 2050. Based on current regulations and anticipated construction timelines, permitting activities and detailed design should start around 2030. This schedule may need to be accelerated if an industry requiring large amounts of water were to locate or expand in Hanover County.

Several alternatives have been reviewed to meet the System's long-term water supply needs. The County has identified a reservoir located at the existing Verdon Quarry as its most viable source of water. This reservoir could be supplied with water pumped from the Pamunkey River.

Public Wastewater System

As of June 2022, DPU provided wastewater services to approximately 22,370 customers. This includes approximately 1,730 commercial, industrial, and municipal accounts.

Wastewater treatment is provided at the following facilities:

- Totopotomoy Wastewater Treatment Plant: 7 Million Gallons Per Day (MGD) Capacity
- Ashland Wastewater Treatment Plant: 2 MGD Capacity
- Doswell Wastewater Treatment Plant: 1 MGD Capacity
- Hanover Courthouse Sewage Treatment Plant: 0.08 MGD Capacity
- Long-Term Contract with Henrico County: 5.4 MGD

In total, the System has a capacity of 15.48 MGD. Average daily wastewater demand in FY22 was 6.7 MGD.

Private Wastewater Systems

Cascades' Containerboard Packaging – Bear Island 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. Other private facilities are located at the Hanover Learning Center, Barrett Learning Center, and Mountain Run subdivision.

Long-Term Wastewater Treatment Needs

In the future, additional wastewater treatment capacity will be needed as the County continues to grow. In addition to requiring additional capacity, the County's wastewater treatment plants will need to be updated to meet nutrient limits required by the Chesapeake Bay Total Maximum Daily Load (TDML) and the associated Virginia Watershed Implementation Plan. DPU is constantly evaluating its options in an ever-changing regulatory environment. Improvements at all four existing facilities may be required during the planning period covered by this Comprehensive Plan Update. An expansion of the Totopotomoy Wastewater Treatment Plant may also be required during the planning period.

Fire and Emergency Management Services (EMS)

Hanover County Fire-EMS (Department) is a combination system with a diverse team of dedicated career and volunteer members. It provides an all-hazards approach that considers the full scope of emergencies or disasters to protect the lives of citizens and visitors. Training and preparedness are key to provide high-quality service and create a safer community. In addition, the Department partners with regional stakeholders to receive and provide resources through a Regional Mutual Aid Emergency Response Agreement.

The Chief of Fire-EMS 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 aims to provide adequate facilities, equipment, and staffing to meet the following response goals:

Fire Response Goals
<ul style="list-style-type: none">• 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
<ul style="list-style-type: none">• 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 (15) minutes, eighty (80%) of the time.
- Adequately staff Fire-EMS facilities with trained personnel to meet the current and future needs of Hanover County.

Fire and EMS Facilities

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

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
Laurel Meadow	Station 17	Lee Davis Road, Mechanicsville, VA 23111 (Under Construction)
Training Center	Training	13038 Winston Road, Ashland, VA 23059

A facilities assessment was conducted to identify critical needs for maintaining existing facilities and expanding services to accommodate forecast population growth. This assessment evaluated the condition and functionality of these facilities to meet current and future needs for additional staffing, gender-appropriate facilities, and Fire-EMS apparatus space. As a result, four Fire-EMS facilities were identified as a priority for renovation:

- Doswell Station 4
- Montpelier Station 8

- Rockville Station 9
- Chickahominy Station 10

New facilities are planned and/or under construction to help meet response goals:

- The construction of Station 17 off of Lee-Davis Road will provide additional resources in the Mechanicsville area. The addition of this station will have an immediate impact and have a call response volume exceeding 3,200 calls. This station will improve response goals and enhance resources available to citizens. Station 17's innovative construction will focus on the health and safety of first responders through cancer prevention techniques.
- The construction of a Public Safety Building will improve efficiency and interoperability between Fire-EMS and the Sheriff's Office. The new facility will co-locate the administrative and training functions for Fire-EMS and the Sheriff's Office. Additionally, the Public Safety Building will provide space for Hanover County's Emergency Operations Center (EOC). This building will be located at the County Administration Complex at Hanover Courthouse.

Additional facilities may be needed to address future growth during the planning horizon:

- Based upon forecasted growth, an additional facility may be needed near the Lewistown Road corridor. A new facility will support future commercial growth and increased traffic along Interstate 95. Additional facilities were identified in the 25-year outlook, including construction of Station 18 and Station 19 to meet expected call volume growth.
- 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 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 at that location.

The goal is to strategically staff every facility to provide 24-hour all-hazards emergency service coverage to Hanover County. This can be accomplished by continuing to recruit and foster a combination work environment comprised of career and volunteer staff. The County should continue to provide up-to-date, cutting-edge training programs to all members through local, regional, state, and national standards. Moving towards accreditation will not only help Fire-EMS benchmark against national standards, but leverage data analysis to become more efficient and effective. In FY23, the Department was awarded a SAFER grant to conduct a Standards of Cover study to develop a comprehensive staffing plan.

Parks + Recreation

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. During the Envision Hanover planning process, many participants expressed interest in having greater access to amenitized public parks, particularly within the Suburban Service Area (SSA).

PRD currently administers over 1,228 acres of public parks and has a cooperative agreement with the Hanover County School Board for the shared use of school facilities for recreational purposes after school hours. The County also has 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 complement County-sponsored parks and recreational activities.

The location of park facilities is dependent upon many factors. The primary factors considered include convenient access and land conducive to the types of activities for which the park will be used. 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*. That plan, which was last updated in 2010, serves as a planning guide for ensuring recreational facilities continue to meet residents’ needs into the future. In developing service level standards, PRD relies on a variety of sources, including the Virginia Department of Conservation and Recreation (DCR) and the National Recreation and Parks Association (NRPA). Each organization has standards regarding the number of acres for types of parks and/or the amenities that such parks should have (e.g., ball fields).

Hanover County Park Classifications	
<p>Regional Parks + District Parks</p>	<ul style="list-style-type: none"> • Regional Parks (Min. 100 acres) offer 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. • District Parks (Min. 50 acres) 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>Examples of existing regional and district parks include:</p> <ul style="list-style-type: none"> • Cold Harbor Battlefield Park (50 acres) • Courthouse Park (120 acres) • Montpelier Park (50 acres) • North Anna Battlefield Park (172 acres)

	<ul style="list-style-type: none"> • Pole Green Park (217 acres) • Poor Farm Park (254 acres) • Taylor Park (53 acres) • Washington Lacy Park (216 acres) <p>These parks total 1,132 acres.</p>
Community Parks	<p>Community Parks (Min. 20 acres) offer a wide variety of recreational activities with intensive use (e.g. ball fields, tennis courts, basketball courts, natural areas, trails).</p> <p>Examples of existing and planned community parks include:</p> <ul style="list-style-type: none"> • Hanover Wayside Park (36 acres) • Little River Park (Undeveloped County-Owned Land: 22 acres) • Winding Brook Park (Undeveloped County-Owned Land: 39 acres) <p>These parks and County-owned lands total 97 acres.</p>
Neighborhood Parks	<p>Neighborhood Parks (Min. 5 acres) offer a 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>Examples of publicly- and privately-managed neighborhood parks include:</p> <ul style="list-style-type: none"> • Doswell: Ruritan Park (Non-Profit) • Bethany Park (Non-Profit) • Town of Ashland Parks • Private Residential Parks within Subdivisions (HOA Managed)
Water Access + Blueways	<p>Water Access + Blueways (Up to 3 acres) are developed for the purpose of providing public launching points for small, non-motorized watercraft and fishing opportunities.</p> <p>Existing boat ramps and water access points include:</p> <ul style="list-style-type: none"> • Littlepage (Pamunkey River at U.S. Route 301) • North Anna (North Anna River at U.S. Route 1) • South Anna (South Anna River at State Route 54) • Ground Squirrel (South Anna River at U.S. Route 33)
Greenways/Trails (> 1 mile in length)	<p>Greenways/Trails (greater than 1 mile in length) generally utilize watercourses (streams, rivers, and canals) and rights-of-way (transportation and utility) to provide recreational opportunities. The Fall Line Trail is currently under development.</p>
National Battlefield Parks	<p>Civil War battlefields managed by the National Park Service (NPS) in the County are connected by Cold Harbor Road, which runs from Mechanicsville east to the crossing of the Chickahominy River where it enters Henrico County. These parks 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. Specific sites include:</p> <ul style="list-style-type: none"> • Beaverdam Creek • Cold Harbor

	<ul style="list-style-type: none"> • Gaines Mill • Garthwright House • Rural Plains/Totopotomoy
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The following chart summarizes the existing acreage of different park classifications compared with the Virginia Outdoors Plan (VOP) recommendations for the ratio of park acreage to forecasted population. The recommended appropriate park acreage ratio/population is based on 4 acres per 1,000 residents for district and regional parks and 3 acres per 1,000 residents for community and neighborhood parks.

Park Class	2025 Pop.: 114,690	2030 Pop.: 120,152	2035 Pop.: 125,613	2040 Pop.: 131,075	2045 Pop.: 136,536
Regional + District Parks (2023: 1,132 acres)	Recommended: 459 acres Exceeded by 673 acres	Recommended: 481 acres Exceeded by 651 acres	Recommended: 503 acres Exceeded by 629 acres	Recommended: 525 acres Exceeded by 607 acres	Recommended: 547 acres Exceeded by 585 acres
Community + Neighborhood Parks (2023: 97 acres)	Recommended: 345 acres Deficient by 248 acres	Recommended: 361 acres Deficient by 264 acres	Recommended: 377 acres Deficient by 280 acres	Recommended: 394 acres Deficient by 297 acres	Recommended: 410 acres Deficient by 313 acres

The County does not currently administer any *neighborhood parks*, but will continue to seek opportunities to develop this park classification in the future. There are other types of facilities that provide similar recreation opportunities:

- Privately-maintained residential development parks and common areas;
- Doswell-Ruritan and Bethany Parks (maintained by non-profit organizations);
- Public schools that offer recreational and sport facilities after school hours; and
- Neighborhood parks owned and/or maintained by the Town of Ashland.

While the acreage within County-owned regional and district parks exceeds minimum recommendations outlined in the Virginia Outdoors Plan (VOP), some of the existing facilities in this classification (particularly Washington Lacy Park and Taylor Park) have limited recreational amenities. As resources become available, the County could develop underutilized acreage to provide additional active and passive recreation opportunities. While Pole Green Park and some of the other regional parks include athletic fields, the large demand for athletic fields within the heavily-populated Mechanicsville area exceeds the quantity available.

Based upon national trends and community input, the focus of future park development will include a greater emphasis on passive recreational amenities, in addition to athletic field construction. During the Envision Hanover planning process, there was significant interest in providing more parks and recreational opportunities, particularly amenitized neighborhood parks within the Suburban Service Area (SSA). Additionally, there is interest in having more athletic fields in closer proximity to suburban neighborhoods, particularly in the Mechanicsville and Atlee areas.

Libraries

In 2023, the Pamunkey Regional Library serves the counties of Hanover, King and Queen, Goochland and King William. The Pamunkey Regional Library is overseen by the Board of Trustees, which includes members appointed to represent Hanover County and other member localities. Hanover County is served by six library branches. These libraries currently occupy 59,730 square feet.

Existing Libraries

Library	Square Footage (2023)	Square Footage (2024)
Gillis (Ashland)	10,000	10,000
Atlee	20,835	20,835
Courthouse	3,000	3,000
Mechanicsville	16,000	16,000
Wickham (Montpelier)	2,500	5,212*
Cochrane (Rockville)	7,395	7,395
Total	59,730	62,442

*Wickham (Montpelier Library) will increase in size upon completion of the Montpelier Recreation Center.

Based upon a 2022 population estimate from the Weldon Cooper Center, the libraries' square footage per capita ratio is approximately 0.5. The County has traditionally been in a range between 0.4 - 0.5 sf/capita. The State Library of Virginia (SLV), in its *Planning for Library Excellence: Standards for Virginia Public Libraries 2019*, has established service level rankings for various measures. The minimum measure is "E" (Essential) services meeting the basic needs and expectations of a public library, including circulation, internet access, and basic reference assistance, as mandated in the Code of Virginia. For facilities, "E" correlates to 0.6 sf/capita for a county of Hanover's population. The Pamunkey Regional Library Board has long agreed with the 0.6 sf/capita as a minimum target.

The following table illustrates in five-year increments (through 2045) forecasted 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/capita ratio target established by the SLV and the PRLB. Completion of the Montpelier Recreation Center and Library, which is expected in 2024, will move library space to approximately 91% of the 0.6 sf/capita goal. Based upon forecast population growth and level service expectations, a new library facility could be warranted during the planning horizon.

Library Facility Space and Per Capita Forecasts

Year	Forecasted Population	SF/Ratio = 0.5	SF/Ratio = 0.6 (LVA + PRLB Service Target)
2025	114,690	57,345 sf	68,814 sf
2030	120,152	60,076 sf	72,091 sf
2035	125,613	62,807 sf	75,368 sf
2040	131,075	65,538 sf	78,645 sf
2045	136,536	68,268 sf	91,922 sf

Schools

Hanover County Public Schools (HCPS) 2022 student enrollment is over 17,000 students in pre-K-12. There are fifteen elementary schools, four middle schools, four high schools, an online school, an alternative education center and a center for trades and technology. HCPS is the fifteenth largest of the 132 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 HCPS 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/facilities. In the event these measures will not relieve overcrowding, additions to current facilities or the 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 www.hcps.us or by contacting the Hanover County Public Schools.

The following chart includes a school enrollment forecast through 2042. It is based upon ten-year enrollment projections developed through 2032. For subsequent years, a growth rate of 1.5% was used. Compared to previous Comprehensive Plan data, school enrollment is not anticipated to grow as quickly as in previous planning periods.

As part of the Capital Improvements Program (CIP), the County is planning to fund the replacement of aging schools, as some facilities are nearly 90 years old and do not meet current needs. While some replacement facilities will be built on the same site as the existing school, others will be built at new locations nearby.

Student Enrollment Forecast (2022 - 2042)

Elementary Schools				
Year	# of Elementary School Students	Existing Capacity	(Over)/Under Capacity	% (Over)/Under Capacity
2022	7,196	9,794	2,598	26.53%
2026	7,228	9,794	2,566	26.20%
2032	7,609	9,794	2,185	22.31%
2037	8,197	9,794	1,597	16.31%
2042	8,830	9,794	964	9.84%
Middle Schools				
Year	# of Middle School Students	Existing Capacity	(Over)/Under Capacity	% (Over)/Under Capacity
2022	3,917	4,797	880	18.34%
2026	4,027	4,797	770	16.05%
2032	3,985	4,797	812	16.93%
2037	4,293	4,797	504	10.51%
2042	4,625	4,797	172	3.59%
High Schools				
Year	# of High School Students	Existing Capacity	(Over)/Under Capacity	% (Over)/Under Capacity
2022	5,630	6,788	1,158	17.06%
2026	5,369	6,788	1,419	20.90%
2032	5,578	6,788	1,210	17.83%
2037	6,009	6,788	779	11.48%
2042	6,473	6,788	315	4.64%

General Government, Administration, and Judicial

General government, administration, and judicial facilities provide offices and meeting space for the County's workforce, so that they can provide high-quality customer service to residents, businesses, and other community members.

Most County offices are located at the Hanover County Government Complex on U.S. Route 301. Additional offices are located at:

- Human Services Building on U.S. Route 1
- Fire Administration Offices at the Courthouse Fire Station (Station 5)
- General Services at the Lakeridge Parkway Fleet Facility
- Economic Development Department at Rutland off of Atlee Road

While not a County-maintained facility, Pamunkey Regional Jail is located near the Hanover County Government Complex adjacent to Courthouse Park (off of U.S. Route 301). The jail is operated by a regional authority.

The future office/facility requirements for the County's workforce are difficult to project. Space to provide new and expanded services is dependent upon factors such as State or Federal mandates and citizen/Board of Supervisor initiatives that influence the extent and function of the County's workforce. The 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 its workforce, with the most recent analysis completed in Summer 2023. To address anticipated growth, workforce needs, and customer service expectations, that study recommends a variety of improvements, including:

- Construction of a dedicated public safety building, providing a single facility that is safe and secure for Fire-EMS Administration and the Sheriff's Office.
- Upgraded training facilities for both Fire-EMS and the Sheriff's Office.
- Renovations and an addition at the Animal Control Building.
- Replacement and renovation of multiple fire stations.
- Additions at the current Courthouse building to accommodate growth in Court Services.
- Additional maintenance facilities for the Parks and Recreation Department; and
- Additions and/or renovations to accommodate several government departments.

Telecommunications + Broadband Infrastructure

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 16-site, twelve-channel 800 MHz trunked radio system, enhanced wireline and wireless 911 systems, a computer aided dispatch system (CAD) which includes mapping, digital recording system, and interoperable communications systems.

Private Telecommunications Networks

Growth in the industry providing mobile telephones 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, security, access, aesthetics, and technological needs for the area in close proximity to the facility or structure and the County as a whole.

Broadband

Hanover County understands that universal high-speed internet access is essential for residents and businesses. It is necessary to support businesses, education, public safety, and everyday life. Therefore, we support the development and implementation of a broadband internet plan to extend high-speed internet to the unserved areas of the County. *Unserved* is defined by the federal government as not having access to internet service at a minimum bandwidth. The majority of homes and businesses in the County have access to broadband internet service. This is due to the fact that the vast majority of residents live within the Suburban Service Area (SSA), where Comcast has provided high-speed internet service for 25 years. The unserved population, representing approximately 15% of residents, is in the mostly rural/agricultural areas of the County. All providers are welcome and encouraged to expand broadband internet service to Hanover County citizens.

As part of the *Connect Hanover* initiative, the County is using a combination of state grants, federal funding, and private corporate investment to make broadband service available (by the end of 2024) to almost 6,200 residents and businesses that do not currently have sufficient internet access.

Airport

The Hanover County Airport opened in 1971 and is located on approximately 250 acres east of Interstate 95, between the Atlee/Elmont and Lewistown Road interchanges. As part of the National Transportation System, the airport provides general aviation service to both corporate clientele and the recreational pilot. The airport serves small single-engine and multi-engine aircraft, as well as corporate business jets.

The airport has been identified by the Federal Aviation Administration National Plan of Integrated Airport Systems (NPIAS) as a vital link to air service in the Richmond Metropolitan area. The airport has been designated as a reliever airport to Richmond International Airport (RIC) in the Virginia Air Transportation System. The function of a reliever airport is to reduce the amount of general aviation air traffic at airports such as RIC that receive commercial air service.

The airport also serves medical and law enforcement agencies, as well as agricultural spray operations. During a disaster or crisis situation, the airport contributes to the relief effort by assisting agencies performing damage assessments, medical evacuations, air ambulance, delivery of emergency supplies, as well as a base/staging areas for search/rescue, media coverage, and other disaster response teams.

An Airport Master Plan is the primary document used by airports to determine the long-range planning needs for the development and modernization of the airport. It is a plan that is sequenced into the Airport Capital Improvement Plan and is eligible for federal funding. The latest master planning effort for the airport dates back to 2006. Since adoption of that master plan, the Federal Aviation Administration (FAA) has made significant changes to its standards regarding the design of airports. To address these new requirements, Hanover County is currently pursuing an update to its Airport Master Plan.

Objectives and Strategies

Objective CF.1 (Public Utilities): Provide reliable, quality water and wastewater service in a fiscally-responsible manner to support residents' needs, economic development, and the Comprehensive Plan.

- Strategy CF.1a: Explore additional water supplies to support the Comprehensive Plan and the growth of the public utilities system, including the Verdon Quarry Water Supply.
- Strategy CF.1b: Increase wastewater treatment capacity as required to meet future demands and upgrade facilities to meet nutrient limits required by the Chesapeake Bay Total Maximum Daily Load and the associated Virginia Watershed Implementation Plan.
- Strategy CF.1c: Assess the need to update the Water and Wastewater Facilities Master Plan.
- Strategy CF.1d: Identify funding mechanisms (including public/private partnerships) that could be used to make strategic infrastructure investments in public utilities within the EDZs to support economic development.

Objective CF.2 (Fire and Emergency Management Services): Strategically maintain, renovate, and locate fire and EMS facilities to provide optimal services to residents, businesses, and visitors by achieving adopted response benchmarks.

- Strategy CF.2a: Renovate existing fire and EMS facilities identified in the most recent facilities assessment to meet current and future needs related to staffing, gender-appropriate facilities, and Fire-EMS apparatus space.
- Strategy CF.2b: Construct new fire and EMS facilities at appropriate locations to improve response times, efficiency, and interoperability between public safety personnel, including additional fire stations, a public safety building, and a burn building for training.

Objective CF.3 (Parks and Recreation): Provide a balance of high-quality recreational programs and facilities to meet the needs of the present and anticipated population of Hanover County.

- Strategy CF.3a: Continue to offer a safe, well-maintained, and diverse park system that provides both passive and active recreational opportunities for all community members.
- Strategy CF.3b: Expand the park system to include additional neighborhood, community, and specialty athletic parks in response to community demand, especially within the Suburban Service Area (SSA).
- Strategy CF.3c: Plan for the expansion of indoor recreation facilities to improve service levels through diverse program offerings and increased healthy lifestyle opportunities.
- Strategy CF.3d: Continue to maintain partnerships with stakeholders who support the mission of Parks and Recreation, including Hanover County Public Schools, youth athletic associations, and the National Park Service.
- Strategy CF.3e: Update the Parks and Recreation Master Plan (last updated 2010).

Objective CF.4 (Libraries): Provide convenient locations to access library materials and services, maintaining current service levels and exploring opportunities to achieve target recommendations established by the State Library of Virginia and the Pamunkey Regional Library Board.

- Strategy CF.4a: Prioritize replacement of the Montpelier Branch Library. Hanover County and the Pamunkey Regional Library Board (PRLB) expect the future library to be located on a site in the Montpelier Park. Groundbreaking was held on April 14, 2023 and the construction process is expected to be completed in 2024.

- Strategy CF.4b: Following replacement of the Montpelier Branch Library, prioritize improvements to the aging Ashland Branch Library.
- Strategy CF.4c: Explore the possibility of pursuing construction of a new library facility during the planning horizon to meet level of service expectations.
- Strategy CF.4d: Explore the innovative use of technology at libraries that can yield greater efficiencies and have the potential of reducing building or facility square footage.
- Strategy CF.4e: Strive to achieve the library standards established by The State Library of Virginia and the Pamunkey Regional Library Board.

Objective CF.5 (Public Schools): Provide facilities of the kind, size, and quality that will best support and accommodate the school division's educational program and the number of students enrolled, offering the best possible physical environment for learning and teaching.

- Strategy CF.5a: 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 public school facilities that will meet additional service demands.
- Strategy CF.5b: Accommodate and facilitate new organizational and instructional patterns in new and renovated school buildings that support the division's educational philosophy and instructional goals.
- Strategy CF.5c: Meet all safety requirements through the remodeling of older structures.
- Strategy CF.5d: Provide building renovations as needed to meet requirements regarding the availability of public school facilities to persons with disabilities.
- Strategy CF.5e: Design and construct new schools and support buildings to reduce maintenance costs and conserve energy. These two factors will also be given special consideration in the renovation of buildings.
- Strategy CF.5f: Decisions pertaining to educational specifications of new public school facilities and those undergoing extensive remodeling will be developed with the benefit of viewpoints of teachers, students, and the community.

Objective CF.6 (General Government, Administration, and Judicial Services): Provide suitable office space and facilities for the County's workforce to foster high-quality customer service for residents, businesses, and other members of the public.

- Strategy CF.6a: Implement recommendations in the latest Space Needs Analysis and Facilities Assessment.
- Strategy CF.6b: Conduct future space needs analysis recognizing population changes, sound financial practices, and the changing dynamics of providing superior service.
- Strategy CF.6c: Explore the innovative use of technology that can yield greater efficiencies and have the potential of reducing building or facility square footage.

Objective CF.7 (Telecommunications and Broadband Infrastructure): Increase the availability of high-speed data connections and broadband internet access.

- Strategy CF.7a: Establish a public/private partnership with third-party private internet service provider(s) to provide fiber to the home broadband internet service to unserved areas.
- Strategy CF.7b: Develop a comprehensive fiber-to-the-home broadband internet program that ensures all homes and businesses have access to broadband internet service.

- **Strategy CF.7c: Implement the findings and strategies of Hanover's Blueprint to Broadband Internet.**
- **Strategy CF.7d: Support cost-saving plans for low- to moderate-income households to access broadband internet service.**

Objective CF.8 (Airport)

- **Strategy CF.8a: Update the Airport Master Plan.**