Livable Frederick represents a sea change in the way that our plans have been created in the County. The long history of efforts to determine the future shape of Frederick County has been fraught with familiar but serious obstacles. From the deficiencies of technical and analytical methods for informing decisions - to the lofty presumptions of professional knowledge - to the fickle ebb and flow of political tides - our plans often embody extensive efforts that can sometimes amount to little more than idiosyncratic guesswork, albeit at a large scale. Livable Frederick has introduced a process and a tool for reducing the guesswork and creating an objective base of knowledge for consciously creating a future Frederick County that embodies our values.

The scenario planning process represents one of the primary means of realizing this future. It does this by allowing us to create a variety of different possible futures and analyze the results. The scenarios described below are not rhetorical. In other words, they do not intentionally provide several inferior options in order to show a predetermined preferred option in the best light. Also, the scenarios are not contingency plans. They are not intended to provide one course of action if one set of events occurs, and another equally valid set of options if a different set of event occurs.

The scenarios presented below are primarily analytical. They get us beyond a customary and simplistic “predict and plan” approach and allow us to explore four different but not mutually exclusive hypotheses about growth in the County. The outcomes of these scenarios are measurable and provide valuable data that can inform our choices about how to grow.

The Scenario Planning Process

The Livable Frederick scenario planning process is based on the premise that our county’s growth and economic development is influenced by both regional and local dynamics. It also factors in consideration of changing market demands for both housing types and employment locations. Therefore one of the first steps in scenario development entailed an examination of the greater Washington-Baltimore economic trends. Specifically, what kinds of jobs, people and households would likely drive demand for growth in Frederick County over the next several decades? This demand analysis provided a baseline for developing hypothetical growth scenarios that allowed for an examination of how different growth patterns (type and location of residential and non-residential development) might influence the attractiveness of the county for different market segments. These considerations were overlayed with existing comprehensive plan policies, Livable Frederick Vision aspirations and other considerations to create distinct scenarios for evaluation and discussion.

Demand Analysis

The scenario planning process begins with a macroeconomic analysis that provides a forecast of regional growth trends and an evaluation of which market segments and industry sectors are likely to prefer to locate in Frederick County as growth occurs. This is coupled with a microeconomic analysis that evaluates the place characteristics that are preferred by different market segments and industry sectors.
Macro Analysis

Growth in Frederick County is driven by growth in the Baltimore-Washington region and is influenced by the local advantages and disadvantages of the County relative to the region. We can better understand the effects of regional growth in Frederick County through a) migration trends: the movement of people into and out of the region and the county, b) job mix: the kinds of jobs that are being added to the region and to the county, and c) residential market segments: the projected demographic profile of the County.

Data sources used for this analysis include:

- ESRI Business Analyst: A database and software extension for ArcGIS designed to provide analytical support for decision-making on the locational decisions of businesses and organizations. Among its capabilities is the assessment of “customer profile” information that provides an analysis of the current mix of population by market segment and the current mix of businesses by industry sector within Frederick County and the region.
- Internal Revenue Service (IRS) migration data to provide information about current trends in relocation
- Metropolitan Washington Council of Government (MWCOG) land use forecasts to provide information about future jobs and population at TAZ level out to the year 2045.
- Woods and Poole (W&P) county growth forecasts to provide information about future jobs and population at the county level out to 2050.

Migration Trends

The County is seeing changes in the mix of people and households that are coming to and moving from the county. These demographic shifts are part of a feedback loop with an evolving economy. Both economic and demographic changes will impact the county's development patterns, its environment, character, travel behavior, and energy consumption. Also, understanding the location preferences and typical transportation mode choices of incoming residents underlies an assessment of multi-modal accessibility in the County.

ESRI Tapestry and IRS data demonstrate that the mix of people that are coming to and moving from the County is changing. This change is both economic and demographic and can impact the County’s development patterns, environment, character, travel behavior, and energy consumption.

**HOW IS FREDERICK COUNTY CHANGING?**
Consolidation of Market Segments
To keep the demand analysis and scenario development manageable, standard market segments and industry classifications were consolidated into fewer generalized categories. While every household and business is unique, generalization reveals basic trends.

This consolidation of ESRI tapestry segments allows for a simplified market analysis while maintaining differentiation among different population segments with similar incomes, life styles, and location preferences. As Frederick County evolves, these different market segments, along with market forces and development policies, will influence the character of the county’s diverse places and how they change or are preserved.

CONSOLIDATION OF ESRI TAPESTRY MARKET SEGMENTS

- Affluent Estates
- Upscale Avenues
- Uptown Individuals
- Family Landscapes
- Gen-X Urban
- Cozy Country
- Ethnic Enclaves
- Middle Ground
- Senior Styles
- Rustic Outposts
- Midtown Singles
- Hometown
- Next Wave
- Scholars and Patriots
- Retired Persons
- Low to Middle Income Singles
- Middle Income Urban, No Kids
- Wealthy Urban/Suburban
- Middle Income Suburban
- Low to Middle Income Families

Consolidation of Industry Groups
The North American Industry Classification System (NAICS), the Federal standard for classifying businesses for data collection and analysis in the U.S., is consolidated as shown below while maintaining differentiation among different industry sectors with similar location preferences and recruitment strategies.

As Frederick County evolves, these different industry groups will influence the residential composition of the county, pull from its diversifying workforce, and influence the character of its places.

<table>
<thead>
<tr>
<th>Consolidated Employment Group</th>
<th>Woods &amp; Poole Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource jobs</td>
<td>Farm</td>
</tr>
<tr>
<td></td>
<td>Forestry, fishing, related activities</td>
</tr>
<tr>
<td></td>
<td>Mining</td>
</tr>
<tr>
<td>Industrial jobs</td>
<td>Manufacturing</td>
</tr>
<tr>
<td></td>
<td>Wholesale trade</td>
</tr>
<tr>
<td></td>
<td>Transportation and warehousing</td>
</tr>
<tr>
<td>Consumption jobs</td>
<td>Retail trade</td>
</tr>
<tr>
<td></td>
<td>Arts, entertainment, and recreation</td>
</tr>
<tr>
<td></td>
<td>Accommodation and food services</td>
</tr>
</tbody>
</table>
Approximately 86,000 more jobs and 134,000 more people are projected for Frederick County by 2050. MWCOG projects steady growth through 2050 (projections are to 2045 and extrapolated to 2050). Woods and Poole also projects steady growth through 2050 with population growth initially slower than MWCOG and employment growth forecast at higher rate than MWCOG.

Frederick County’s share of regional growth is expected to increase. The share of regional population growth is projected to accelerate in next 10-15 years, then stabilize. The projected share of regional job growth steadily increases over time and is expected to take an increasing share of the region’s jobs.
The increment of growth projected for Frederick County to the year 2050 is as follows.

An additional:  
134,000 people  
86,000 jobs  
60,000 households  
35,000 acres of developed land

Local industry Strength
Industry strength is based on three factors: 1) Industry Mix: industry is growing regionally faster (or declining less rapidly) than the regional market for all jobs, 2) Local Competitiveness: industry is growing faster (or declining less rapidly) locally than regionally, and 3) Job Growth: industry is adding jobs locally.
Growth Projections by Industry Group and Market Segment

A variety of projections that distributed growth among industry groups and market segments were compared and analyzed in order to develop a strong understanding of general trends affecting the County. One projection assumed that Frederick County’s regional share of each industry and market segment would remain constant as growth occurs. Another projection that was developed by a private forecasting firm, Woods and Poole, was also included. Finally, two projections were developed using shift share analysis to examine the results if recent changes in the region’s and county’s industry mix persist. These included an analysis of regional growth effects, which inform how recent growth in the region might impact all industries in the local economy, and regional industry mix effects, which describe how an industry’s expected changing role in the region might impact the local economy.

All of this analysis served to substantiate the selection of a set of final controls totals for an increment of growth in Frederick County to 2050 by industry group and market segment. The resulting projections are shown below.

GROWTH PROJECTIONS BY INDUSTRY GROUP AND MARKET SEGMENT

Micro Analysis

The advantage of parsing growth by industry group and residential market segment is that the “locational affinities” of each group or segment can be considered. In other words, there are physical, place based attributes that affect where different industries and markets segments choose to locate, and an understanding of this can inform the development of policies, actions, and regulations that affect the physical characteristics of places in the County. This means is that our projected growth can be tied to different place types and our county can be analyzed to see where that projected growth would locate based on our current policies and regulations, as well as any potential future changes we may choose to pursue.

A GIS-based scenario planning software program (modeling tool) developed by the planning consultant firm Renaissance Planning has been employed to conduct this analysis during the
scenario development process. This modeling tool enables the analysis of the distribution of growth (allocation of jobs and households) across the county in different configurations. This allocation of growth is rooted in connecting the place based attributes of our existing and potential land use policies and land use distribution to the locational preferences of different industry types and market segments.

This represents the most significant difference between Livable Frederick and past planning processes. Not only can we explore a variety of future alternatives for growth, but we can also begin to determine what we need to do in terms of policies and actions to proactively influence our growth.

With the customary methods of comprehensive planning, projected population growth over a certain time period provides a “lump sum” of additional people that are expected to be in the county. This number is then translated into land use and allocated throughout the county based on technical knowledge, tacit knowledge, and politics. With this approach, there is no analytical method for connecting the physical attributes of places to the different preferences of the industries and market segments that are growing.

The ability provided by the scenario planning tool to connect the attributes of physical places with the location preferences of industries and market segments allows us to think about how we provide the types of places that will attract the types of industries and market segments that we want to have in the County. So in a real way, we can begin to exercise some informed control over our own destiny.

Here is a basic framework for how this is done:

The macro-analysis shown above results in growth projections parsed by industry group and residential market segments. The County itself is then analyzed based on physical factors that influence where these industries and markets are likely to locate. These physical factors are referred to as attractiveness drivers. They are: place type, accessibility, growth, and cost.

The place type driver constitutes a palette of different types of physical environments that are associated with different market segments and industry groups. It includes place types that currently exist in the County, as well as future, desired place types that could be provide through policy refinements. The accessibility driver measures automobile, transit, and pedestrian accessibility. The growth driver measures historic growth in different locations throughout the County and associates industries and markets that correspond to the dictum that “growth follows growth.” Finally, the cost driver measures the real property costs of land.
The Scenarios

As hypothetical stories about the future, four distinct scenarios emerged to help illustrate how different configurations of future growth might influence some of the goals and aspirations articulated in the Livable Frederick Vision. For instance, how might different scenarios perform relative to increasing housing options and transportation choices? How might different patterns of growth position the county for different industry sectors or workforce talent? What are the environmental impacts associated with different growth scenarios? These future scenarios included:

**LIVABLE FREDERICK SCENARIOS**

<table>
<thead>
<tr>
<th>BUSINESS AS USUAL</th>
<th>CITY CENTER RISES</th>
<th>SUBURBAN PLACEMAKING</th>
<th>MULTIMODAL PLACES AND CORRIDORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Let’s keep our policies “as is.” The future direction should reflect past trends.</td>
<td>The City of Frederick is a major urban and cultural center. Let’s maximize the growth potential in and around the City to create an even stronger place for walkable, urban living and working while retaining our historic sense of place.</td>
<td>Many of our residents love suburban living. Let’s make our suburban communities even stronger by reinvesting in them with infill development that creates more opportunities to walk, shop, work, and recreate closer to home.</td>
<td>Our County has existing rail service that connects us to the greater Baltimore Washington Region. Let’s leverage this asset and create more multimodal corridors to help catalyze the redevelopment of aging retail and office, and create new mixed use places in the southern part of the County.</td>
</tr>
</tbody>
</table>
Pipeline
The continuation of the existing pipeline of development in the County - i.e. planned development that currently has some form of approval, be it through rezoning, subdivision, site plan, or developers rights and responsibilities agreements - remains a basic assumption in each of the scenarios, as well as the generalized thematic plan shown below. None of these scenarios proposes removal of land use related to pipeline development in the County.

Agricultural and Natural Infrastructure
There is an unfortunate tendency to conceive of agricultural and natural infrastructure as “undeveloped” land that serves as a vessel for future growth. However, this view undermines the essential role these parts of our County play in our productivity, health, and quality of life. Therefore, agriculture and green infrastructure are “baked in” to all scenarios and into the generalized thematic plan below. They are treated as stand alone regions, separate from the influence of significant growth pressure.

Evaluating the Scenarios
As described above, the scenario development process included the use of a GIS-based scenario planning software program that enabled the distribution of growth (allocation of jobs and households) across the county in different configurations. To guide this process, a palette of place-types was created to reflect different assumptions concerning transportation access, density, intensity, household type and other placemaking based factors. Based on the hypothetical location of growth and the configuration of different place-types, the scenarios could be evaluated to demonstrate how growth might influence different county wide goals or aspirations using specific indicators or performance measures. Some of these evaluation metrics and benchmarks included:

- Acreage of newly developed land
- Acreage of agricultural lands consumed
- Acreage of green infrastructure impacted
- Percent of new development (housing and jobs) located in walkable, multi-modal centers
- Attractiveness of new growth to different market segments (household types and job types)
- Percent of new housing by type (housing choices)
- Vehicle Miles Traveled (VMT) and mode split (percent auto vs. non-auto travel)
- Energy consumption
- Air quality
- Proximity to key destinations
- Percent redevelopment or infill

Key Findings
The favorability of the different scenarios was evaluated relative to different market segments and industry groups.
Multimodal Places & Corridors is the most attractive to the highest number of industry sectors. Resource jobs do well in all given working lands preservation. Growth of middle income suburban families is expected to be accommodated entirely by pipeline development, so there is no differentiation among the scenarios for this market segment.

Each scenario assumes a more multi-modal pattern of growth. Therefore there is an opportunity to enhance existing places that are less auto-dependent, more walkable, bikable, and transit supportive.
The scenario process illuminated several key findings that ultimately can be incorporated into updates to the comprehensive plan. These include the following:

- A significant amount (40%) of our future household growth is likely to occur in currently planned developments known as the “pipeline growth.” However, the traditional suburban patterns assumed with this growth may not be matching up with future market demands for greater housing choices and more walkable communities. Therefore is there an opportunity to revisit some of the policy assumptions associated with the pipeline development?

- Creating more multimodal places and corridors (compact, walkable and transit ready) positions the county well for different job sectors—but doesn’t noticeably change travel behavior in terms of reducing countywide Vehicle Miles Traveled (VMT) or use of non-auto modes (walking, biking, or transit) to get around. Therefore are there certain corridors or subareas of the county where new growth, infill or redevelopment could be targeted with more compact, mixed use patterns supportive of a less auto-dependent lifestyle?

- Affordability of housing within the county will continue to be an issue with demand for wealthier households remaining high. Therefore where are the specific opportunities where we can target production of more housing options with ample access to more transportation choices so that we can continue to attract the workforce needed for the creative economy, healthcare jobs and other service industries?

- The scenarios intentionally push development away from sensitive natural resources, green infrastructure and working lands. However are there more policies needed to create greater incentives for contiguous natural spaces and working lands preservation?

- Infill development within our existing suburban neighborhoods can create more amenities closer to where people live and provide more opportunities for walkable neighborhoods. Where are the best opportunities for this type of infill development?

- The creation of job centers within walkable, multimodal centers is aligned with the workforce talent in the creative and high-tech industries. Therefore where are the best locations for future job centers that can achieve this type of development patterns?

Based on these key takeaways, the scenarios and the associated place-types provide an analytical framework for refining the policies within the comprehensive plan.
The Thematic Plan

The scenario planning process directly informed the development of a policy focused, generalized, thematic plan. As a policy focused document and plan, the primary intent is to set a course of action for the County to follow in the future in order to achieve the aspirations of the community vision.

In more practical terms, it means that Livable Frederick is text based and strategic, and that growth strategies are geographically expressed in the form of diagrams and analytical mapping. Not through parcel specific recommendations.

The benefit of taking this approach is that it removes the discussion about growth from the realm of personal property. Instead, the focus is on strategy, and specifically on the types of growth strategies that are supported by the community and expressed thought the community vision.

The thematic plan is a mix of all of the strategies explored through the scenario planning process. Each new scenario, with the exception of “business as usual,” focuses on different approaches for improving multi-modal accessibility in the County. This is the case for a number of reasons.

First, the existing pipeline for development satisfies a significant share of the future demand for conventional development. Therefore, there is an opportunity to supplement this supply by supporting future development patterns that do not rely solely on automobiles for transportation.

Second, and perhaps most important, is that a development pattern that provides multi-modal accessibility is what will best support the County Vision.

Our Health is supported by providing walkable neighborhoods that allow for active lifestyles and reduce the reliance of the car, and by making services more accessible to those who need them.

Our Community is supported by allowing for housing that is transit serviced to reduce transportation costs, and by ensuring that streets are walkable and accessible to foster social interaction and reduce social isolation.

Our Economy is supported by providing the types of walkable, transit-oriented places that employers are seeking when they make locational decisions to help make Frederick an employment hub in the region, and by creating the type of places that our future workforce will choose to inhabit.

Our Environment is supported by reducing vehicle miles traveled, reducing the need for major road expansion, and by

For these reasons, the overarching strategy of the plan is to achieve a more multi-modal pattern of growth, leveraging the existing pipeline of conventional suburban development. Therefore, the plan focuses on opportunities to enhance existing places and create new places such that they are less auto-dependent, and more walkable, bikable, and transit supportive.

As is demonstrated by the chart titled “Attractiveness by Market Types and Industry Groups” on the previous page, a multi-modal accessibility strategy provides favorable development patterns for a significant portions of our growth.
The generalized thematic plan is composed of primary growth areas, secondary growth areas, agricultural infrastructure, and green infrastructure.

**PRIMARY GROWTH:**
Areas of the County where the majority of growth will be directed.

**Central Growth Areas:**
Maximize growth potential in and around the City of Frederick, the Ballenger Creek Area, and the South Frederick Area. Emphasis for development is on the strengthening of places that support walkable, urban living and working while retaining a historic sense of place.

**The City of Frederick:**
Growth locations within and around the City of Frederick include new development in East Frederick (A) and North Frederick (B), redevelopment along the “Golden Mile” (C), infill development throughout the City (D), and limited greenfield development around the City (E).

**Ballenger Creek:**
Development in the Ballenger Creek area will emphasize “Suburban Retrofit.” (F)(see below)

**Southeast Frederick:**
Development in the Southeast Frederick area, specifically along the 85/355 Corridor will emphasize mixed use, transit oriented development. (G)
Multi-modal Places and Corridors:
Maximize the growth potential along specific corridors in the County by leveraging the existing assets of rail and highway infrastructure that connect the County to the greater Baltimore-Washington region. Emphasis is on building transit connectivity centered on the City of Frederick and creating multi-modal corridors that catalyze redevelopment of aging retail and office, while also creating new transit accessible mixed use locations in the County.

CSX/MARC Rail Line:
Focus growth within a development corridor along the existing CSX MARC rail line in the form of transit oriented, mixed use development. Focus development at decommissioned Eastalco site.

Interstate 270:
Focus growth within a development corridor along a future Bus Rapid Transit line along Interstate 270 in the form of transit oriented, mixed use development. Focus development at traffic interchanges.
Spoke Hub Transit Model:
Minimize growth in surrounding communities and reinforce growth in the central portion of the County by building on the hub and spoke distribution system for transit services.
SECONDARY GROWTH:

Suburban Retrofit:
Support and improve existing, older suburbs to make suburban communities stronger by reinvesting in them with infill development that creates more opportunities to walk, shop, work and recreate closer to home.

GREEN INFRASTRUCTURE:
Direct growth away from green infrastructure. Where green infrastructure exists within areas targeted for growth, ensure the protection and integration of green infrastructure with development.

AGRICULTURAL INFRASTRUCTURE:
Direct growth away from agricultural resources. Allow development in support of rural and agricultural activity. Focus agricultural support uses in rural hamlets.
WE ARE DRIVING LESS

VEHICLE MILES TRAVELED PER CAPITA (VMT) within Frederick County has declined by more than 7% since 2005.

This is in contrast to the 25 years before 2005 where VMT per Capita in the county rose steadily by 49%.

THIS LOCAL TREND REFLECTS NATIONAL TRENDS and is related to the values of our younger generation.

Nationally, younger people use other forms of transport and drive less.

Many are avoiding or postponing car ownership and licensure.

In general, more and more people are choosing to live in places that offer transportation alternatives.

Among younger people, these national trends are likely to persist for many reasons, even as our economy continues to rebound.

Some younger people are choosing to reduce driving based on values, such as the imperative to minimize their impact on the environment.

Many places have been enacting more strict requirements in order to acquire a driver's license.

Collaborative consumption for transportation is providing previously unavailable options, such as ride sharing and on-demand transport.

More and more, car ownership is seen as unaffordable.
AND THE WAY WE GET AROUND IS BEGINNING TO CHANGE

As these trends shape the demand characteristics of our national and local transportation future, NEW FORMS OF INFORMATION AND TRANSPORTATION TECHNOLOGY are shaping the supply side.

The impending rise of autonomous vehicles is now being seriously considered, and the impact to Frederick County, and to our region as a whole will likely be great.

<table>
<thead>
<tr>
<th>Travel Mode Of Resident Commuters</th>
<th>Frederick County Resident Commuters</th>
<th>Resident Commuters To Jobs Within The County</th>
<th>Resident Commuters To Jobs Outside The County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bike, Walk, Taxi, Work At Home, Motorcycle</td>
<td>9%</td>
<td>15%</td>
<td>1%</td>
</tr>
<tr>
<td>Rail Or Bus</td>
<td>3%</td>
<td>1%</td>
<td>5%</td>
</tr>
<tr>
<td>Car: Carpoled</td>
<td>12%</td>
<td>10%</td>
<td>14%</td>
</tr>
<tr>
<td>Car: Drove Alone</td>
<td>76%</td>
<td>74%</td>
<td>80%</td>
</tr>
</tbody>
</table>

Congestion problems may be mitigated due to potential increased safety of traveling at close distances.

Self-driving cars could drastically reduce the number of accidents helping to save thousands of lives.

Consumer value can be gained from the ability to work while commuting or from the convenience of performing other tasks instead of driving.

The need for parking may decrease as may the need to own a vehicle.

The transportation needs those who can’t drive could be better served.

BUT THE CAR REMAINS DOMINANT

For those going to jobs within the county, many people use other modes, like walking or biking, while public transit use is minimal.

For those going to jobs outside the county, public transit plays a bigger role.
OUR CONNECTIVITY AND ACCESS TO THE REGION IS STRONG

Between 2000 and 2013, 59% of working residents commuted to locations within the county.

During the same time period, 41% traveled to work places outside of the county.

BUT OUR LOCAL ROADS ARE MUCH LESS CONNECTED

In last few decades, we have been designing our roads as BRANCHING NETWORKS THAT FUNNEL TRAFFIC onto a few major arteries with emphasis on maximizing the flow of vehicles on those arteries.

We planned roads in the past as INTERCONNECTED NETWORKS of a variety of road types that SPREAD THE LOAD making destinations more accessible to a variety of travel modes.
AND WE ARE NOT IMMUNE TO AREAS OF CONGESTION

In 2013, MD SHA conducted congestion assessments on major roadways to measure performance. Heavy congestion, shown in red equates to a Level of Service (LOS) of E or F and a Travel Time Index (TTI) of 1.3-2. Moderate congestion shown in blue equates to an LOS of D and a TTI of 1.15-1.3.

---

IN OUR ROADS OR IN OUR SCHOOLS

Compared to our total county population, the share of our school age population will keep pace with population growth.

Between 2010 and 2025, the projected increase in county school enrollment is 2,184 students.

Between 2015 and 2025 the most significant student enrollment increase will be at the high school level.
BUT OUR SCHOOL CAPACITY HAS BEEN GETTING BETTER

<table>
<thead>
<tr>
<th>GRADE LEVEL</th>
<th>1995 SYSTEM-WIDE CAPACITY</th>
<th>2015 SYSTEM-WIDE CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary School</td>
<td>102%</td>
<td>96%</td>
</tr>
<tr>
<td>Middle School</td>
<td>97%</td>
<td>79%</td>
</tr>
<tr>
<td>High School</td>
<td>92%</td>
<td>85%</td>
</tr>
</tbody>
</table>

The percentage of school age population versus total county population is projected to decline and then increase.

The percentage of enrollment versus county population is projected to decline.

<table>
<thead>
<tr>
<th>Enrollment</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>40,236</td>
<td>2025</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Population</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>234,196</td>
<td>2025</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percent Enrolled</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>17%</td>
<td>2025</td>
</tr>
</tbody>
</table>
Our schools are keeping up to date with **CHANGING TECHNOLOGIES** such as the provision of wireless internet connectivity for all schools and the deployment of digital devices to students.

It has been shown that building design affects **ATTENDANCE, CONCENTRATION, & PERFORMANCE**. This is supported by good acoustics, quality indoor air, and plenty of daylight.

Recent school designs support the planning strategy of providing common areas and breakout spaces for group learning.

Our schools are designed and built according to **LEED standards** and are environmentally responsible and efficient throughout their life cycle: including siting, design, construction, operation, maintenance, renovation, & demolition.

Funding for educational technology has seen a decrease since 2009.

FCPS faces challenges in maintaining the State of Maryland recommended five-year cycle for the replacement of outdated devices.

As of 2014, 70% of computers in FCPS schools are older than five years.

Also, many don’t have the capacity to connect to wireless networks.
OUR FOCUS IS ON LARGE PARKS FOR MORE ACTIVE RECREATION

The county’s focus for new park development has been on LARGE REGIONAL PARKS serving as centers for recreation and organized athletics. This has taken precedence over parks that are smaller in size and would serve local neighborhoods.

However, in the county there are not many requirements for parks in new development, even as the health benefits of parks and greening are more greatly understood.

OUR LIBRARIES ARE THRIVING

<table>
<thead>
<tr>
<th>Total Circulated Items</th>
<th>Library Cards Issued</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995: 924,815</td>
<td>1997: 81,000</td>
</tr>
<tr>
<td>2000: 1,150,378</td>
<td>2000: 61,985</td>
</tr>
<tr>
<td>2006: 1,610,223</td>
<td>2007: 120,000</td>
</tr>
<tr>
<td>2015: 2,829,482</td>
<td>2015: 140,809</td>
</tr>
</tbody>
</table>

Since 2000, total circulation has increased by 146%.

Since 2000, the total number of library cards issued increased by 127%.

Since 1998, the total number of buildings that Frederick County Public Libraries (FCPL) has built or renovated is 6, and over 103,000 sf of space has been added.
EVEN AS OUR LIBRARIES ADAPT TO A VARIETY OF CHANGES

Our modern libraries are so much more than buildings and books, and they remain highly valued facilities that are important to our communities and our quality of life.

Our libraries continue to have all of the resources and technology we expect: large community meeting rooms, STEM labs, computer stations, and wi-fi.

Our libraries now serve our community as:
- tech hubs,
- meeting places,
- locations for quiet study,
- places for retreat from hyper-abundance,
- and purveyors of lifelong learning through activities and events.

Library design now emphasizes access to the outdoors, flexibility, daylighting and interspersed reading spaces. Also, new one stop service desks are being added to support efficiency and customer service.

The internet and digital technology has driven the evolution of the library.

Nationally, in 2001 41% of adults had a dial-up internet connection at home, while 3% of adults had a broadband connection at home.

In 2013, dial-up connections went down to 3%, while broadband connections rose to 70%.

This, along with the growth of personal electronic devices & social networking, have given the library the dual role as a place where people go and as a resource that “goes” to people.
The Price to Income Ratio is a coarse measure of housing affordability relative to homeownership. It is the ratio of the median house price to the median income.

Price to income ratio in Frederick County is more favorable than in counties to the east.

In the year 2000, households earning lower than $25,000/yr faced a gap in the number of affordable homes that were available in the County.

The housing gap expanded by 2014 to include households earning $50,000/yr.

A decrease in naturally affordable rental housing in Frederick has contributed to the growth of the housing gap.

The total number of rental units has declined from 13,236 units in 2000 to 7,152 units in 2014. This is an overall decrease of 46%.

Rents have risen faster than income in Frederick County over the past 15 years.

Since 2000, median rent has increased by about 77% while median income has only risen by 40%.
There are a few significant trends moving in Frederick County’s favor as it seeks to close the housing gap.

- Projected population growth is concentrated among higher income households.

- There is a large residential development pipeline in Frederick County.

- There has been an expansion of production of publicly assisted affordable housing.

Four key areas of housing need have been identified. They are listed to the right:

1. **Workforce Rental Housing**
   Almost half of renters in Frederick County are housing cost burdened, a dramatic increase since 2000. More than 3 out of 4 renters earning between $50-20,000 in Frederick County are housing cost burdened.

2. **Rental Housing With Operational Support**
   Frederick County continues to have an insufficient supply of housing affordable to households earning less than $25,000.

3. **Housing For An Aging Population**
   The senior population is projected to substantially grow, expanding the need for senior housing.

4. **Affordable Home Ownership**
   It is increasingly difficult for moderate income households in Frederick to become home owners.
OUR COUNTY VALUES ITS HISTORY

3 jurisdictions maintain certified historic districts or registers: the City of Frederick, the Town of New Market, and Frederick County.

8 jurisdictions maintain National Register districts: Brunswick, Burkittsville, Emmitsburg, Frederick, two in Middletown, Mount Airy, and New Market.

12 sites are listed on the Frederick County Register of Historic Places, which began in 1998. This is an increase of 50% over the past 4 years. Nearly half of those listed sites are in active commercial use.

Frederick City’s Historic District was established in 1952 as one of the earliest historic districts in the U.S. and covers 40 city blocks in the county seat.

BUT WE ALSO HAVE GAPS IN THE DOCUMENTATION OF RESOURCES

There is a lack of data for most structures and sites that are not listed on the Maryland Inventory of Historic Places, the National Register, or the Frederick County Register.

Much existing information at the county level is not digital form and is not linked to GIS.

94 of Maryland’s 1,539 National Register sites are within Frederick County.

3,000 of Maryland’s 53,000+ Maryland Inventory of Historic Places sites are in Frederick County.

Three state scenic byways, and one national scenic byway, pass through the county including over 85 miles of historic corridors.

Private and not for profit organizations are also active in historic preservation efforts: Frederick County Landmarks Foundation | Frederick County Historical Society | Journey Through Hallowed Ground Partnership | Heart Of The Civil War Heritage Area | dozens of local historical societies, museums, and organizations.

Historic preservation staff and funding has declined over the past decade.

Heritage tourism funding has continued to fund projects in the county but has fallen short of the overall demand for project resources.
PEOPLE FROM THE SURROUNDING REGION WANT TO BE IN FREDERICK

In the years 2014 through 2015, there were OVER 1,750,000 VISITORS TO FREDERICK COUNTY spending an average of over $1 million per day at local shops, hotels, and destinations. This is double the amount spent by tourists in 2000.

Of all visitors to Frederick County 75% were destined for Frederick City.

For tourism spending, Frederick County ranks 8th among all counties in Maryland.

OUR HISTORY ADDS VALUE

In 2015/2016, the average sales price of a home in one of Frederick County’s historic districts was $481,000.

Overall, sales of historic homes brought an average offer price of 97% of the original listing price.

During the 2007-09 recession historic properties lost 10% to 15% less of their value than did other properties.

The Weinberg Center for the Arts in downtown Frederick City has more than doubled its attendance between 2006 and 2013.

5 of Maryland’s 28 main street programs are located in Frederick County.

For properties in historic districts or with verified historic connections to people and events from the County’s past, buyers pay a premium.
Compared to our parents and grandparents, we are spending much more of our time sitting down, at work, home, and in our cars.

In the sixty-five years between 1950 and 2015, the number of sedentary jobs has risen by 83%.

In 1960, the % of the U.S. workforce that had physically active jobs was 50%

In 1970, 20% of workers had sedentary jobs while the percentage of workers that had physically active jobs was 30%

In 2000, 40% of workers had sedentary jobs while the percentage of workers that had physically active jobs was 20%

In the twenty years between 1995 and 2015, total screen time has increased dramatically. In 2010, the average daily amount of time spent sitting and watching television was four hours.

In 2003, 60% of working adults primarily used a computer on the job and 90% of children used computers in school.

Between 1989 and 2009, the number of households with computer and internet access rose from 15% to 69%.
WE’RE STARTING TO MOVE AND BE MORE PHYSICALLY ACTIVE

The percentage of residents in Frederick County who engage in regular exercise and physical activity increased from 75.8% in 2011 to 82.1% in 2014.

Access to exercise opportunities within Frederick has increased. In 2016, the percentage of the county population that lived near exercise opportunities was 94% whereas only 86% did in 2014.

BUT OVERWEIGHT AND OBESITY RATES ARE INCREASING

The percentage of Frederick adults who are overweight has increased from 33.5% to 39.3% between 2011 and 2014 and is now higher than the Maryland percentage.

Between 2011 and 2014, the percentage of Frederick adults who are obese has increased from 25.5% to 28.7% and the percentage who are not overweight has decreased from 41% to 32%.
WE HAVE BECOME A MUCH LESS WALKABLE AND BIKEABLE COUNTY

Most land development in Frederick county that was constructed after World War II prioritized the car over other types of transport.

Prior to World War II, it can be argued that most non-rural residential development in the County was walkable.

Today, the ratio of non-rural residential development built after 1945 to non-rural residential development built before 1945 in the county is roughly 6to1.

BUT WE HAVE GREENERY AND THRIVING LOCAL FARMING

43% of Frederick County is covered by existing tree canopy. However, forest cover is being lost at a rate of 420.3 acres/year.

As of the year 2012, Frederick County is covered by 181,512 acres of farmland, equating to 42.4% of county land.

In 2013 there were 11 farmers markets in the county and 86 out of 1,442 farms sold goods locally.
WE STRUGGLE WITH A NUMBER OF BARRIERS TO HEALTH CARE

In 2016, Frederick County residents were surveyed about barriers they experienced in obtaining health care.

PERCEIVED BARRIERS TO HEALTH CARE

<table>
<thead>
<tr>
<th>% of Respondents Who Agree/Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance Status</td>
</tr>
<tr>
<td>Cost of Obtaining Prescriptions</td>
</tr>
<tr>
<td>Awareness of Available Services</td>
</tr>
<tr>
<td>Employment Challenges</td>
</tr>
<tr>
<td>Transportation</td>
</tr>
<tr>
<td>Child Care</td>
</tr>
<tr>
<td>Mistrust of Programs or Services</td>
</tr>
<tr>
<td>Language Translation Concerns</td>
</tr>
<tr>
<td>Culturally Competent Programs</td>
</tr>
</tbody>
</table>

The survey showed that barriers to care differ by age, income, race, educational attainment, and insurance status.

The barrier of cost varied based on age, with cost being a bigger barrier for those under 64 than those over 64.

Interpreting services and transportation as a barrier to access to health care varied based on income level.

Awareness, mistrust of services, and communication barriers varied based on race.

Transportation, employment, insurance status, awareness, and mistrust of services also varied based on level of education.
THE OLDER SEGMENT OF OUR POPULATION IS GROWING

The proportion of the County’s population that is older is growing larger.

By 2020, the number of adults age 60+ in Frederick County will surpass the number of school age children.

Over the next 25 years in Frederick County, THE 85 AND OVER AGE GROUP WILL QUADRUPLE.

Between 2010 and 2040, the share of residents aged 70 years and older is projected to increase from 8% to 18%.

THE NEED FOR SERVICES IS OUTPACING AVAILABILITY.

Some areas of need include:
- transportation
- nutrition
- navigating health care systems
- in-home services
- increase in dementia
- health care costs
- affordable housing
- long wait lists for services
MORTALITY AND CHRONIC DISEASE PATTERNS ARE SHIFTING

The leading cause of death in Frederick County for the grouped years of 2012-2014 is heart disease.

The second leading cause of death in Frederick County for the years between 2012 and 2014 is cancer.

2012-2014 FREDERICK COUNTY MORTALITY RATES PER 100,000 POPULATION

<table>
<thead>
<tr>
<th>Cause</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Disease</td>
<td>166.5</td>
</tr>
<tr>
<td>Cancer</td>
<td>151.3</td>
</tr>
<tr>
<td>Stroke</td>
<td>36.1</td>
</tr>
<tr>
<td>Chronic Lower Respiratory Disease</td>
<td>35.8</td>
</tr>
<tr>
<td>Accidents</td>
<td>23.6</td>
</tr>
<tr>
<td>Influenza and Pneumonia</td>
<td>18.1</td>
</tr>
<tr>
<td>Alzheimer's Disease</td>
<td>13.8</td>
</tr>
<tr>
<td>Diabetes Mellitus</td>
<td>13.5</td>
</tr>
<tr>
<td>Septicemia</td>
<td>10.4</td>
</tr>
<tr>
<td>Suicide</td>
<td>10.2</td>
</tr>
</tbody>
</table>

Approximately one in four adults in Frederick County (25%) and Maryland (26%) were told by a doctor that they had arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia in 2014.

The percentage of adults in Frederick who have asthma has increased from 7.5% in 2011 to 9.8% in 2014, and is now higher than Maryland.

The percentage of adults in Frederick County with chronic obstructive pulmonary disorder has decreased from 2011 (7.1%) to 2014 (5.4%) and is now slightly lower than Maryland (5.7%).

The percentage of adults in Frederick County who have ever been told that they have diabetes has decreased slightly from 9.4% in 2011 to 8.2% in 2014 and is now less than Maryland (10.2%).

Frederick County does not meet the following health goals:

MD SHIP 2017 Goals
Reduce heart disease mortality to 166.3 deaths per 100,000 and reduce cancer mortality to 147.4 deaths per 100,000.

Healthy People 2020 Goals
Reduce cancer mortality to 161.4 deaths per 100,000 and reduce diabetes mortality to 66.6 deaths per 100,000.
MENTAL HEALTH SUPPORT IS A PRESSING CONCERN AND ISSUE

Behavioral health remains a significant and growing problem in the county.

The rate of visits to the emergency department at Frederick Memorial Hospital (FMH) for mental and behavioral health issues was 3725 per 100,000 population in 2010.

In the year 2011 this number increased to 4422 per 100,000. That is an increase of 84% per 100,000 people.

One in ten Frederick County adults reported having 8-29 days in the past 30 days when their mental health was not good. This increased from 7.9% in 2011.

The percent of adults suffering from an anxiety disorder has remained consistent from 2012 at 14% to 2014 at 14.1%. This is a higher percentage than Maryland where 13.3% were reported in 2014.

Depression diagnoses have risen from 2012 (13.5%) to 2014 (17.1%). This is a higher percentage than Maryland where 15.9% were reported in 2014.
AND SUBSTANCE ABUSE REMAINS A RELEVANT & GROWING PROBLEM

Substance abuse visits to Frederick Memorial Hospital (FMH) have increased 17.6% from 2014 to 2015.

1 in 5 substance abuse visits are opioid related and almost two-thirds are alcohol related.

<table>
<thead>
<tr>
<th>Substance Abuse Visits to FMH</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>age</td>
<td></td>
</tr>
<tr>
<td>18-39</td>
<td>41%</td>
</tr>
<tr>
<td>40-59</td>
<td>44%</td>
</tr>
<tr>
<td>60-79</td>
<td>10%</td>
</tr>
</tbody>
</table>

Prescription opioid-related deaths have continued to decrease from the peak of 21 deaths per 100,000 in 2011.

The overdose death rate for heroin in Frederick County has more than tripled from 3.5 deaths per 100,000 in 2007 to 10.7 deaths per 100,000 in 2014, with the most significant increases seen since 2012.

The overdose death rate for heroin in Frederick County is higher than in Maryland (9.7) in 2014.

Overdose death rate for alcohol has doubled from 2.2 deaths per 100,000 in 2011 to 4.9 deaths per 100,000 in 2014.

Chronic drinking decreased from 5.7% in 2001 to 4.2% in 2014.

Alcohol abuse visits to FMH have increased 13% from 2014 to 2015.

Opioid abuse visits to FMH have increased 20% from 2014 to 2015. Over half of patients seeking care at FMH for opioid abuse are between 18-39 years old.

87.6% of people seeking care at FMH for opioid abuse are white.

80% of people seeking substance abuse care at FMH are white.

Current smokers in Frederick County has decreased from 17.2% in 2011 to 11.1% in 2014. 81.3% of FMH patients reporting tobacco use are white.
**OUR REGIONAL ECONOMY AND WORKFORCE IS STRONG**

Frederick County is part of both the D.C. and Baltimore metropolitan region. The county is a member of the metropolitan Washington Council of Governments.

The Washington Region is the 6th largest metropolitan economy in the world and has the 6th strongest Gross Regional Product in the world.

The D.C. region was ranked 7th in the world in 2014 in business, financial, professional, and local services.

The Washington D.C. Region contains about 5,300,000 people and provides an employment base of about 3,200,000 jobs. This is a regional jobs per capita rate of .6

The D.C. region is among the top markets for millennials and has one of the highest rates of educational attainment in the U.S.

The percentage of the 2016 regional population with a bachelor’s degree or higher is approximately 50%. The national average is 30%.
**OUR LOCAL ECONOMY IS GROWING AND DIVERSE**

Between 2011 and 2015, the number of jobs per capita in Frederick County rose from .38 to .41. This is less than the regional rate of .6.

In 2015, Frederick County contained almost 100,000 Jobs.

Between 2011 and 2015, the total number of jobs in Frederick rose by 8.4%, and between 2014 and 2015 by 3.3%.

The total number of businesses rose from 6,071 to 6,369 from 2011 to 2015, a total increase of 5%.

The average office rental rate in 2014 was $21.39 sf. This is 5% lower than the 2011 rate, but 2% higher than in 2014.

Average flex rental rates in 2014 were $10.61 sf, 7% higher than in 2011.

Average retail rates in 2014 were $18.36 sf, 4% higher than in 2011.

In 2015, 81% of the employment base was private sector, which has increased from 79% in 2011.
Per the US Census of Agriculture, the County lost 20,575 acres of farmland between 2007 and 2012. Total acreage decreased from 202,087 acres to 181,512 acres, which is an average loss of 9 acres per day.

Over the past decade the highest expenditure for agricultural preservation was in 2010 for almost 11 million dollars.

The lowest expenditure was in 2013 for just under 3 million dollars.

County funding was the highest in 2008, at 12 million dollars.

Funding levels in the county are now between 6-7 million dollars.

Frederick County now has over 20,000 acres preserved through MALPF.

Acres lost declined in 2007 to less than 250 acres, but has increased to 500 acres in 2015.

As of 9/2016, there are over 55,000 acres of farmland land preserved in the county.

The Frederick County Mid-Maryland Rural Legacy Area, is now ranked 2nd in the State for total grant money awarded since the start of the Rural Legacy Program.

Frederick County is now ranked 5th in the State of Maryland for total preserved acreage and total amount of expenditures in the MALPF program.
SMALLER FARMS ARE ON THE RISE

There are currently over 1,300 farms in Frederick County. This is an increase from 1,273 in 2002, but a decrease from 1,442 in 2007.

Between the years of 2002 and 2012, the average farm size decreased from 154 acres to 139 acres. Smaller farms between 1 and 9 acres in size grew from 111 in 2002 to 171 in 2012.

AGRICULTURAL PRODUCTION IS ADAPTING AND EVOLVING

From 2007-2012, the average total sales per farm increased from $88,095 to $115,030 and the average total production expenses per farm increased from $81,194 to $102,013.

From 2007-2012 total cropland fell from 143,661 to 127,130 acres, and the number of crop farms fell by 207 farms.

Barley, grain corn, sorghum, and soybean production are increasing. Rye, wheat, winter wheat production, and hay are declining.

The number of dairy farms and the overall number of cows has decreased in the last ten years. Beef cattle farming has remained stable over the last decade.
Our Green Infrastructure Needs More Room to Grow

Compared to counties of comparable size in MD, including Anne Arundel, Baltimore, Hartford, Howard, Montgomery and Prince Georges counties, Frederick County has the LOWEST AMOUNT OF FOREST COVER.

Land in Frederick County is covered by 180,968 ACRES OF EXISTING TREE CANOPY. This represents 43% of all county land.

Forest cover is being lost at an estimated 420.3 acres per year.

There are 12,591 potential acres of forest reforestation area on residential land in Frederick County.

72% of the 35 foot stream buffer has existing tree canopy. 52% of the 300 foot stream buffer has existing tree canopy.

There is room to plant trees within both stream buffer areas: 27% possible tree canopy in the 35 foot buffer and 46% in the 300 foot buffer.

49% of the Monocacy River corridor is existing tree canopy. The remainder of the land within the corridor is 50% possible tree canopy with only 1% being not suitable land for establishing tree canopy.

The County has 128,773 acres of significant natural resources known as green infrastructure in unincorporated areas.

More than 50% of the County's green infrastructure does not have a natural resource plan designation. 14.6% of growth areas contain green infrastructure.
THE QUALITY OF OUR WATERWAYS HAS BEEN ON THE DECLINE

The quality of Frederick County waterbodies has been declining from fair to poor for biological health since 2008.

Brook trout populations are declining in Frederick County and may become **LOCALY EXTINCT BY THE YEAR 2100** due to climate change and urbanization.

Frederick County has already reduced enough pollution to the Chesapeake Bay to meet goals for nitrogen, phosphorus and sediment.

<table>
<thead>
<tr>
<th>2015 Pollutant</th>
<th>Nitrogen-million lbs/yr</th>
<th>Load:3.9 Goal:3.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorus-thousand lbs/yr</td>
<td>Load:204 goal:230</td>
<td></td>
</tr>
<tr>
<td>Sediment-thousand tons/yr</td>
<td>Load:82 goal:92</td>
<td></td>
</tr>
</tbody>
</table>

All new development in Frederick County is required by MD law to meet a standard of **WOODS IN GOOD CONDITION** to treat 1” of rainfall using stormwater best management practices.
AIR QUALITY AND CLIMATE REMAIN A CHALLENGE

Greenhouse gas emissions in Frederick County have reduced by 19% between 2005 and 2012. The State goal is to reduce greenhouse gas emissions by 25% from 2006 levels.

The Maryland Department of the Environment’s plan is for a 40% emission reduction by 2030.

The trending total number of code red and code orange days of unhealthy ozone for sensitive groups in Frederick County is zero.

The number of days of unhealthy air due to ground level ozone has been decreasing.

BUT OUR ENERGY USE IS STARTING TO GET CLEANER

In 2015, 1.57% of the county’s energy use was produced by solar.

The EPA green power goal for a jurisdiction our size is 3%. Maryland’s Renewable Portfolio standard goal for solar energy by 2025 is 2%.

In the year 2015, the county generated an estimated 44,928 megawatt hours of clean energy from solar.

The total number of jobs in the solar industry in Frederick County in 2015 is 141.
OUR WASTE DIVERSION EFFORTS ARE ON TRACK

WASTE DIVERSION AND RECYCLING TARGETS

<table>
<thead>
<tr>
<th>Category</th>
<th>Current Rate</th>
<th>Required Rate by 2025</th>
<th>Improvement Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Waste Diversion Rate</td>
<td>approximately 55%</td>
<td>70%</td>
<td>15%</td>
</tr>
<tr>
<td>Overall Recycling</td>
<td>approximately 50%</td>
<td>65%</td>
<td>15%</td>
</tr>
<tr>
<td>Food Waste Recycling</td>
<td>Low</td>
<td>60%</td>
<td>Significant</td>
</tr>
<tr>
<td>Yard Waste Recycling</td>
<td>Very High</td>
<td>80%</td>
<td>Minor/None</td>
</tr>
</tbody>
</table>

The recycling rate currently achieved by Frederick County is 50%.

The waste diversion rate for municipal solid waste in 2015 was 55%. Waste diversion includes source reduction activities.

Frederick exceeds the 35% target currently mandated under the Maryland Recycling Act.

Frederick is on track to meet a goal adopted by the Board of County Commissioners to have a waste diversion rate of 60% by 2025.

Maryland’s Zero Waste Plan provides goals for increasing overall recycling and waste diversion by 2040. To meet its waste diversion goal of 70% by 2025, the County would need an additional recovery of 40k to 45k tons of waste landfilled annually.

Significant improvement will be needed to achieve the 60% food waste recycling target for 2025, which represents recovery of 15,000 tons annually.

The cost to ship and landfill our waste is $69 per ton.