

STAKEHOLDERS MEETING AGENDA

Monday, April 2, 2018

6:00 PM Welcome / Administrative Items / Information Updates

- Introductory Comments from Committee Chair – Jeff Salmon
- Meeting Objectives – Alaina Ray
- Discussion of Timing of InDesign Publishing Format for Comprehensive Plan

6:15 – 7:45 PM Loudoun 2040 General Plan Chapter 3: Natural & Heritage Resources Review

- Staff Presentation
- Stakeholders Committee General Questions
- Round Robin Discussion

7:45 – 7:55 PM Break

7:55 – 8:40 PM Loudoun 2040 General Plan Chapter 4: Housing Review

- Staff Presentation
- Stakeholders Committee General Questions
- Round Robin Discussion

8:40 – 9:25 PM Loudoun 2040 General Plan Chapter 5: Economic Development Review

- Staff Presentation
- Stakeholders Committee General Questions
- Round Robin Discussion

9:25 – 9:30 PM Next Steps

Important Documents

- A. Agenda 4-2-18
- B. Staff Cover Memo 4-2-18
- C. Loudoun 2040 General Plan Chapter 3: Natural & Heritage Resources
- D. Loudoun 2040 General Plan Chapter 4: Housing
- E. Loudoun 2040 General Plan Chapter 5: Economic Development
- F. Envision Loudoun Round Three Public Open Houses Map

County of Loudoun
Department of Planning & Zoning
MEMORANDUM

DATE: March 26, 2018

TO: Stakeholders Committee

FROM: Ricky Barker, Director of Planning & Zoning

SUBJECT: April 2, 2018 Stakeholders Committee Meeting

General Plan Chapters

At the April 2 Stakeholders Committee meeting, staff will provide presentations regarding the following documents, which are included in the April 2 Agenda Packet:

- Loudoun 2040 General Plan Chapter 3: Natural & Heritage Resources (Attachment C);
- Loudoun 2040 General Plan Chapter 4: Housing (Attachment D); and
- Loudoun 2040 General Plan Chapter 5: Economic Development (Attachment E).

These draft General Plan Chapters provided in the April 2 Agenda Packet do not yet include most maps or graphics; as such, some of the narrative text in the chapters may be converted to graphic presentation, where appropriate. As a reminder, additional information on housing can also be found in the [Primer on Housing in Loudoun County](#) prepared for the Housing Summit on October 16, 2017.

As with the previous chapters that the Stakeholders Committee has reviewed, these draft chapters are not presented in the publishing program format (InDesign) that will be used for the Plan. Due to the labor-intensive effort required to input the chapters into InDesign, and difficulty when attempting significant revisions within the program, the chapters will not be transferred into InDesign until they are further refined through the Stakeholders and Public Input process. Our goal is to provide the Stakeholders Committee with the opportunity to review and comment on the InDesign format for the Plan prior to the Plan being forwarded to the Board of Supervisors and Planning Commission.

As mentioned on previous occasions, the development of the draft chapters is an iterative process and staff anticipates the chapters to evolve and be revised throughout the Plan review and adoption process.

Round Three Public Input

The dates and locations for the Round Three Public Open Houses have been finalized. There will be six Open Houses, including one during the day for participants who may not be able to attend an evening meeting. A map (Attachment F) providing information for each meeting has been included in the April 2 Agenda Packet. The Loudoun 2040 Comprehensive Plan will be made available online for viewing and comment approximately one week prior to the first Open House. The format for the Open Houses is currently being developed and will be reviewed at the April 30 Stakeholders Committee Meeting.

Chapter 3 –

Natural and Heritage Resources

Vision

Protect and enhance the County’s natural and heritage resources for the enjoyment of current and future generations.

What is New

Policy statements in the 2040 General Plan build upon commitments to protect and preserve the County’s abundant natural and heritage resources for current and future generations. This Plan identifies measures to improve and enhance water quality throughout the County as a top priority. This Plan also seeks to further the County’s efforts in the protection of ridgelines and existing tree cover. Recognizing the importance of the County’s historic, archaeologic, and scenic resources, this Plan references the Heritage Preservation Plan as well as identifies the importance of adaptive reuse, historic cemeteries, locally important resources, and African American and Native American cultural resources.

Introduction

Abundant natural and heritage resources define Loudoun County’s unique sense of place. Natural and heritage resources include the Potomac River edge, major rivers, stream corridors, floodplains, wetlands, steep slopes, ridges and mountainsides, forested and vegetative landscapes, limestone geology areas, farmlands, soil resources, important plant and habitats, historic and archaeological sites, scenic areas and corridors, designated heritage areas, battlefields, historic cemeteries, and cultural landscapes. Also of importance to the health, safety, and welfare of Loudoun residents are those elements that are complementary to the natural and heritage resources, such as air quality and the beauty of the night sky. Natural and heritage resources are tangible assets that make the County an appealing place to live, work, play, and learn while contributing directly and indirectly to Loudoun’s economy.

This chapter provides the guidance for balancing the protection of natural and heritage resources in conjunction with the development and redevelopment of the County. Many of the County's natural and heritage resources are located primarily within the Rural Policy Area; however, these resources should be preserved and protected when located elsewhere in the County as well. The County has a history of protecting and preserving these important resources through policies, regulatory measures, land acquisition, and educational programs. The protection of these resources will not only provide environmental and heritage benefits, but will enable residents to experience the natural environment within the context of the built environment. The protection of these resources is interrelated, creating a network of environmental and heritage resources. For instance, the protection and preservation of existing forest cover adjacent to a stream will help to filter pollutants from entering the stream and provide for streambank stabilization, while also improving air quality, energy conservation, creating wildlife corridors, and protecting archaeological resources.

Updating and adopting zoning regulations and development standards to implement the objectives of this chapter will be important for protecting the health, safety, and welfare of Loudoun residents as well as preserving natural and heritage resources for the enjoyment of future generations.

Principles

Protect and enhance natural and heritage resources by considering the following:

- Conservation – Careful management of natural features within the built environment.
- Preservation – Retaining and protecting natural and heritage resources.
- Restoration/Recapture – Enhancing natural and heritage resources wherever possible.
- Education – Communicating the importance of natural and heritage resources.

Throughout the Envision Loudoun comprehensive planning process, residents shared their concerns and suggestions. The public input sessions and online engagement activities indicate very strong support for preserving the County's natural and cultural resources as well as a desire for more interconnected natural open space areas. Overall comments on the environment were the third highest amount of comments received. Comments stressed that natural resources and green spaces be a priority in future developments. Scenic beauty, public enjoyment, concerns about water and air quality, the need for more parks and public spaces, and light issues were among some of the most discussed topics.

Topics

Water Resources

River and Stream Corridor Resources (RSCRs) comprise the County's largest natural ecosystem supporting air quality, water quality, and biological diversity. In the event that the floodplain and adjacent steep slopes are less than 100 feet beyond either stream bank, a 100-foot minimum stream buffer will protect the river and stream corridor. The buffers help to maintain stream bank stabilization, temperature moderation, flood control, and aquatic habitat as well as filter nutrients and sediments from upland disturbances. Because rivers and streams and their associated floodplains are dynamic, the buffers help to ensure that development adjacent to the floodplain today will not be in the floodplain in the future. The 50-foot management buffer can be reduced if it can be shown that a reduction does not adversely impact the floodplain, adjacent steep slopes, wetlands, and riparian forests of the river and stream corridor.

River and Stream Corridor Resources (RSCRs) consist of rivers and streams that drain 100 acres or more, associated 100-year floodplains, adjacent steep slopes, and a 50-foot management buffer surrounding the floodplains and adjacent steep slopes. The 50-foot management buffer protects the other RSCR elements from upland disturbances and adjacent development.

The County has two Scenic Rivers—Goose Creek and Catoctin Creek (from Waterford to the Potomac River). These scenic rivers are an important part of the County's river and stream corridor system. The County also seeks to preserve the Potomac River shoreline.

Major water resource issues for the County include ensuring an adequate supply of drinking water, protecting groundwater and surface water from contamination and pollution, and preventing the degradation of water quality in the watersheds.

Impaired Streams

Many stream segments across the County have been designated as "impaired" by the Virginia Department of Environmental Quality (DEQ). In 2009, the County conducted an assessment of streams within all the County's watersheds. The County assessment indicated impairments in over 75 percent of County streams. One tool used by the County to help restore these degraded waters is the Total Maximum Daily Load (TMDL) program, which is defined by Section 303(d) of the Clean Water Act (CWA). The TMDL represents the amount of a pollutant that a waterway can assimilate and still maintain its health. The TMDL identifies the pollutant responsible and the suspected cause and source of the pollutant. Based on the TMDL, the County may be required to develop and implement a TMDL Action Plan to reduce pollutants. If required, actions may include stormwater pollutant reduction and mitigation projects, such as stormwater infrastructure retrofits, reforestation, stream restoration, and/or riparian plantings. Additionally, Loudoun County is located within the Chesapeake Bay Watershed and is currently subject to the Chesapeake Bay

Total Maximum Daily Load (TMDL) and the Chesapeake Bay Watershed Implementation Plan (WIP), which requires state jurisdictions within the watershed, including Virginia, to meet sediment, phosphorus, and nitrogen reduction goals by 2025.

Due to the length of the TMDL process and the number of impairments in the County, it may take decades before certain water quality restoration efforts achieve positive results. Additionally, given the anticipated rate of development within the County, many areas will likely have entitlements prior to the development of the local TMDL Action Plans. Taking a proactive approach towards water quality efforts could help to avoid costly and time-consuming processes to restore water quality to the required standards after development is completed.

Watershed Management Planning

The 2008 Comprehensive Watershed Management Plan (CWMP), provided a preliminary classification of the County's 161 subwatersheds into categories of "improve," "mitigate and maintain," and "preserve." The CWMP recommends approximately 90 specific watershed management activities, some of which the County has already implemented.

The CWMP recommended a watershed management plan pilot project as the next step to achieving Loudoun County's goal of effective management of the County's water resources. The watershed management planning process is intended to address the many mandates that the County must meet in each individual watershed. These include the requirements of the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit, watershed-specific TMDLs, and the Bay TMDL. The County developed the Upper Broad Run Watershed Management Pilot Project (UBRWMP) in 2013-2014. The UBRWMP assessed the current conditions within the watershed, developed watershed management practices that could be implemented to make progress toward TMDL or other pollutant removal goals for the Upper Broad Run watershed, and projected future conditions with and without the implementation of suggested watershed management measures. Lessons learned from the pilot project can be applied to the remaining County watersheds.

Since 2001, several efforts have been completed regarding water resources within the County, such as water quality monitoring, the 2009 County Stream Assessment, Strategic Watershed Management Solutions, the Chesapeake Bay Watershed Implementation Plan, the Comprehensive Watershed Management Plan, the Upper Broad Run Watershed Management Pilot Project, and the Countywide Floodplain Remapping of February 17, 2017.

Surface and Groundwater Resources

Groundwater supply is important as it is the primary drinking water source for residents of the western Towns and rural areas. Loudoun Water provides drinking water from Goose Creek Reservoir and Fairfax County. The western Towns provide water from wells, and Purcellville augments this with surface water from the Hirst reservoir. As of 2018, there are over 15,000 private groundwater wells, mostly in western Loudoun. In developed areas an increase in impervious land

cover contributes to diminishing groundwater capacity and stream degradation, as rainwater once filtered through the soil to replenish groundwater is now kept above ground artificially and carried via culverts and stormwater pipes directly to local streams.

Geologic and Soil Resources

Physiographic provinces are determined based on geology and landforms.

The eastern half of Loudoun County is located in the Piedmont physiographic province, and the western half is in the Blue Ridge physiographic province. The Bull Run fault, coincident with the eastern edge of the Catoctin Mountain, forms the boundary line between the two provinces. Soils

and geologic information are important tools used in the development of land, predicting potential impacts on erosion, water quality and quantity, and failing slopes, as well as insight into mitigating post-development problems.

Limestone

An area of approximately 18,000 acres (approximately 5.5% of the County) that lies north of Leesburg and east of Catoctin Mountain is characterized as karst terrain. Karst terrain refers to areas where the underlying limestone and other carbonate rocks have been dissolved over time by naturally-occurring mildly acidic water, creating a landscape characterized by underground cavities, sinkholes, and springs. These areas are susceptible to increased cavity collapse, ground slippage, groundwater pollution, and threats to the stability of foundations and structures. On February 17, 2010, the Board adopted amendments to the Zoning Ordinance that established the Limestone Overlay District, which regulates development in limestone geology areas.

Prime Agricultural Soils

Prime agricultural soils are soils that are best suited for conventional agricultural use. These soils account for approximately 19 percent of Loudoun County's soils and are usually found in areas that are nearly level to gently sloping, well drained, and with access to water sources. Loudoun's remaining best agricultural soils are generally located in the Rural Policy Area. Because the County has emphasized the rural economy as an important part of its overall economic health, prime farmland and agricultural soils are especially valuable. Once this land-based resource is lost, it cannot be reclaimed. Prime agricultural soils are threatened by residential development, as they are well suited for development because they are well-drained, generally found on mildly sloping terrain, and have good drainfield potential. Since the establishment of the Loudoun County Agricultural and Forestal District Program in 1979, over 43,000 acres are enrolled within 23 Agricultural and Forestal Districts (AFDs)¹ throughout the County.

¹ As of September 25, 2017

Mountainside and Steep Slopes

Steep slopes and moderately steep slopes occupy an area of approximately 53,000 acres (approximately 16% of the County). Moderately steep slopes are areas with a 15 percent to 25 percent grade (identified by Slope Class D on Loudoun County soil maps). Steep slopes refer to more environmentally critical slopes of greater than 25 percent (identified by Slope Class E on Loudoun County soil maps). Improper use and disturbance can trigger increased erosion, building failure, road failure, downstream flooding, and other hazards. In 1993, the County decided that the protection of steep slope areas beyond just the mountainous portions of the County are important and developed Steep Slope standards. Since the adoption of the Steep Slope standards, several revisions have occurred, resulting in greater flexibility in the standards.

Mountains create an environment that contributes to the scenic character of rural Loudoun County. Mountainsides contain headwaters to many of the County's streams and are identified as a critical groundwater recharge area for Western Loudoun County. The County's hills and mountains contribute to Loudoun's beauty and are valued by residents, visitors, and rural businesses. They are also highly sensitive to land disturbance and development. In addition to the destruction of prime viewsheds, uncontrolled land disturbance within these areas can cause major soil slippage, debris flows, or landslides. Disturbances that can initiate these land surface failures include removal of trees and vegetation; cutting, filling, or blasting of the soil and bedrock; and altering the soil moisture content by excessive groundwater withdrawal or changing surface water runoff. The Zoning Ordinance regulates these areas through the Mountainside Development Overlay District (MDOD). The MDOD contains land use restrictions and performance standards to minimize the destruction of individual resources and the disturbance of the ecological balance of these resources. The boundaries of the MDOD are based on a range of both technical and aesthetic factors. Mountainside areas are divided into three areas depending on the elevation and the types of resources present as determined by weighted analytical criteria (Somewhat Sensitive, Sensitive, and Highly Sensitive). Policies also encourage mountainside areas to be placed under permanent open space easement. Updates to the MDOD are included as an action step to bring the Zoning Ordinance and the Plan guidance into alignment.

Forest, Trees, and Vegetation

Loudoun County has some of the state's best hardwood stands for lumber and veneer production. Working forests in rural areas contain valuable stands of hardwood timber, while trees and forest resources in the more urban portions of the County help to make them attractive places in which to live, work, and visit. The County's forests and trees also improve air and water quality, offer important habitat for birds, small mammals and other wildlife, and provide buffers between communities. Forests and trees conserve energy by providing shade and evaporative cooling through transpiration. They also reduce wind speed and redirect airflow, reduce stormwater runoff and soil erosion, and can increase real property values. Riparian forests along streams provide the greatest single protection of water quality by filtering pollutants from stormwater runoff, decreasing stream bank erosion, and maintaining the physical, chemical, and biological condition of the stream environment.

The County supports the incorporation of existing tree cover into required buffers as well as the control and removal of invasive species. The utilization of existing vegetation to meet requirements for the screening of uses and within required landscape buffers is preferred over the removal and planting of new vegetation. Action steps call for the submittal of a Tree Cover Inventory as part of development applications to evaluate existing tree cover and identify areas worthy of preservation. Forest resources are also protected through Agricultural and Forestal Districts, easements, and other voluntary means, as well as through the implementation of the MDOD, LOD, and Steep Slope Standards.

Historic and Archaeological Resources

Identifying historic, archaeological, and scenic resources and preserving these resources will enrich and protect the County's heritage. Most of these elements will remain in private ownership and can be regulated through protective buffers, donation of open space easements, and performance standards. A number of implementation steps can also be used, including state and federal programs, County historic districts and zoning regulations, mapping and surveying, and site design.

Since 1972, Loudoun County has protected its unique historic assets through the designation of local historic districts. There are six County-administered Historic and Cultural Conservation Districts: Aldie, Bluemont, Goose Creek, Oatlands, Taylorstown, and Waterford and two County-administered Historic Site Districts: Welbourne and the Broad Run Toll House properties. The County has also designated a Historic Roadways District. The Beaverdam Historic Roadways District comprises a network of 32 rural roads. In addition, the incorporated Towns of Leesburg, Middleburg, and Purcellville administer local historic districts through their zoning ordinances. There are also five National Historic Landmarks in the County, including Balls Bluff Battlefield, Dodona Manor, Oatlands Plantation, Oak Hill, and Waterford. Nearly 7,000 individual historic structures and archaeological sites have been identified through surveys in the County to date. The County has 88 sites listed in the National Register of Historic Places. Not all of the surveyed resources have been protected or preserved. Many have likely been destroyed during the land development process. An analysis of the number of structures and sites lost during the land development process has not been conducted.

Most of the County-initiated comprehensive survey work was completed in the early 2000's, such as the Post-Civil War structure survey (2003) and an African American Sites survey (2004). The County also conducted surveys in 2016 for the Ball's Bluff Battlefield Expansion Project and a Rural Schools Survey. The County and State database of surveyed resources is largely augmented through the Phase 1 archaeological and historic resources survey required with legislative and preliminary subdivision applications, as well as private property owners requesting listing in the National Register of Historic Places.

The Board of Supervisors adopted the Heritage Preservation Plan (HPP) on December 15, 2003, and a subsequent amendment to the HPP on February 9, 2009. The creation of a Heritage

Commission (HC) is the principal mechanism for implementing many of the recommendations in the HPP. The HC was created on February 14, 2011, providing expertise and a range of public and private sector experience to heritage issues. Since the adoption of the HPP in 2003, the County has recognized the need to focus attention on heritage resources associated with historically marginalized communities in the County. Because African American communities and Native American communities are not well represented in the historic, written record, the County recognizes the importance of archaeological resources, oral histories, historic settlements, cemeteries, burial grounds, and places of worship to understand, preserve, and interpret the lives and contributions of these Loudoun residents. Development applications will be evaluated using both the HPP and this Plan.

Cultural Landscapes

Cultural landscapes include heritage areas and corridors, scenic byways and waterways, battlefields, and historic cemeteries. There are several roadways within the County that are designated as Virginia Byways. Goose Creek and a portion of Catocin Creek are designated as State Scenic Rivers. In 2002 the County established the Beaverdam Creek Historic Roadways District to protect a cultural landscape that has changed little since Loudoun County's formation in 1757. Two nationally recognized heritage areas are within the boundaries of Loudoun County—the *Journey Through Hallowed Ground* and the *Mosby Heritage Area*. The *Journey Through Hallowed Ground* follows Route 15/20 from Gettysburg in Pennsylvania (a designated National Byway), through Loudoun County, to Monticello in Charlottesville, Virginia. In February, 2008, the Board of Supervisors passed a resolution in support of the Heritage Area, and the County is a partner with the *Journey Through Hallowed Ground* project. The *Mosby Heritage Area*, formed in 1995, represents the cultural landscape and landmarks of three centuries of our nation's history. The *Mosby Heritage Area* encompasses parts of four counties including all of western Loudoun and all of the towns in the County.

Plant and Wildlife Habitats

Plants and animals play an important role in nature's lifecycle and its ecosystems. For wildlife habitats, large contiguous parcels of natural open space are preferable to more numerous, but disconnected and smaller areas. The creation of a larger network helps ensure the viability of the habitat.

While many high-quality plant and animal habitats have already been lost or altered due to land development, the County still has a number of unique and natural habitat areas. The largest contiguous areas of forest and naturally vegetated land are on mountainsides, steep slopes, and along stream channels. These areas play a key role in preserving the abundance and diversity of the County's remaining plant and wildlife resources. The integrated approach to preserving natural and heritage resources is intended to help prevent habitat fragmentation, while enhancing ecological connections with larger areas. The County strives to protect, preserve, and create large-scale plant and wildlife habitats that overlap with other important resources and resource systems. The County will also protect habitat for rare, threatened, and endangered plant and animal species

in accordance with the Federal Endangered Species Act. Action steps call for legislative development applications that have the likelihood of one or more natural heritage resource², to conduct a species assessment and develop a plan for impact avoidance in cases where the presence of the species is identified.

Complementary Elements

Complementary elements consist of elements that are not directly a part of the land-based environmental and heritage resources but complement them. They include air quality, and lighting and the night sky.

Air Quality

Loudoun's air quality is threatened by air pollution from automobile and aircraft emissions, removal of forest cover, heating furnaces, and power plants. In order to meet the federal goals of the Clean Air Act, the County offers an integrated land use approach that protects air quality by planning development in locations that are close to major transportation facilities and transit nodes, limiting densities in the Rural and Transition Policy Areas, and promoting and implementing alternative modes of transportation. Loudoun is included in the US Environmental Protection Agency's (EPA's) Washington DC nonattainment area for meeting national standards for air contaminants. The County has an active role on the Metropolitan Washington Air Quality Committee (MWAQC) and the National Capital Region Transportation Planning Board (TPB).

Lighting and the Night Sky

The beauty of the County's night sky is threatened by excessive and improper lighting. Artificial lighting is intended to be minimized and light pollution reduced while maintaining the primary purpose of light for public safety and visibility. Action steps call for updating lighting standards that promote quality and energy-efficient lighting and preserve the natural beauty of the night skies.

Influences and Opportunities

As the County continues to experience growth, the opportunities and challenges to preserve and conserve natural and heritage resources will increase. A proactive approach to water quality could help to avoid costly and time-consuming processes to restore water quality as part of TMDL Action Plans. Through watershed management plans, the County has the opportunity to identify those areas that will help to improve water quality in areas where it is most needed. The County also has the opportunity to document efforts to promote sustainability, environmental stewardship, and protect the environment. The County should continue to support and build upon work that has

² Natural heritage resources include rare, threatened, and endangered plant and animal species; exemplary natural communities, habitats and ecosystems; and other natural features of the County.

already begun and consider the development of a sustainability plan or an annual report highlighting work that is being done. The Board of Supervisors can use this report to identify future goals. Essential to the preservation of heritage resources and cultural landscapes is proactive survey and evaluation of these resources as provided in the HPP.

Policies, Strategies, and Actions

Natural and Heritage Resources

Policy I: Provide protection for natural and heritage resources.

Strategy

- 1.1. Support mechanisms to further the goals of conservation, preservation, restoration/recapture, and education to protect the health, safety, and welfare of Loudoun residents.

Actions

- A. Maintain a map of natural and heritage resources as part of an integrated system and contiguous network of natural and passive open spaces, and active recreational sites.
- B. Identify those properties that are not conducive to development due to sensitive environmental, cultural, and historical characteristics, and promote their purchase through various programs (such as a PDR/TDR program, land trusts, etc.).
- C. Adopt zoning regulations and development standards that implement a Conservation Design or similar process applicable to land development.
- D. Update the *Facilities Standards Manual*, the *Land Subdivision and Development Ordinance*, and other development standards to implement the natural and heritage policies.
- E. Establish a PDR/TDR program that protects agricultural, natural, historic, and scenic resources.
- F. Use the Conservation Design process, Use Value Assessment Program, Agricultural and Forestal Districts, the PDR/TDR program, public and private partnerships, and other regulatory and incentive-based efforts for the preservation, conservation, restoration, and management of the County's natural and heritage resources. Explore and implement additional incentive-based approaches.
- G. Retain conservation easements as a tool to protect open space areas in subdivisions and to ensure long-term maintenance and protection of the area. Such easements will be recorded as part of the subdivision process and include public access, where appropriate.
- H. Direct public investment and resources toward completing a natural and heritage

Purchase of Development Rights (PDR), Transfer of Development Rights (TDR), and Conservation Easements are tools that are available to the County to protect and preserve open space, farms, and natural and heritage resources in perpetuity, allowing landowners to retain ownership of their property, while maximizing the economic value of the land.

resource network and recapturing natural and heritage resources in developed areas.

- I. Ensure that development proposals that impact one or more natural and heritage resources offset impacts by enhancing and/or recapturing natural and heritage resources elsewhere onsite.
- J. Ensure that development proposals create links to adjacent natural and heritage resources to create an integrated network.

Strategy

- 1.2. Promote private, state, and federal conservation programs and their allocated resources to advance conservation programs within the County through public and private means such as grants, voluntary easements, dedications, etc.

Action

- A. Study and if feasible aid in the establishment of a conservation foundation whose main purposes are to educate landowners about the income and estate tax benefits of conservation easement donation.

Strategy

- 1.3. Act as a leader and educator in environmental design to achieve and sustain a high-quality built environment.

Action

- A. Provide incentives for innovation and good design and collaborative public/private/community partnerships for program implementation including provisions for awards of certificates of excellence in environmental design for the public and private sectors.

River and Stream Corridor Resources

Policy 2: The County will protect natural ecosystems, restore water quality, serve Loudoun's population, and support the built environment through healthy surface and groundwater resources.

Strategy

- 2.1. Establish and maintain a healthy river and stream corridor ecosystem that meets desired water quality standards, protecting from the damages of soil erosion and flooding while promoting biological diversity.

Actions

- A. Amend zoning regulations and development standards, including but not limited to the Floodplain Overlay District (FOD) and Scenic Creek Valley Buffer sections, to address the objectives of the RSCR policies. Zoning regulations and development

standards will establish performance standards and best management practice requirements to ensure the health and biological integrity of the river and stream corridors and minimize adverse impacts.

- B. Develop and implement a watershed management plan for each watershed, establishing development guidelines and performance standards to protect water quality. The County will follow the recommendations of the 2008 Comprehensive Watershed Management Plan.
- C. Consider appropriate standards and regulations to protect natural streams from the harmful effects of increased stormwater volume, velocity, and pollutant loads resulting from development.
- D. Protect the headwaters of the Catocin and Goose Creeks by establishing appropriate regulations for the Catocin, Shorthill Mountain, and the Blue Ridge Mountains, to limit diversions of water from the headwaters and to prevent stream pollution.
- E. (New) Encourage stormwater Best Management Practices on-site or as close to the area being treated as possible to prevent increased nutrient and sediment runoff.
- F. (New) Establish incentives and/or a funding program for reforestation, stormwater management (SWM)/BMP projects, and SWM/BMP retrofits.
- G. (New) Support the retrofitting of older stormwater systems and the rehabilitation of degraded areas to enhance pollution removal capabilities and create open space amenities.
- H. Promote the use of low-impact development to replicate natural hydrologic patterns and alleviate the strain on centralized systems.
- I. Support and incentivize reforestation for degraded forested areas in upper stream reaches that do not include Major Floodplain and promote natural regeneration within the limits of the Major Floodplain to mitigate the loss of native canopy coverage as a result of construction.
- J. Maintain standards for activities that propose pollution sources such as the storing and dispensing of petroleum products, chemical storage, and sale or transfer of potential contaminants.
- K. Maintain a working relationship with the Federal Insurance Administration of the Federal Emergency Management Agency (FEMA) for continued participation in the National Flood Insurance Program (NFIP). The County will also maintain its current status as a Cooperating Technical Partner (CTP) in FEMA's Flood Map Modernization program.
- L. Work with the incorporated Towns to establish overall water quality goals and specific standards for individual streams and river and stream corridors, consistent with County RSCR objectives and policies.
- M. Coordinate with the Metropolitan Washington Airport Authority regarding water quality protection within the Broad Run watershed.
- N. Promote and encourage community programs, such as the "Adopt-A-Stream" program, in order to keep river and stream corridors free of litter and debris and as a means of promoting public awareness of the County's river and stream corridors.

- O. Support the interstate 2014 Chesapeake Bay Watershed Agreement, a watershed partnership signed by the governors of Virginia, Maryland, West Virginia, Delaware, New York, and Pennsylvania, as well as the District of Columbia and the U.S. Environmental Protection Agency (EPA). The County supports Virginia's action towards meeting the Chesapeake Bay Total Maximum Daily Load (TMDL) and watershed implementation plans.
- P. Support the mitigation of stream and wetland impacts and the creation of stream and wetland mitigation banks within Loudoun County to improve water quality in Loudoun.
- Q. Maintain the County's Predictive Wetland Model and require submittal of digital wetland delineations in conjunction with land development applications in order to develop a reliable wetlands inventory and map of wetland areas.

Strategy

- 2.2. Establish River and Stream Corridor Resource (RSCR) buffers to promote river and stream health (streambank/streambed stability, temperature moderation, nutrient removal, sediment removal, flood control, and aquatic food and habitat).
 - A. Develop and use incentives to encourage property-owners to establish and maintain a 100-foot minimum riparian stream buffer.

<p><i>A 100-foot minimum stream buffer protects rivers and streams when floodplains and adjacent steep slope areas do not extend beyond either bank by 100 feet. The RSCR 50-foot management buffer protects the other elements of the RSCR from upland disturbances and adjacent development. The RSCR 50-foot management buffer will not be added to the 100-foot minimum stream buffer.</i></p>	<p><i>The RSCR 50-foot management buffer can be reduced if it can be shown that a reduction does not adversely impact the other elements of the RSCR, and that performance standards and criteria, developed as part of the implementation of the RSCR policies, are met and maintained.</i></p>	<p><i>Conservation Design techniques will protect and preserve river and stream segments draining less than 100 acres and wetlands that are not part of the RSCR.</i></p> <p><i>Picture placeholder.</i></p>
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Permitted Uses in the RSCR

Permitted uses within the RSCR are intended to support or enhance the biological integrity and health of the river and stream corridor. These uses are intended to have minimal adverse effects on natural and heritage resources. Development of such uses requires mitigating impacts while complementing the hydrologic processes of the river and stream corridors including flood protection and water quality. New uses should be limited to:

- a. Road crossings, rail crossings, bridges, and drive-way crossings.
- b. Public water and sewer.
- c. Local and regional stormwater management facilities within the minor floodplain river and stream corridor resource only (subject to best management practice requirements).
- d. Public lakes and ponds (subject to best management practice requirements).
- e. Public water supply reservoirs.
- f. Historic and archaeological sites.
- g. Paths and trails – including footpaths, biking or hiking paths, and horse trails (of a permeable material only).
- h. Passive recreation – limited to hiking, biking, horseback riding, picnicking, camping, climbing, hunting, fishing, and wildlife viewing.
- i. Active recreation within the minor floodplain river and stream corridor resource only.
- j. Agricultural activities, but not structures – including crop planting and harvesting and grazing (subject to appropriate best management practice requirements).
- k. Silviculture – as required to care for forests and not commercial forestry (limited to forest preservation and tree planting, limited tree clearing and clearing of invasive species, tree trimming and pruning, and removal of individual trees (subject to appropriate best management practice requirements).
- l. Planting native vegetation (subject to appropriate best management practice requirements).
- m. Conservation – including stream restoration projects, facilities and activities; Adopt-A-Stream programs; scientific, nature and archaeological studies; and education programs.

Strategy

- 2.3. Protect and enhance impaired streams and their tributaries to improve water quality and provide ecological benefits while also providing opportunities for passive recreation.

Actions

- A. (New) Encourage the implementation of enhanced pollutant control measures and watershed management strategies such as: downspout disconnection; tree planting/reforestation, especially within riparian areas; storm drain marking; stream restoration; wetland creation; adding best management practices (BMPs); enhanced stormwater management ponds; enhanced pollution/erosion control measures; coordination and outreach with VDOT and owners associations on use of sand and anti-ice materials in snow removal/road clearing operations; and stormwater pond conversion.
- B. Actively participate in regional water quality initiatives to protect and improve water

- quality.
- C. Comply with the Virginia General Permit for stormwater discharges from small municipal separate storm sewer systems (MS-4 General Permit).
 - D. Prepare and implement TMDL Action Plans, as necessary to meet TMDL requirements. The Action Plans, designed to improve the County's surface water quality may include working with other entities, such as the Loudoun Soil and Water Conservation District (LSWCD) and Virginia Cooperative Extension-Loudoun (VCE-Loudoun).
 - E. Collaborate with the Department of Environmental Quality on any pollution impairment issues within streams and support volunteer water quality monitoring efforts and coordination of these efforts with federal, state, and local water quality data collection.

Surface Water Resources

Strategy

- 2.4. Protect rivers and public drinking water reservoirs to ensure a clean, safe, and adequate supply of drinking water.

Actions

- A. Protect lands that are critical to the quality of key water supplies through easement, fee simple acquisition, regulatory measures, or other sufficient measures. Restore filtration and erosion control functions through the re-naturalization of these areas.
- B. Develop and implement a watershed overlay district for all public water supply reservoir watersheds, establishing more stringent development guidelines and performance standards to protect water quality.
- C. Develop and implement a Potomac River shoreline management plan and seek to coordinate this effort with adjacent jurisdictions (local, state, and regional organizations, advisory boards, and citizen groups). This Plan should include:
 - The boundaries of the study area,
 - A comprehensive natural resources inventory,
 - Policy recommendations for river corridor management and protection,
 - A process for integrating the participating groups, and
 - A plan for acquiring and managing open space corridors along the Potomac River.
- D. Establish appropriate standards and land uses to protect drinking water supplies.

<p><i>Protect public water supply reservoirs, Scenic Rivers, the Potomac River, and the Bull Run by providing a 300-foot no-build buffer or the other elements RSCR, whichever is greater. As an important regional water source and supplier to the Occoquan Reservoir, the Bull Run will have an additional 200-foot transitional buffer beyond the no-build buffer. The RSCR performance standards, best management practice requirements, and list of permitted uses will apply to the no-build and transitional buffer, except adjacent to existing or planned drinking water reservoirs where stormwater management facilities will not be permitted.</i></p>	<p><i>The limits of the 300-foot no-build buffer for reservoirs will be based on their projected high water mark where expansion is proposed.</i></p>	<p><i>A distance of 1,000 feet from the Beaverdam and Goose Creek reservoirs is designated as a priority open space area for the voluntary creation of a greenbelt. This voluntary greenbelt extends 1,000 feet beyond the 300-foot no-build buffer established to protect water supply reservoirs. This greenbelt will be created through various mechanisms such as land donations, conservation easements, purchase of development rights, and other land conservation mechanisms. Such additions will be considered as fulfilling open space requirements.</i></p>
	<p>Picture place holder.</p>	

Groundwater Resources

Strategy

2.5. Preserve and protect groundwater quality.

Actions

- A. Develop and implement a comprehensive groundwater protection strategy to ensure adequate water supply.
- B. Initiate and maintain a comprehensive pollution management program to protect groundwater resources.
- C. Local wellhead protection plans will be taken into consideration during review of development applications to maintain drinking water quality and protect groundwater from contamination.
- D. Limit the installation of additional wells and limit the number of additional households

dependent on wells through water conservation efforts and through the use of communal and/or central water systems where feasible and as approved by Loudoun Water.

- E. Assess the recharge and consumption rates for groundwater in each watershed by analyzing data from groundwater level monitoring and stream flow measurements. If negative impacts are detected, the information will be presented to the Board of Supervisors for appropriate action.

Soils and Geologic Resources

Policy 3: Preserve and protect the County's unique geologic characteristics, farmland, steep slopes, mountainsides, and ridgelines recognizing their sensitivity to land disturbance and development as well as their contribution to the quality of life valued by residents and visitors.

Limestone Geology Areas

Strategy

- 3.1. Protect limestone geology areas susceptible to sinkholes, cavity collapse, ground slippage, pollution, and other hazards.

Actions

- A. Maintain performance standards for lands within areas underlain by limestone.
- B. Identify pollution sources and establish appropriate standards for reducing pollution in areas underlain by limestone.
- C. Monitor groundwater and surface water in areas underlain by limestone, and if monitoring recognizes negative impacts, the information will be presented to the Board of Supervisors for appropriate action.

Establish development standards for areas underlain by limestone, including minimum setback distances from sinkholes, rock outcrops, and other Karst features due to the potential for environmental damage and to ensure public health and safety.

Picture placeholder.

Limit development within areas underlain by limestone to avoid development in areas of identified Karst features.

Communal water and wastewater systems for new development in areas underlain by limestone is preferred, unless it is demonstrated to the County that other types of systems achieving the same or superior performance standards are suitable.

Prime Agricultural Soils

Strategy

- 3.2. Preserve and protect prime farmland and agricultural soils, recognizing their importance to the overall economic health of the rural economy.

Actions

- A. Develop a public education program that will focus on communicating advantages associated with private protection of Prime Agricultural Soils.

Steep Slopes, Moderately Steep Slopes and Mountainside Areas

Strategy

- 3.3. Protect steep slopes, ridgelines, and mountainside areas against destabilization, erosion, building and/or road failure, downstream flooding, and other hazards and to maintain the scenic and rural nature of these areas.

Actions

- A. Manage development in mountainside areas using performance standards and regulations to minimize negative environmental impacts, minimize land disturbance, protect the ridgelines, maintain woodlands, plant, and wildlife habitats; and preserve natural features and rural character as requirements for approval of the location of proposed development.
- B. (New) Protect ridgelines so that structures blend naturally into the mountain landscape through updates to the Mountainside Development Overlay District or the development of a Ridgeline Protection Overlay District.
- C. Monitor and amend zoning regulations and development standards to ensure consistency with the objectives of the mountainside area policies.
- D. Establish performance standards for unavoidable development on questionable soils as defined by the International Building Code.

All subdivisions of three lots or more will require a Special Exception in Sensitive and Highly Sensitive defined areas.

<p><i>Prohibit land disturbance on naturally occurring slopes with a grade of more than 25 percent and/or with the soil Slope Class of E, with limited exceptions, such as access easements to existing lots where no other access is possible. Performance standards will be applied to protect soils, vegetation, and other environmental features in areas where these exceptions are permitted or are allowed by special exception.</i></p>	<p><i>Preserve forests and indigenous vegetation on steep slopes (greater than 25 percent). On moderately steep slopes (15-to-25 percent grade), clearing will be limited to only essential clearing that is necessary for home construction, road construction, and utility installation. Agricultural activities, excluding structures, may be allowed on steep slope areas provided that an approved Forest Management Plan or Farm Management Plan, whichever is applicable, is implemented.</i></p>	<p><i>Special performance standards are to be used to protect slopes with grades from 15 to 25 percent and/or with the soil Slope Class of D. These standards will include best management practices and locational clearances for clearing and grading. The County will establish incentives to locate development outside of these areas.</i></p> <p><i>Picture placeholder.</i></p>
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Forests, Trees, and Vegetation

Policy 4: Preserve, protect, and manage Loudoun County’s forests and trees for current and future use and enjoyment, recognizing these resources provide many benefits, such as improving air and water quality; offering important habitat for birds, small mammals and other wildlife; providing buffers between communities; conserving energy; reducing wind speed and redirecting airflow; and reducing stormwater runoff and soil erosion.

Strategy

- 4.1. Preserve, protect, and manage forest resources for their economic and environmental benefits.

Actions

- A. Require a Tree Cover Inventory as part of all development applications and, where applicable, require a Tree Conservation Plan for designated Tree Conservation Areas; such plan should demonstrate a management strategy that ensures the long-term sustainability of these designated areas and address the removal and monitoring of invasive woody vegetation and insects.
- B. (New) Incentivize and encourage the preservation of existing trees within required landscape buffer areas and for screening of uses.
- C. Require the removal of invasive plant species during the development process.

- D. Explore the development of a Tree Preservation Ordinance.
- E. Inventory and map trees and indigenous vegetative resources to be preserved or managed in accordance with County standards and create and maintain a database of these resources to include, but not be limited to, old growth forests, significant tree stands, specimen trees, heritage trees, and State or National Champion trees.

Strategy

- 4.2. Promote tree planting and preservation as a means to reduce the heat island effect and improve water quality, air quality, and wildlife habitat.

Action

- A. Prioritize the planting of indigenous vegetation, specifically those corridors that provide connections to other natural and heritage resources.

Historic, Archaeologic, and Scenic Resources

Policy 5: Loudoun County's scenic and heritage resources that comprise its distinctive cultural landscapes include Scenic Rivers and Byways, historic buildings, archaeological sites, battlefields, and historic cemeteries. These resources are the foundational elements of the County's changing landscape. Protected, and enhance scenic and heritage resources recognizing them as relevant, character-defining elements of both the natural and built environments.

Strategy

- 5.1. Preserve cultural and scenic character through conservation and preservation of designated heritage areas, battlefields, cemeteries, scenic corridors, Scenic Rivers, the Potomac River, significant geological features, archaeological sites, historic structures and their settings.

Actions

- A. (New) Evaluate land development applications within the context of this Plan as well as those more specific policies contained in the Heritage Preservation Plan.
- B. (New) Evaluate the Heritage Preservation Plan every five years and update if necessary.
- C. Require an archaeological and historic resources survey for all development applications. This survey must include a plan for recordation of identified resources and measures for preservation, mitigation, and adaptive reuse. The County will maintain a repository for artifacts recovered from required surveys to be used for research and public education purposes.
- D. Evaluate the historic or archaeological value of inventoried resources based on criteria set forth in the Secretary of the Interior's Standards that include historic context and site integrity. Resources will be evaluated for consideration for State and National

Registers. The County's cultural resource inventory will be updated through the land development process and County-sponsored historic surveys.

- E. (New) Identify locally important historic and archaeological resources through survey and community outreach that meet criteria for listing on the County Heritage Register as outlined in the Heritage Preservation Plan.
- F. (New) Identify, delineate, and map historic cemeteries, burial grounds, and graves to ensure they are protected from destruction or neglect.
- G. (New) Identify African American and Native American cultural resources to fill voids in the County's database of heritage resources and create policies and programs that protect, preserve, and interpret these resources for the benefit of county residents.
- H. Maintain the County's database by using the inventory of cultural resources as a dynamic body of data to be reevaluated as needed.
- I. Require an applicant to submit an assessment of historic significance prior to issuing a demolition permit for a structure that is fifty years old or older.
- J. Work with local communities to protect and enhance the character of cultural landscapes and historically significant sites through the designation of County Historic and Cultural Conservation Districts.
- K. Preserve and protect significant cultural and scenic resources from development impacts by promoting private or public acquisition, easements, and the use of PDR/TDR programs.
- L. Where consistent with the applicable provisions of the Virginia Code Section 15.2-2303, cash contributions may be provided for the enhancement and/or improvement of historic features within the County to fulfill the open space guidelines if the County agrees to or requests the exchange.
- M. Prioritize the adaptive reuse of historic structures that are of local, regional, or national significance as the primary method of preserving the county's diverse collection of historic architecture within the framework of sustainable development.
- N. (New) Amend zoning regulations and development standards to ensure the viability of adaptive reuse, particularly in the County's villages where the ability to reuse historic structures is vital to the historic character and vitality of these communities.
- O. Prepare and implement corridor management plans, including identifying and defining viewsheds for the County's Scenic Rivers in order to protect their natural and scenic quality.
- P. The County will not permit diversion of Scenic Rivers under any circumstances.

A viewshed analysis for a Scenic River typically involves looking at both the view from the resource itself as well as the view towards the resource.

Natural Heritage Resources

Policy 6: Preserve, protect, and create a network of privately and publicly protected open space, favoring large contiguous areas over smaller disconnected areas, maintaining green infrastructure assets, preventing habitat fragmentation, and reinforcing the unique character of the diverse communities in the county.

Strategy

- 6.1. Conserve and protect natural heritage resources including rare, threatened and endangered plant and animal species; exemplary natural communities, habitats, and ecosystems; and other natural features of the County.

Actions

- A. Utilize open space requirements, passive recreation, nature preserves, incentives, and regulations to protect areas of natural biodiversity and rare, threatened, and endangered plant and animal species to foster the implementation of the Federal Endangered Species Act.
- B. Development applications will identify Loudoun County's natural heritage resources through coordination with the Virginia Department of Conservation and Recreation (VDCR), Division of Natural Heritage and the Virginia Department of Game and Inland Fisheries (VDGIF). For those development applications that have a likely presence of one or more natural heritage resource, the County will require the applicant to conduct a species assessment and develop a plan for impact avoidance in cases where the presence of the species is identified.
- C. Encourage the study of natural heritage resources by qualified research organizations such as the VDCR and VDGIF and develop implementation strategies for the preservation of identified natural heritage resources.

Wildlife Habitats

Strategy

- 6.2. Conserve and protect wildlife habitats, wildlife travel corridors, and access to streams and water sources through the preservation of natural resources such as indigenous vegetation, forest cover, woodlands, floodplains, streams and stream corridors, wetlands, and undeveloped areas associated with steep slopes.

Actions

- A. Encourage the incorporation of indigenous vegetation into the landscape design of new development.
- B. Promote and support the establishment of public and private nature preserves throughout the County as part of the protection of natural and heritage resources.

Complementary Elements

Policy 7: The County promotes healthy air and low levels of light pollution as essential elements for current and future residents.

Air Quality

Strategy

- 7.1. Preserve and protect air quality.

Actions

- A. Comply with the requirements of the Federal Clean Air Act Amendments of 1990 through support of the State Implementation Plan (SIP).

Lighting

Strategy

- 7.2. Prevent light pollution.

Actions

- A. Update lighting standards to achieve the following:
- Promote the use of lighting for convenience and safety without the nuisance associated with light pollution.
 - Promote a glare-free environment through proper lighting performance standards to improve visibility and enhance public safety.
 - Promote appropriate lighting standards to conserve energy.
 - Develop appropriate lighting standards to prohibit unnecessary and intrusive light trespass that detracts from the beauty and view of the night sky.

Chapter 4 - Housing

Vision

Provide housing options for all people who want to work and live in Loudoun County that can accommodate a variety of lifestyles, households, ages, cultures, market preferences, incomes, and special needs.

What is New

The 2040 General Plan creates the critical connection between providing the types of housing necessary for Loudoun to remain competitive and successful as a community. This plan emphasizes providing the right type of housing at the right locations near the jobs, schools, and transportation facilities. The plan also calls for greater public/private partnerships, changes to our zoning regulations, and looking for opportunities for adaptive reuse. This plan seeks to find a realistic and economic way to provide the appropriate incentives for overall increases in residential density in exchange for more workforce and affordable housing with new development.

Introduction

During much of the first two decades of the 21st century, Loudoun County was the fifth fastest growing county in the country. Over this time period, the convenient access to Washington, DC and the scenic qualities of Loudoun, coupled with strong demand for residential development, led to the development of Loudoun's many high quality neighborhoods. The County primarily accommodated this growth in the eastern portion of the County where the market forces for new development have been strongest due to the area's closer proximity to Dulles International Airport and Washington, DC. This development has resulted in a shrinking supply of available land for further growth, yet there remains strong market demand for housing in Loudoun County.

In these circumstances, the housing supply available to accommodate new residents naturally diminishes, unless new housing is created to meet the demand. As demand for housing increases and the available housing supply decreases, competition for the available housing supply causes housing costs to escalate. These market forces have resulted in Loudoun containing some of the most highly valued residential communities in the region, which has increasingly priced many people out of the County's housing market. In addition, recent national trends show that personal housing preferences are changing for many demographic groups leading to demand for different housing types and lifestyle options.

All of this presents challenges in achieving the County's vision of providing a full spectrum of housing to support our community. An adequate supply of housing—varied in type and price, both rental and for-sale, in convenient locations—is a fundamental ingredient of a complete, inclusive, and enduring community. The creation of sustainable housing requires that the pattern of residential development—its design, density, location, cost, and performance—benefit the user and community now and over time.

Reaching this vision requires a multi-prong approach that will take coordination throughout the government, private sector, and overall community. This approach begins by reaffirming current policies, actions, and programs that are successful and setting forth new and innovative strategies/actions and a commitment to implement them.

Community Input

Throughout the *Envision Loudoun* comprehensive planning process, the public shared their concerns about available housing choices for both the present and future. The following is a summary of the attitudes and ideas expressed by participants at community outreach sessions and online engagement activities.

- There was strong, although not universal, preference for a greater range of housing choices in the County in response to a general rise in housing costs, long commutes for workers who work in the County but cannot afford to live in the community, and a general shortage of options for millennials and/or empty nesters.
- There was support for increasing the overall quantity of housing to accommodate demand and increasing density around transportation investments.
- A number of responses were supportive of more diverse housing types, including smaller square footage homes and one-level housing, to meet a broadening set of housing demands; however, there were also sentiments opposing additional multi-family development.
- Many indicated a strong preference for increasing affordable housing options for multiple ages and incomes. Three specific groups were consistently mentioned with respect to the ability to live/stay in the community: young people/families, the workforce, and older adults.
- Some expressed concern over decreasing housing affordability for all income levels.
- Participants recognized that there is a difference between where people work and where they are able to live.
- There are opportunities to accommodate housing affordability needs in certain geographies (like areas proximate to the Metro stations).
- Sentiment in support of affordable options being integrated into new and existing developments (versus being isolated).
- Many comments related to housing and economic development acknowledged the interrelationship of the two. Strong support was shown for more jobs and a recognition that the housing supply needs to be aligned with workforce needs.

Business Community Input

The Department of Economic Development regularly receives feedback from existing and prospective businesses on the housing supply available to workers. Business owners have continuously cited the lack of housing as a challenging factor for attracting the desired workforce to Loudoun which has resulted in many jobs remaining unfilled. Based on this feedback, a continuum of housing types is needed, especially compact and dense housing product that is affordable by design, in an urban setting, and close to transportation alternatives. The business

community indicates that the housing focus needs to be expanded beyond a social issue to an economic development issue.

Affordable and diverse housing is critical to our future economic success as described in the feedback below:

- The Economic Development Advisory Commission’s (EDAC) 2016 Nighttime Economy community survey found that over half of the responses about housing focused on affordability and density as key issues.
 - *“Affordable housing or metro access adjacent to bars, restaurants and entertainment venues to attract more young people to live and play in the County. When you do go out here it feels like everyone is 40 and older. Young people want to be around other younger people. Most can't afford to live in the apartments currently being constructed near the new mixed-use developments. Instead of building "luxury" units consider building smaller units with multiple bedrooms which would attract younger people with roommates (EDAC Survey, 2016).”*
- The EDAC also had the following recommendations based on survey results and other analysis:
 - Housing diversity should include special emphasis on millennials and empty-nesters, which will drive a significant portion of the commercial and retail tax base, as well as “affordable” housing for all sectors of the population.
 - Undertake a full review and rewrite of the Comprehensive Plan that recognizes housing as the lynchpin to commercial economic development success.
 - Work with developers to ensure a diverse housing portfolio without the use of proffers.
 - Embrace the concept of “Live Work and Play” into all practices by establishing planning and zoning policies and comprehensive plan strategies that support a vibrant—and viable—balance of retail, office and housing with multiple density, height, and pricing options.

Principles

- Provide safe and habitable housing for the County’s current and prospective residents by ensuring housing is attainable for people of all income levels.
- Maintain economic competitiveness by fostering housing options for all levels of the workforce.

Challenges and Opportunities

Over the planning horizon, Loudoun has many challenges to overcome in order to meet its goal of providing a range of housing choices. In the public input sessions, residents have correctly

identified that young people, the workforce, persons with disabilities, and older adults are increasingly struggling to afford available housing options in Loudoun. In addition, the changing population will require certain accommodations in the types of housing products developed, such as accessible buildings for older adults and persons with disabilities. Loudoun must also consider the longevity of its existing affordable housing stock against growing demands.

High Cost of Living and Housing

Despite having regulations, policies, and programs in place to provide affordable housing, Loudoun's housing market has not met the housing needs for all members of the community and the affordability gap remains. As of 2017, the median home sales price and median rental price were \$469,500 (Source: Dulles Area REALTORS) and \$2,250 (Source: Zillow), respectively. Studies commissioned by the County conclude that the housing supply currently being constructed for home ownership is outside the affordability range of households earning up to 100 percent of the Washington Metropolitan Area Median Income (AMI), which is \$110,300 annually for a family of four as of 2017. Based on these 2017 amounts, a family at 100 percent of AMI would anticipate purchasing a house priced at \$330,900 using the general standard of income multiplied by three, which is \$138,600 less than the current median home sales price in Loudoun County. Another perspective is that a household of four needs an income of at least \$156,500 annually to afford the median home sales price in Loudoun County using the aforementioned general standard.

Being “cost burdened” is a term used for households that spend 30 percent or more of their total monthly household income on housing. The term does not consider other costs that affect the cost of living in the areas such as transportation costs. The high cost of housing is an ongoing issue in Loudoun due to the growing number of households becoming cost burdened. The greater the percentage of income that households have to spend on their housing, the less disposable income that is available to spend on the other goods and services that make up Loudoun's economy.

Jobs-Housing Balance

Addressing housing diversity and affordability is critical to for a continued and strong economic development future for Loudoun County. Businesses thinking of expanding or locating in Loudoun have cited that the lack of desirable and attainable housing makes attracting workforce to Loudoun more challenging. The lack of attainable housing undercuts the ability of employers to attract workforce and causes workforce instability, especially in lower paying industries. This challenge also leads to long commutes from jobs to more affordable housing outside of Loudoun, which causes increased congestions on our roadways.

Affordable housing has lasting impacts on the local workforce. Housing types, availability, and cost are among the deciding factors that corporations, companies, and organizations use to determine where to locate. Housing availability and cost in particular enable companies to attract and retain their workforce. They are less likely to locate in a community where finding housing is a substantial issue for their workforce as their employees are a key ingredient to their success. A lack of reasonably-priced dwellings that are desirable and attainable by all income levels of the workforce can hinder businesses from attracting and retaining the talent they need, thereby hindering growth and deterring new businesses from moving in. When workforces cannot find housing or maintain housing expenses, they explore new options, sometimes driving them away

from the community, region, or even state. Young professionals want to be in thriving, active communities; they are not looking to locate in static or slow growing economies. Businesses follow the available workforce for successful business operation. Therefore, they are following where recent college graduates and young professionals are locating, which are vibrant communities with diverse affordable housing choices, high quality of life, and the ability to live, work, and play in close proximity to avoid long commutes to various activities. Employees want mixed use communities where they can be close to work, restaurants, entertainment, and daily activities like shopping and professional offices (e.g., healthcare).

As of 2016, about 56 percent of Loudoun's workforce resides locally, while the other 44 percent (about 61,000) commute into the County daily. Of these in-commuters, many work in relatively low-wage sectors such as Construction, Transportation & Utilities, Manufacturing, and Leisure & Hospitality. Meanwhile, more than half of the workers in the high-wage Professional & Business Services sector live within the County. About 70 percent of local and state government employees, including Loudoun County Public School employees, live in the County. Economic analysis reveals that lower-wage employment sectors of Leisure & Hospitality and Education & Health Services are growing, so the rate of in-commuting may increase if Loudoun does not have the housing to accommodate the workers, which could contribute additional pressure to the regional transportation systems. In addition, the current lack of transit-accessible affordable housing has been cited as a detriment to winning new corporate office prospects. Moving forward, Loudoun should keep this in mind for the Urban Policy Areas near the Ashburn, Loudoun Gateway, and Innovation Metro stations.

Retail and service companies develop when there is critical mass of population, which is represented in the number of rooftops. If there is not enough housing, these businesses will not develop. According to the 2016 Retail, Entertainment and Culture Cluster Study by Streetsense, there are some submarkets in Loudoun that are oversaturated with retail, meaning there are not enough rooftops to generate enough demand. Meanwhile, there are also some areas in Loudoun where there are not enough commercial options for the amount of residential on the ground, according to the 2016 EDAC Nighttime Economy Ad-Hoc Committee Report. This leads to the millennial workforce being less willing to locate in Loudoun and dollars being spent outside the County. Furthermore, the affordability gap between housing costs and income make staffing existing retail and entertainment venues challenging, and developing new ones less feasible. The difficulty with attracting and retaining employees due to workforce housing challenges is facing businesses throughout the County.

Value of the Housing Sector

According to the Virginia Employment Commission, there were at least 5,000 people employed in Loudoun County who worked in the housing sector in 2016 (3.1% of employment in the County). The vast majority of these people work in various aspects of construction and residential contracting, but the 5,000 figure also includes around 500 real estate agents and property managers. An additional 3,700 people work in landscaping services (which provide services to both residential and nonresidential clients). It is important to note the following: 1) Not all labor by the people employed in the housing sector in Loudoun County is actually performed in Loudoun

County, 2) Some people who are employed in the housing sector in neighboring counties perform work in Loudoun County, and 3) Some people working in this sector might be left out of the Virginia Employment Commission's data.

Based on 2015 data, an alternative breakdown of jobs related to housing in Loudoun County, provided by Implan, suggests up to 11 percent of employment and 14.4 percent of total economic activity in the County is related to housing; however, the limitation of this dataset is that it covers all sectors related to real estate development and property management in general, which makes it difficult to isolate the housing sector. If the housing sector slows due to the lack of residential growth, it will have an impact on the Loudoun's economy.

Limited Supply of Available Land for Residential Growth

Loudoun County grew significantly between 2000 and 2016. The population and number of housing units have more than doubled, while commercial space nearly doubled. Growth has mainly been along Belmont Ridge Road/NorthStar Boulevard. Residences built during this time have mostly been on the western edge of the Suburban Policy Area and parts of the Transition Policy Area in a line running roughly south from Leesburg. There has been less concentration of new homes built in the western Rural Policy Area, though there has been more in the Towns and along Route US 15 than other parts of the west. As a result, much of Loudoun County's residential land, particularly land in the Suburban and Transition Policy Areas, is either developed or is considered "in the pipeline" with some level of development approvals.

High Demand for Housing

The County has undertaken two studies to project the demand for new housing units. In February 2017, George Mason University (GMU) Center for Regional Analysis completed the Housing Needs Assessment (Link: <https://www.loudoun.gov/documentcenter/view/127559>). The Housing Needs Assessment was completed to assess the County's current and future housing needs.

In January 2018, Kimley-Horn completed a Market Analysis as part of the Envision Loudoun effort (Link: <https://www.loudoun.gov/DocumentCenter/View/131399>). Both studies confirmed that the demand for new residential development is higher than that provided in our current *Revised General Plan*. Although these unconstrained numbers for the demand for new housing units are useful information to understand potential demand, the County is not compelled to ensure that all these units are accommodated. The demand is useful to understand how the County will absorb planned new residential development over time.

Current Housing Inventory and Gaps in Market Needs

According to U.S. Census data from 1956 through the end of 2017, the nation's average quarterly vacancy rate is 1.6 percent for the residential sales market and 7.4 percent for the residential rental market. The 2017 George Mason University Housing Needs Assessment found that the vacancy rate for all housing units in Loudoun County was 4.3 percent in 2014, and the rental vacancy rate was just 2.3 percent in 2014, including both multi-family apartments and single-family detached and attached homes. Both the overall vacancy rate and the rental vacancy rate in Loudoun County were among the lowest of the comparable jurisdictions in the Washington DC metropolitan area. By comparison, the 2012-2016 American Community Survey estimates for vacancy rates by tenure

in Loudoun County were 1 percent for owner-occupied units and 4 percent for rental units. The County's low vacancy rates in the rental and sales markets indicate that demand exceeds the supply of housing units. The Housing Needs Assessment further identified a shortage of 11,200 rental units, based on an analysis of renter cost burden, of which about 75 percent can be attributed to households with a total household income below 60 percent AMI.

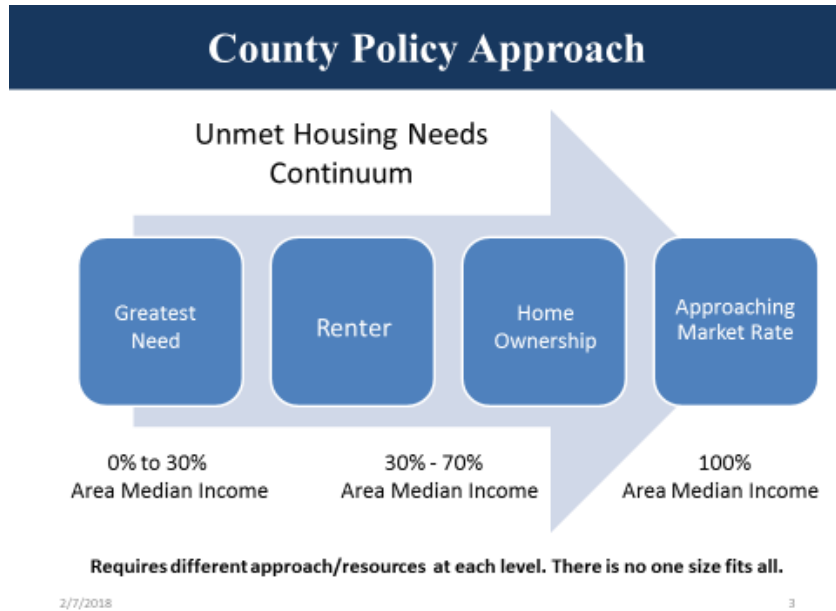
County Programs to Address Affordability

The County established the ADU Program to assist in the provision of housing to persons of moderate income by promoting the development of a range of housing choices. Article 7 of the Revised 1993 Loudoun County Zoning Ordinance and Chapter 1450 of the Loudoun County Codified Ordinance established the regulations for the County's Affordable Dwelling Unit (ADU) Program.

In 2005, the County commissioned a study on housing needs and found that the housing market was not meeting the demand for units affordable to households earning up to 100 percent of the Area Median Income (AMI) for the Washington Metropolitan Statistical Area (MSA). The County adopted Unmet Housing Needs policies to address these needs through commitments from legislative applications. In 2017, the GMU Housing Needs Assessment reconfirmed the finding that the housing market is not meeting the demand for housing for households earning up to 100 percent AMI.

As of October 2016, there were 2,472 Affordable Dwelling Units (ADU) and Unmet Housing Needs Units (UHNU) units in the County that had some form of affordability deed restrictions, delivered through the mandatory ADU programs or voluntary proffers. As of 2017, Loudoun's inclusionary zoning ordinance calls for single-family developments to provide 12.5 percent of the units as ADUs, while multi-family developments are to provide 6.25 percent of the units as ADUs for development applications proposing more than 50 units and at a density greater than one dwelling unit per 40,000 square feet. According to the Grounded Solutions Network, a nonprofit organization that promotes affordable housing, these percentages are in the lower range for inclusionary policies, which typically require set-asides between 10 percent and 30 percent. In addition, the same source reports that 80 percent of inclusionary programs require units to remain affordable for 30 years, and one-third of those require 99-year or perpetual affordability.

Recognizing the importance of affordable housing to Loudoun County, a Housing Summit was held on October 16, 2017 to seek feedback from stakeholders and advisory boards/commissions on the County's housing programs, policies and other related topics. As part of the Summit, County Staff provided an overview on the needs, programs, and policy and regulatory framework that exist across the spectrum of operational departments that are involved in housing issues and business development issues. This was an initial effort at beginning the coordination throughout the government, private sector, and overall community that will be necessary to achieve the County's vision for housing, and the event informed the policies, strategies, and actions that are included in this plan.



Changes in Typical Households

Loudoun will continue to be an attractive place for residential development given its geographic location in the region, school system performance, and notable quality of life. Demand for residential product will need to meet a wide variety of preferences, driven by attractiveness for families, young adults forming new households, and downsizing occurring in the Baby Boomer generation, as well as the County's assets, infrastructure, and high tech ecosystem. The extension of the Metro Silver Line into Loudoun County will create opportunities for higher-density residential that capitalizes on proximity to transit.

As new affordable housing strategies are developed, it is necessary to consider the needs and preferences of the changing typical household. For example, numerous studies have found that millennials have a greater preference for housing located in active, walkable environments near a mix of uses. As the Baby Boomer generation ages, it will be necessary to provide a range of senior housing opportunities. Multigenerational housing choices are gaining popularity across the country, in the form of large houses with multiple kitchens, houses with main floor bedrooms and bathrooms, or houses with an accessory dwelling unit. A Pew Research analysis shows that Asian and Hispanic immigrant populations are significantly more likely to live in multigenerational housing arrangements; therefore, a higher demand for these housing types in Loudoun is anticipated given the growth of these populations.

Housing Impacts on Government Services & Units Affordable by Design

Development of new housing attracts new residents, directly or indirectly, and with new residents comes increased demand for the provision of services such as law enforcement, fire protection, emergency medical services, and education. To implement this philosophy, the County has developed Capital Intensity Factors (CIF) to estimate the anticipated costs to construct capital facilities. (Refer to www.loudoun.gov/cif)

Where allowed by State Code, the County expects development entities of residential projects to mitigate these impacts of the development, which is typically done with contributions to capital facilities formalized in proffer statements. Since market conditions dictate the sales price of housing units, a developer absorbs the cost of the capital facility contribution in each unit's sales price, which reduces a development entity's profit. For ADUs provided pursuant to Article 7, the County absorbs the capital facility impacts generated by that housing unit type by crediting the developer the costs for each affordable dwelling unit's impacts.

Since the CIF is based on unit type and not unit size and development entities intend to maximize profit margins, an incentive to develop smaller or modest sized housing is typically not present. Instead, these two factors influence the construction of larger, higher value residential housing units that are affordable to households within incomes greater than 100 percent AMI. Identifying these influences provides the County an opportunity to address the issues that could enable or incentivize development of smaller, modest sized houses to occur within the market, which would be more affordable by design.

Policies, Strategies, and Actions

Note for Stakeholders Committee

For your information, the basis of the policy statements in this section is noted by the following codes which are in brackets after each statement:

- SC = Stakeholders Committee's Recommended Housing Policies, Actions & Strategies
- RGP = *Revised General Plan* Housing Policies, Actions & Strategies
- N = New Staff Recommended Policies, Actions & Strategies

These codes will be removed from the chapter in the document that is prepared for public outreach.

Policy 1: Increase the amount and diversity of housing unit types, sizes, and prices and promote innovative designs throughout Loudoun County that are desirable and attainable to all income levels. [SC]

Strategies

- 1.1. Encourage the integration of housing for special needs populations within existing and planned communities, particularly in areas within ¼ mile walking distance of convenience shopping, employment opportunities, transit, and other amenities. [RGP]
- 1.2. Provide for diverse housing options for older adults (55+) to meet the continuing needs of the aging population and support the option of aging in place or within the community. [RGP]
- 1.3. Support mixed-use development and redevelopment projects that provide a continuum of housing types and prices as well as commercial uses such as retail, entertainment, and offices in a walkable environment. [SC]

- 1.4. Focus County programs on the unmet housing needs of households earning up to 100 percent of the Washington Metropolitan Area Median Income (AMI). [RGP]
- 1.5. Encourage development proposals that include a residential component to include housing for households with incomes at or below 50 percent of AMI. [RGP]
- 1.6. Encourage housing that is developed to fulfill unmet housing needs to be served by public utilities and located near existing or planned employment opportunities, public facilities and services, transit, and other amenities. [SC]
- 1.7. Encourage and provide regulatory flexibility for the use of existing, planned and/or zoned non-residential land to address unmet housing needs (development should provide a mix of residential, commercial, and employment uses). [RGP]
- 1.8. Enable market innovation to address housing diversity in a manner that is compatible with the surrounding neighborhood character. [N]

Actions

- A. Develop effective incentives that enable development to provide units to meet unmet housing needs to include housing for households with incomes at or below 30 percent of AMI, which is the area of greatest need and includes older adults on fixed incomes, persons with disabilities, and workers in low-wage occupations. [N]
- B. Strengthen regulatory standards to the greatest extent that state code allows to maximize the diversity in housing types and the number of units in the provision of affordable housing. [RGP]
- C. Revise building and development standards so the design of residential units and neighborhoods physically meet the needs of aging adults and persons with disabilities (e.g., universal design and accessible units). [RGP]
- D. Amend the Zoning Ordinance to expand the number of districts where manufactured housing, accessory units, and other alternative housing types are allowed (e.g., small lot and innovative housing types). [RGP]
- E. Review and revise regulatory documents, as appropriate, to enable people to age in their own homes. [RGP]
- F. Amend the Zoning Ordinance to establish necessary revisions to incentivize affordable housing. [N]
- G. Ensure affordable units are provided on land development applications proposing development of 20 or more dwelling units with a density greater than one dwelling unit per acre. [RGP]
- H. Examine and estimate unmet housing needs and evaluate housing programs for their effectiveness in addressing those needs every five years. [RGP]

- I. Develop an affordable housing strategic plan that more specifically identifies strategies, actions, programs, and best management practices to address the County's current and future unmet housing needs to include. [RGP]
- J. Research and implement effective incentives, such as appropriate density increases for the provision of affordable housing and the off-set of capital facilities contributions, and evaluate successful housing programs in other jurisdictions to determine the resources needed to foster a continuum of housing affordability for workers in Loudoun. [N]

Policy 2: Preserve existing affordable housing stock levels and ensure housing remains safe and habitable.

Strategies

- 2.1. Leverage public and private resources to address housing needs in Loudoun County. [SC]
- 2.2. Prevent the displacement of affordable housing units that are currently provided by the market with redevelopment projects. [N]

Actions

- A. Create an inventory of affordable housing units using County assessment data that identifies the type of unit, its location within the County, and general characteristics of the units. [N]
- B. Provide programs that bring existing affordable housing in need of indoor plumbing, operational septic and water systems, and major system repair (e.g., new roofs, heating and cooling systems) up to safe and livable conditions. [RGP]
- C. Implement housing programs that address the maintenance, preservation, and improvement of existing affordable housing stock. [RGP]
- D. Create a dedicated revenue stream for affordable housing development. [SC]
- E. Develop a rent subsidy program to address the housing needs of extremely low-income or vulnerable households including older adults on fixed incomes and persons with disabilities. [N]
- F. Use public and private partnerships, programs, tools, and incentives to address unmet housing needs and increase the County's capacity to compete for federal and state assistance. [RGP]
- G. Provide technical assistance to the Towns to assist them in establishing and maintaining programs that provide affordable housing. [RGP]
- H. Work in partnership with nonprofit, public, and private entities that are committed to the provision of a wide range of housing opportunities by offering technical and

- financial assistance such as direct loans, gap financing, revolving loans, credits, and grants. [RGP]
- I. Evaluate whether to pursue the creation of a Housing Authority that would develop new affordable housing, rehabilitate housing, and revitalize community infrastructure. [RGP]
 - J. Encourage the Economic Development Authority to exercise its authority to assist with property acquisition, tax exempt bond financing, and leverage gap financing, and stimulate cooperative partnerships toward the preservation and production of housing to address unmet needs. [RGP]
 - K. Consider the use of County-owned property to offset the costs to nonprofit, public, and private sector entities to fulfill unmet housing needs and primarily target 1) special needs populations and/or 2) households earning less than 50 percent of AMI. [RGP]
 - L. When purchasing real property, consider buying properties that can be developed to fulfill unmet housing needs in addition to the primary public use. [RGP]
 - M. Expand the employer-assisted housing program to help meet the private sector's workforce housing needs. [RGP]

Chapter 5 – Economic Development

Vision

Our vision is a diverse and globally competitive Loudoun Economy.

What is New

New policy directions in the 2040 General Plan build upon the County's economic strengths, and create strategies to overcome some of the local economy's challenges. Emphasis is placed on diversifying the economy so that it is not entirely dependent on one or two successful industry clusters. This includes relying on a refreshed 2017 Targeted Cluster Study to identify the emerging market opportunities where the County should focus business development efforts. Additional new policies support placemaking, especially near future metro stations, to accommodate the growing demand for highly-amenitized walkable places that enable talent attraction. Workforce development also becomes a critical part of economic development policy moving forward, to respond to the increasing need voiced by the business community for locally-trained employees spanning from entry-level to executive.

Introduction

Loudoun County has emerged as a significant hub of economic activity in the Metropolitan D.C. area; in the past decade there has been considerable growth in technology sectors such as aerospace, cybersecurity, and data centers, the federal government continues to fuel employment for almost one-third of the County's rapidly expanding population, and agriculture-based businesses are on the rise due to Loudoun's renewed focus on value-added agricultural products. Start-ups and corporations that span all of these burgeoning industries are thriving due to Loudoun's location in the region, proximity to the Washington Dulles International Airport, highly-educated workforce, and business-friendly government.

Building upon our tremendous economic success, Loudoun has a great opportunity to leverage the economic development potential of Metrorail in the County while also improving the rural economy, diversifying the County's commercial/industry base, and continuing to increase job opportunities.

Community Input

Throughout the *Envision Loudoun* comprehensive planning process, the public has shared their opinions about economic development in Loudoun County. The following is a summary of the attitudes and ideas that were expressed at public input sessions and online engagement activities:

- Attract new businesses and industries to Loudoun County to assist in the creation of a more diverse job market;

- Attract businesses to Loudoun County that will provide high paying employment to citizens;
- Further advance the technology industry in Loudoun County through developing research institutions and continuing Loudoun County as a technology hub;
- Increase employment opportunities in Loudoun County to minimize the need for residents to commute to outside communities;
- Increase the number of educational opportunities in the form of higher education availability in Loudoun County, providing vocational training, as well as other education opportunities;
- Increase County assistance for small businesses and entrepreneurial activity, support for County initiatives in regards to tourism development, and support for the rural and agricultural economy while addressing their potential impacts;
- Increase County support for small businesses and entrepreneurial activity (e.g., incubator space as well as better support and incentives for small businesses);
- Provide more tourism promotion and County-sponsored cultural events; and
- Provide more commercial and retail development including more diverse retail such as higher end retailers, more restaurants, and entertainment options, as well as services such as grocery stores and gas stations.

Business Community Input

In May and June 2017, Loudoun County's Department of Economic Development (DED) interviewed 30 leading business professionals and community leaders about the opportunities and challenges of doing business in Loudoun County and their industries in general. The common challenges cited were about employee recruitment; the lack of desirable and attainable housing and traffic congestion for commuting makes attracting workers difficult. Most if not all interviewees appreciated that Loudoun County is easier to work with than surrounding jurisdictions and placed emphasis on how important it is for Loudoun to remain business-friendly moving forward.

The majority of responses from the Economic Development Advisory Commission's (EDAC) 2016 Nighttime Economy community survey called for improving government processes through additional flexibility in codes and ordinances. The EDAC also had the following recommendations based on survey results and other analysis:

- Identify opportunities for public/private partnership to promote and support the infrastructure and public facilities necessary for mixed-use developments and a vibrant nighttime economy.
- Allow developers, landowners and businesses to quickly and easily make changes in response to the economy and demands of the marketplace.
- Foster an environment to allow business and government to work as a team to resolve issues that add time and expense to the process.

The County's economic development vision is a diverse and globally competitive economy. To achieve this vision, the County must continue to strengthen and diversify Loudoun's economy by

providing world-class and innovative customer-focused services to attract, grow, and retain targeted businesses of all sizes.

Background

In 2000, the Board of Supervisors adopted The Community's Plan for a Thriving and Sustainable Economy, which was intended as a guiding strategy in the County's *Revised General Plan* for five to ten years.

This fundamental economic development strategy identified five goals for the Loudoun community: 1) foster a prosperous and diverse business environment, 2) create a globally recognized economy, 3) maintain sound fiscal health, 4) develop an innovative rural economy, and 5) become a world-class visitor's destination. It also identified Loudoun's competitive advantages:

- Washington Dulles International Airport
- Location in the D.C. Metropolitan area
- Qualified workforce skilled in advanced industries
- Quality of life
- Infrastructure that enables access to the region
- Greenfield land zoned for commercial development

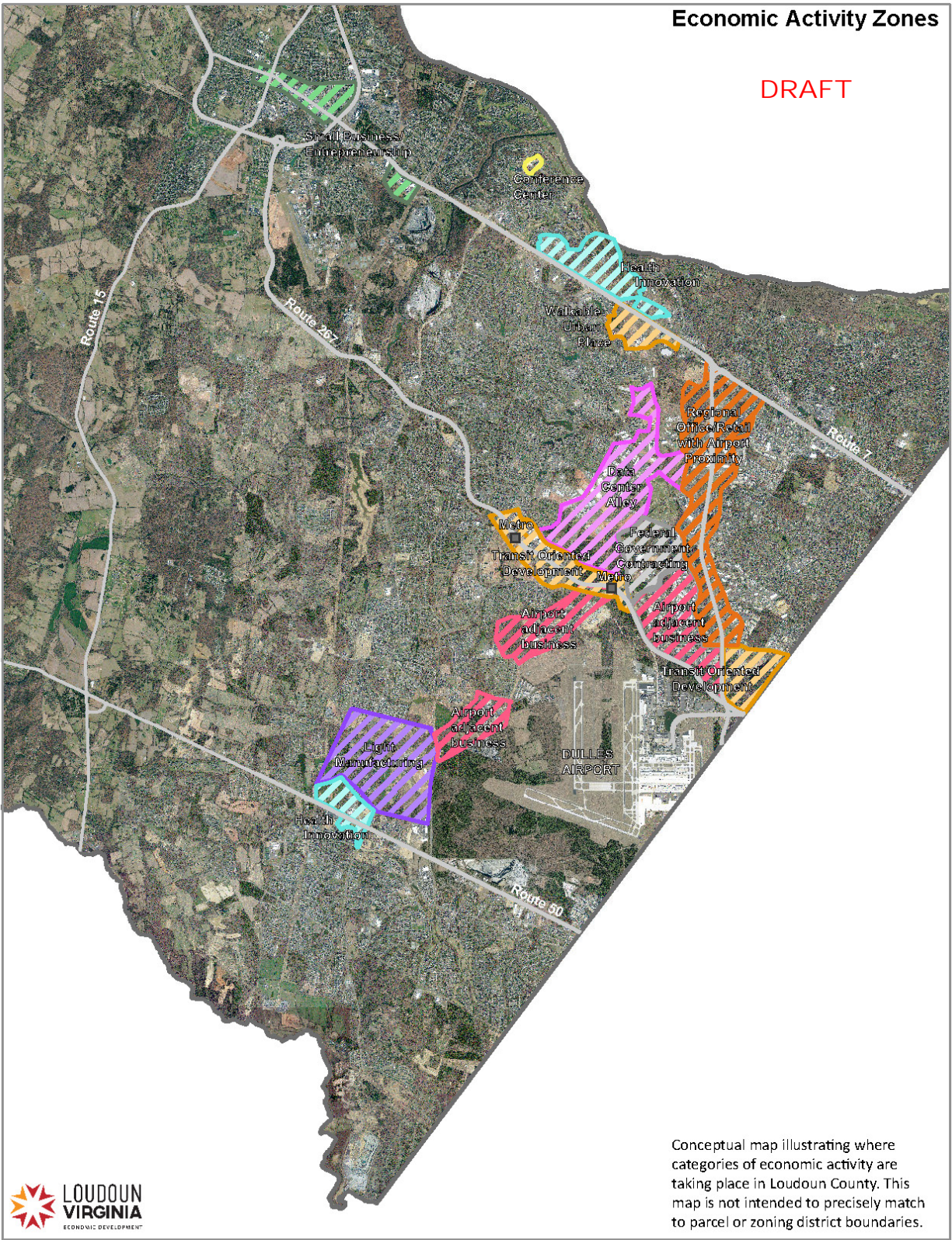
The County has since completed additional strategic economic planning efforts including a Targeted Cluster Strategy in 2008 (updated in 2012 and 2017), and a specialized Rural Economy Business Development Strategy in 2013.

Targeted Cluster Strategy

The County has endorsed a cluster and overlay approach for economic development based on industries that were more concentrated in Loudoun relative to the state/nation, and industries that were adding firms because of Loudoun's strengths and opportunities. The County's current targeted clusters and overlays are: data centers, information & communications technology, federal government contracting, aerospace & defense, aviation & transportation, health, innovation & technology, and agriculture & related businesses.

Based on firsthand knowledge of local market activity, there are certain areas in the eastern portion of the County where business ecosystems have emerged:

Figure 1. Geographic Economic Activity Zones



Challenges and Opportunities

The County updated its competitive economic advantages (strengths) based on existing local market conditions and also analyzed the local economy's weaknesses, opportunities, and threats to further inform policy:

Figure 2. SWOT Analysis of Loudoun Economy

STRENGTHS <ol style="list-style-type: none"> 1. Data centers 2. Pro-business 3. Airport 4. Affluent 5. Educated workforce 6. Farms 7. Technology/infrastructure 8. Momentum 9. Location/access to region 10. Schools 11. Quality of life 12. Culturally diverse 	WEAKNESSES <ol style="list-style-type: none"> 1. Lopsided economy 2. Limited resources 3. No major university 4. No sports venue/marquee hotels 5. Limited nightlife 6. Millennials leave 7. Inflexible development process 8. Minimal housing variety (size, price, setting) 9. Lack of workforce 10. Traffic 11. Conflicting policy direction among depts 12. Available funding for businesses
OPPORTUNITIES <ol style="list-style-type: none"> 1. Walkable Urban Places on metro 2. International 3. Co-working spaces 4. Comp Plan/Zoning Alignment 5. Health IT/Bioscience 6. Workforce development programs 7. New incentives/technology zone 8. Available land/property database 9. Internet of Things/Big Data 10. Ag Bio 11. Cybersecurity 12. Equine 	THREATS <ol style="list-style-type: none"> 1. Federal spending/national economy 2. Telework (change in office use) 3. Housing pressure limits commercial options 4. Regional competition 5. Overregulation 6. Too much time to get established 7. Tax rate/affordability 8. Bedroom community (jobs elsewhere) 9. Public outcry 10. Political shift to slow or no growth 11. Outdated shopping centers 12. Limited supply of large land parcels

Source: Loudoun County Department of Economic Development, 2016

There are also macro trends that will impact economic development in the areas of workforce, globalization, digitization, tourism, and demographics.

Workforce

As of 2017, the number of Americans on unemployment rolls has dropped to a 17-year low, which indicates the labor market nationwide is tightening and companies are facing challenges recruiting skilled workers (U.S. Bureau of Labor Statistics, 2016). Some best management practices for economic development organizations to help address the expected talent shortage include: conducting a workforce sustainability study, collaboration with regional educational institutions, and development of industry-specific online portals for jobs.

As part of an international strategy, attracting immigrants to the workforce helps ensure a steady flow of skilled and unskilled workers. Loudoun County is well on its way to diversifying its local employment base, as one out of every four residents are foreign-born (U.S. Census, 2014).

Globalization

The County's economic development strategies need to be prepared for the global economy. One in five American jobs are tied to international trade, and 95 percent of consumers – three-quarters of the world's purchasing power – is found outside U.S. borders (The Trade Partnership, 2015). Locally, the percentage of Loudoun's gross domestic product devoted to exports (9.9%) is top five for the Greater Washington area. Loudoun is also top five in Greater Washington for numbers of jobs in foreign establishments (Brookings, 2014).

Best practices for increasing foreign direct investment, attracting international companies and recruiting international workforce are straight-forward: devote full-time staff to international trade missions and developing leads and recruiting abroad. Furthermore, globalization is no longer confined to the coastal cities, so the future domestic workforce (students) should be prepared early by emphasizing foreign studies and learning different languages.

Digitization

Digitization of the local government development process is becoming widely accepted, which helps businesses start and expand easier and faster. Electronic plan submittals, business license portals, and online permit or entitlement tracking increase accountability and provide more certainty for the business community.

The continual shift to digital information, communication, and transactions results in steady demand for data storage infrastructure and information technology workers. Loudoun is thriving in both business areas as 30 percent of the world's physical data center buildings are in Loudoun County, and the concentration of employees in information technology as it relates to total County employment is stronger than the information technology cluster in the states of Maryland and Virginia combined.

Tourism

Tourism and economic development are inextricably linked, as visitors to desirable destinations become repeat visitors, which can lead to relocation, entrance into the workforce, and potentially moving or starting a business. Loudoun is uniquely situated in the D.C. region due to its thriving rural economy in the western half of the County that also supports regional tourism.

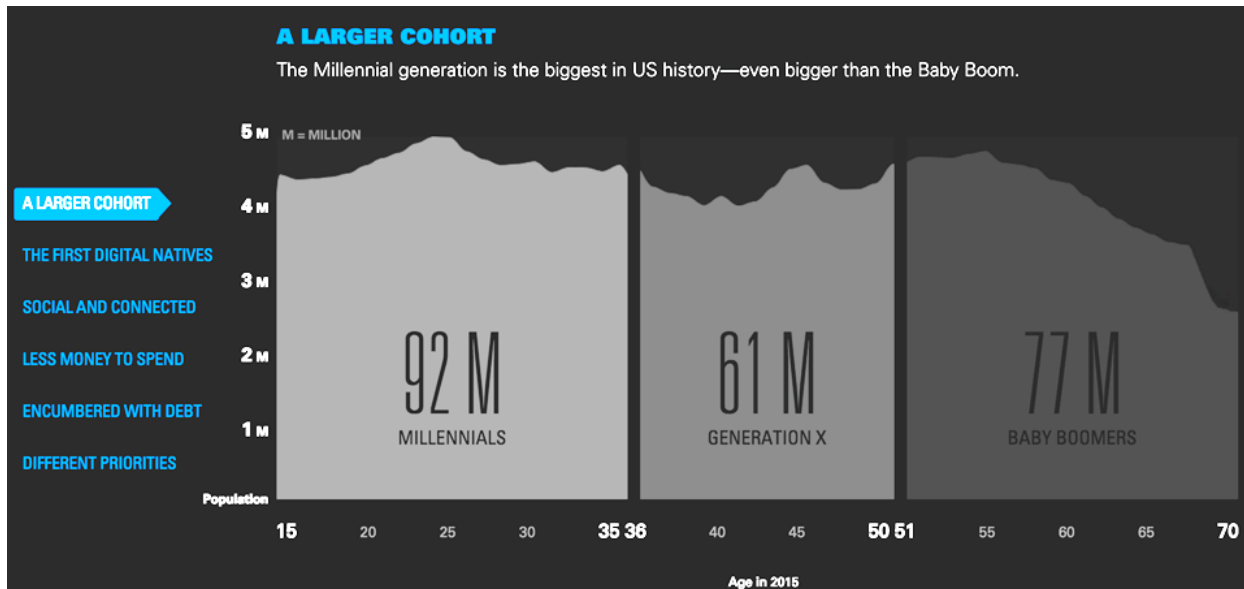
Best management practices for aligning economic and tourism development include using consistent “destination” branding across multiple lines of government, building recognition for year-round activities, and identifying the local community as a progressive tourism destination in marketing materials to business prospects.

Demographics

The up and coming generation entering the workforce, often referred to as millennials, will be the biggest cohort in U.S. history (Business Insider, 2015). The demographic shift will bring changes in consumer spending, office amenities needed to attract workforce, housing preferences, and

political ideologies. In general, millennials are unique because of technological aptitude and reliance, propensity towards tolerance, and high educational attainment (Pew Research, 2015).

Figure 3. Population Comparison of Recent Generations



Source: Business Insider, 2015

Most innovative companies looking to attract the next generation of workers are seeking “urban” places for their expansion or relocation efforts because they cluster offices, retail, entertainment, services, and housing options in close proximity. The emerging workforce desires this amenity-rich environment and expects transportation options such as walking, biking, or transit for commuting or consuming daily goods and services. Transit-oriented on-Metro developments in Northern Virginia have seen remarkable growth, and Loudoun County is poised to capture this trend with the opening of three new Metro stations.

Policies, Strategies, and Actions

The following policies, strategies, and actions are designed to respond to the economic challenges and opportunities facing Loudoun, including maintaining a strong and diverse local economy, capitalizing on our Silver Line Metro stations, and responding effectively to our next generation of workforce.

Policy 1: Diversify the economy by strengthening targeted industry clusters.

Strategies

- 1.1. Attract new businesses in key industries so that the global competitive advantage of Loudoun is strengthened in the targeted industry clusters.
- 1.2. Proactively retain businesses that may be considering leaving Loudoun by helping with relocation or expansion efforts.
- 1.3. Catalyze start-ups and entrepreneurial growth by providing quality resources.

- 1.4. Continue the close working relationship with the Metropolitan Washington Airport Authority (MWAA) to sustain economic growth at and around the Dulles Airport.
- 1.5. Expand international business relationships and foreign direct investment.

Actions

- A. Embed staffing resources in each cluster/overlay to attract or expand businesses using industry expertise, relationships, and earned reputation.
- B. Use marketing and research to create promotional materials, conduct market analysis, assist with site selection, and provide ombudsman services.
- C. Provide assistance with the regulatory process and streamline when possible using electronic plan submittals and online portals to get clients to market more quickly, provided all public safety, health, and welfare regulations are met.
- D. Create mechanisms for the rural economy to maintain its status as a regional agricultural leader and local advantage.
- E. Reserve adequate amounts of developable commercially-zoned land for cluster growth.
- F. Strategically use economic incentives as needed for attraction and retention.

Policy 2: Create desirable places in key commercial corridors and employment centers.

Strategies

- 2.1. The design and infrastructure of key commercial corridors and employments centers should create desirable places for workers, businesses, and travelers.
- 2.2. Support development projects near the Ashburn and Innovation Metro stations that provide a continuum of housing types, retail, entertainment, and employment options in a walkable environment (e.g., walkable urban places).
- 2.3. Be flexible, customer-focused, timely, and open to interpretation in review and approval of commercial or mixed-use projects to keep pace with the dynamism of the market.
- 2.4. Encourage multimodal infrastructure design especially within a mile of Metro stations and near other employment and major hotel centers that minimizes impact to development potential of land.
- 2.5. Support a diversity of available commercial products when planning land use to improve attraction of a multifaceted business base.
- 2.6. Accommodate all types of critical infrastructure when planning for transportation—complete streets, power, water, and fiber.

Actions

- A. Establish a State-endorsed “Technology Zone” for the encouragement of new and expanding technology businesses, which enables reduction of user and permit fees, local tax incentives, special zoning treatment, and exemption from local ordinances.
- B. Streamline the process for amending the Comprehensive Plan to allow for flexible and timely responses to evolving market conditions and technological innovation.
- C. Periodically update the County’s Zoning Ordinance to keep pace with innovation in the marketplace.
- D. Extend support to the Towns to plan for enhancing the economic base.

Policy 3: Invest in the skilled workforce needed for continued economic growth.

Strategies

- 3.1. Support continual growth of the workforce through recruitment assistance, training, and placement programs.
- 3.2. Proactively attract workforce, develop existing pipeline, and explore ways to increase access to qualified job applicants in targeted clusters.
- 3.3. Cultivate partnerships with schools, colleges, and businesses to link all levels of education (including K-12) to targeted industry needs.
- 3.4. Develop housing programs to create a continuum of housing types that are attainable and desirable to all levels of the workforce.

Actions

- A. Collaborate with community and academic partners on connecting people to careers, expanding “learn by doing” programs and securing funding sources for training.
- B. Actively engage local businesses to determine workforce challenges and needed skills.
- C. Incentivize construction of attainable workforce housing using density bonuses, fee waivers, revolving loans, or assistance with required infrastructure.
- D. Consider using the Economic Development Authority for property acquisition to bank land for public/private partnerships on workforce housing projects.

Policy 4: Market the County as a world-class business ecosystem.

Strategies

- 4.1. Market the County as a world-class place to do business using a variety of tools and communication platforms.
- 4.2. Promote gender and ethnic diversity of the local business community.
- 4.3. Market Dulles Airport as a destination portal to a diverse Loudoun economy.

Actions

- A. Tailor messaging to decision-makers and influencers that play a role in starting, expanding or relocating businesses (e.g. owners, executives, site selectors, brokers).
- B. Post and respond on the County's economic development website and social media channels in a timely fashion to maintain credibility.
- C. Maintain economic development brands for custom professional-grade collateral.

Policy 5: Support the promotion and development of Loudoun County as a tourism destination.

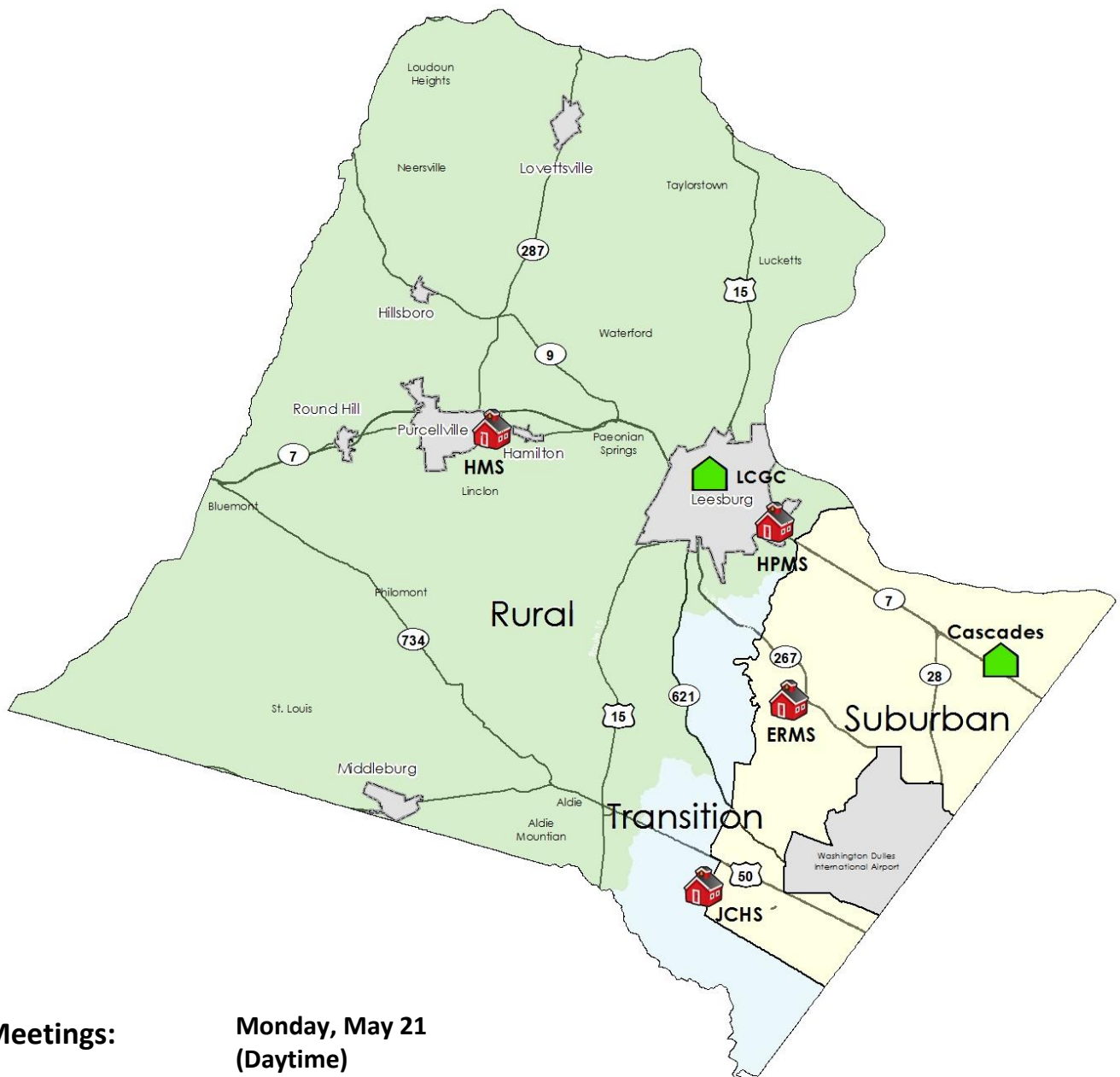
Strategies

- 5.1. Collaborate with Visit Loudoun to support the development and enhancement of tourism and hospitality infrastructure, including hotels, bed and breakfasts, and event facilities.
- 5.2. Encourage and support tourism destination development and marketing.

Actions

- A. Establish a State-endorsed "Tourism Zone" that enables the County to be eligible for gap financing from the State for tourism-related development projects.
- B. Refresh online content and optimize for search engines regularly, translate into multiple languages, and focus design to reflect Loudoun's unique personality and strengths.

ENVISION LOUDOUN ROUND THREE PUBLIC OPEN HOUSES



May 2018 Meetings:

Monday, May 14

Presentation 6:30 pm -7:00 pm
Open House 7:00 pm-8:30 pm

Harmony Middle School
38174 W Colonial Highway
Hamilton

Wednesday, May 16

Presentation 6:30 pm -7:00 pm
Open House 7:00 pm-8:30 pm

Harper Park Middle School
701 Potomac Station Drive
Leesburg

Monday, May 21 (Daytime)

Presentation 10:00 am-10:30 am
Open House 10:30 am-2:00 pm

Loudoun County Government Center
Dulles Room
1 Harrison Street, SE
Leesburg

Monday, May 21 (Evening)

Presentation 6:30 pm -7:00 pm
Open House 7:00 pm-8:30 pm

Eagle Ridge Middle School
42901 Waxpool Road
Ashburn

Tuesday, May 22

Presentation 6:30 pm -7:00 pm
Open House 7:00 pm-8:30 pm

Cascades Senior Center
21060 Whitfield Place
Sterling

Thursday, May 24

Presentation 6:30 pm -7:00 pm
Open House 7:00 pm-8:30 pm

John Champe High School
41535 Sacred Mountain Street
Aldie