

## Vision

The Town of Vienna strives to be a community where residents and other members of the community can achieve a sustainable lifestyle that preserves the natural environment, conserves finite resources, and supports resiliency for future generations. Vienna recognizes its role in helping ~~mitigate greenhouse gas emissions~~ improve air quality and promoting energy efficiency and sustainable practices, all of which contribute to a healthier and more vibrant community.

## Goals

1. Preserve and enhance the Town's natural environment.
2. Reduce sources of pollution and excess energy use within the Town.
3. Serve as a model for small communities in environmentally friendly, sustainable, and resilient operations.
4. Engage and empower the community to achieve goals for environment and sustainability.

## Executive Summary

The Environment and Sustainability chapter of the Comprehensive Plan outlines the Town's commitment to protecting natural resources, reducing pollution, promoting energy efficiency, and building a resilient community for future generations. This chapter sets forth a vision for sustainability and provides a framework of goals, policies, and strategies to guide Town operations, development, and community engagement.

Vienna recognizes its responsibility to preserve ~~its green~~ and open spaces, enhance tree canopy, improve water and air quality, and address the impacts of ~~climate change~~ future weather events. The chapter also highlights the importance of community-wide education, regional collaboration, and innovation to support environmental stewardship.

By investing in sustainable infrastructure, encouraging environmentally conscious choices, and prioritizing resiliency in planning and decision-making, Vienna aims to serve as a model for other small jurisdictions. ~~This chapter serves as both a roadmap and a call to action for residents, businesses, and the Town government to work together toward a more sustainable, healthy, and vibrant future.~~

## Environment

The Town of Vienna is located within the Virginia Piedmont region of gently rolling hills, just west of the fall line separating the coastal plain from the Blue Ridge Mountains. The Town is situated approximately five miles from the closest point of the Potomac River, southwest of Vienna.

Private development consists primarily of low-density residential neighborhoods with single-family detached homes. During the past decade, many lots with older homes have been redeveloped with newer and larger houses, resulting in the loss of many older trees, ~~and~~ reducing the Town's overall tree canopy, ~~and increasing the amount of impervious surface in the Town~~. More-dense housing types have also been developed, especially in areas between the Maple Avenue corridor and single-family neighborhoods. These developments also tend to reduce tree canopy, at least in the short run until new trees grow to full maturity.

Landscaping along the Maple Avenue commercial/mixed-use corridor is sporadic, though recent investments have enhanced its visual appeal. On the whole, there is relatively little tree cover or other green areas within private developments, resulting in a majority of the corridor being impervious surfaces. A similar situation exists in the light-industrial area along Mill Street NE and Dominion Road NE. Though no comparable investments in landscaping have been made in this area, the W&OD Trail that runs between Mill and Dominion offers ~~some trees and plants in its open spaces a green footprint~~, despite Dominion Energy's recent removal of a significant number of trees along the corridor.

Some natural settings remain, primarily in parks and along stream valleys; however, these areas often include non-native invasive species or need interventions to improve waterflow and reduce erosion. Wildwood, Southside, and Northside parks are all heavily wooded and follow stream valley corridors.

## Watersheds

Several separate watersheds pass through the Town. Wolftrap Creek, a tributary of Difficult Run, runs north through the eastern portion of the Town. Piney Branch begins near Mill Street NE and flows north into Difficult Run. Bear Branch, a tributary of Accotink Creek, flows south from the southwest part of the Town. Hunters Branch has its origins near Moorefield Park and flows south into Accotink Creek.

## Floodplains

Floodplains are located within three of the Town's four quadrants. They flank the streams of Bear Branch in the southwest quadrant and Piney Branch in the northeast quadrant. Floodplains are also present along Wolftrap Creek and along a section of Piney Branch within Northside Park in the eastern half of Town. Many lots abutting these floodplains are prone to flooding.

The Floodplain Ordinance (Chapter 18.1 of the Town of Vienna Code of Ordinances) restricts new construction and redevelopment of old structures from taking place in delineated flood plains. Because the ordinance imposes land use controls on development, residents are eligible for participation in the Federal Flood Insurance program administered by the Federal Emergency

Management Agency (FEMA). Affected property owners within a Special Flood Hazard Area also are eligible for lower insurance rates through the Town's participation in FEMA's Community Rating System. The Town's efforts under this program include distributing information on the Town's website regarding the National Flood Insurance Program (NFIP) and guidance on how to protect people and property from flooding.

#### Chesapeake Bay Preservation Areas

The Chesapeake Bay Preservation Act ("Bay Act") requires that the Town implement land use regulations to mitigate nonpoint source pollution and protect the quality of streams and tributaries flowing into the Chesapeake Bay. The Bay Act establishes two levels of land use control to protect water quality: Resource Protection Areas (RPAs) and Resource Management Areas (RMAs).

#### *Resource Protection Areas*

RPAs are 100-foot buffer areas adjacent to and along both sides of perennial streams. RPAs are subject to strict land use controls, as these areas are required to remain free of construction activities except under very restricted conditions.

#### *Resource Management Areas*

RMAs are designated in areas that have potential for contributing to significant water quality degradation through pollution runoff in the natural drainage system. These areas include floodplains and intermittent streams, and lands with sensitive soil conditions, such as hydric or highly erodible soils and soils with high water tables.

#### Climate

Vienna's climate is classified as "Cfa" by the Köppen climate classification. Cfa climates are characterized as humid subtropical climates with long and hot summers and cool-to-mild winters. If climate trends continue, it is likely that the Town will experience an increased number of hot days each year. Further, as ocean water evaporation increases, it is likely that there will be an increased number of high-precipitation events.

#### Trees and Landscaping

Having been recognized as a Tree City USA every year since 2001, the Town has long recognized the contribution of trees and landscaping as community assets and natural resources that need to be protected. However, over the past decade, extensive redevelopment has led to a noticeable decline in the tree canopy within many residential neighborhoods.

In 2023, the Town's Conservation and Sustainability Commission (CSC) presented a report that explored ways that the Town could better preserve and manage its tree canopy. This report recommended both major and minor changes to help Vienna retain, replace, and add trees. In addition, the Town commissioned an Urban Tree Canopy Assessment, completed in 2022, and a street tree inventory, completed in 2023, that targeted tree species and planting locations that would help rebuild the lost canopy, culminating in the Town's Green Streets Project.

To put these studies into action, the Town adopted an alternative approach available under Virginia law to regulating tree canopy during redevelopment in 2024. Vienna established new regulations under the Virginia Tree Conservation Code, as Chapter 17 of the Town Code; formed the Tree Advocacy Committee; and updated its Tree Preservation and Planting Guide, which is tied to the new code provisions and provides guidance and requirements regarding tree planting, canopy, and preservation. Together, these provisions provide more incentives to developers to preserve existing trees and plant trees that are native to the region. Vienna's Town Council has consistently indicated a desire to adopt even stricter requirements to protect and enhance the Town's tree canopy, but current Virginia law limits the Town's flexibility in this area.

**Goal 1: Preserve and enhance the Town's natural environment.**

The Town is known for historically having a rich tree canopy; however, increased redevelopment over the past decade has reduced this canopy. It is vital that the Town uses its available tools to protect existing trees and encourage the planting of more trees in both public and private spaces. Encouraging planting and maintaining native, drought-resistant trees and other vegetation supports local biodiversity and ecosystems, provides food for pollinators, and contributes to the Town's beauty.

**Policy 1.1: Promote diverse native vegetation.**

Strategy 1.1.1: During the development review process, support efforts to preserve and protect native habitat and vegetation.

Strategy 1.1.2: Continue to support collaborations between the Town and Fairfax County regarding stream valley enhancement that increase wildlife and aquatic habitat, increase groundwater recharge, stabilize stream flows, and decrease sedimentation.

Strategy 1.1.3: Increase Town plantings of native and drought-tolerant plants, shrubs and trees, including in rights-of-way and along roadways.

Strategy 1.1.4: Where appropriate and likely to be successful, Encourage planting of native plants, shrubs, trees and pollinator gardens by residents and businesses.

**Policy 1.2: Encourage the removal of harmful invasive species from publicly- and privately-owned land.**

Strategy 1.2.1: Educate the public on how to identify invasive species and about the damage they cause.

Strategy 1.2.2: Adopt and promote policies encouraging the removal of invasive plants and trees.

Policy 1.3: Maintain and enhance the Town's tree canopy.

Strategy 1.3.1: Maintain, protect, and extend the mature tree canopy and green spaces by ensuring adequate funding in the Town budget to plant; maintain, and, as necessary, remove or replace trees in parks and public spaces.

Strategy 1.3.2: Enforce Vienna's tree ordinance during the redevelopment process, bolstering tree protection as permissible under Town and State law.

Strategy 1.3.3: Advocate to the Virginia State legislature for more flexibility to impose stricter tree-preservation and tree-planting requirements during the redevelopment process, with the goal of increasing the Town's tree canopy.

Strategy 1.3.4: Coordinate with NOVA Parks and other local jurisdictions to urge Dominion Energy to protect and ~~, if necessary,~~ replace the tree canopy along the W&OD Trail.

Strategy 1.3.5: Continue commitment to the Town's Tree City USA designation.

Strategy 1.3.6: Educate residents, businesses and developers about the economic and environmental value of preserving trees through existing and new Town programs.

Strategy 1.3.7: Prepare an Urban Forest Management Plan to provide goals, policies, and strategies to protect, enhance, expand, and preserve public trees and the tree canopy for the benefit of the community.

Strategy 1.3.8: Consider creating a heritage tree ordinance to protect trees of a certain size, species, and/or other qualities as appropriate.

## **Pollutant Identification and Reduction**

### Water Pollution

Water pollution can come from two main sources: point sources and nonpoint sources. A point source is a single identifiable origin of pollution, such as a leaking gasoline tank or discharge from a wastewater treatment plant. Nonpoint sources are more diffuse and typically result from various land use activities across urban and rural landscapes.

#### *Point Sources of Potential Pollution*

Two commercial car washes are located within the Town, both of which are required to manage and recycle their wash wastewater on-site. Vienna also has several commercial gasoline stations with underground storage tanks and two municipal fueling stations with above-ground tanks. All gasoline stations are required to inspect their underground storage tanks and ensure compliance with applicable state and federal standards. There have been no reported leaks from underground storage tanks in the Town within the last fifteen years. If leaks are reported or suspected, the Town works with the Virginia Department of Health to investigate the situation and, when necessary, requires full on-site remediation systems including groundwater/free-product recovery wells, granular activated carbon systems, and/or monitoring wells.

Other potential water pollution sources include leaching trash dumpsters, ~~and~~ improperly stored refuse, ~~auto repair shops, and the pickup and disposal of hazardous waste~~. These situations are prohibited by the Town's Refuse Storage, Collection and Disposal Ordinance and are enforced by Town staff. The Town has no landfills or dumps, though the Town's Department of Public Works maintains its road salt supply under cover at the Northside Property Yard. Stormwater management at that site prevents downstream pollution from the stored road salt. In the past, the Town instituted stormwater management measures to filter run-off at the Beulah Road mulch site, though the Town no longer processes mulch at that location. The Town of Vienna has also recently implemented water quality improvements at the Northside Property Yard including secondary containment for the salt brine storage tanks and a canopy over existing exposed storage stockpiles.

Business sites that produce wastewater with potentially polluting substances are tightly regulated. Wastewater discharge forms, which are required for every new business application, are designed to identify regulated substances from commercial and industrial sites discharged into the Town's sanitary sewer system and, ultimately, into the regional treatment plants. A business or industry that generates wastewater with a regulated substance is required to design and implement a plan to treat the wastewater consistent with the National Categorical Pretreatment Standards, adopted by reference in the Town Code. In the absence of a Town-approved treatment system the business would be precluded from discharging into the Town's sanitary sewer system.

#### *Nonpoint Sources of Potential Pollution*

The Town also strives to prevent nonpoint source water pollution. Vienna has instituted requirements and programs to prevent pollution of surface water and ground water. The Town Code prohibits the deposit of any substance or material, including leaves, in any storm drainage facility (including gutters, ditches, and water courses) that would lead to water pollution. To encourage proper materials disposal and prevent additional nonpoint source water pollution, the Town

collects yard debris, leaves, and automobile waste (including used motor oil, antifreeze, and batteries). Fairfax County maintains a collection center for other hazardous waste, including pesticides, fertilizers, and paints.

The Town has 50 underground stormwater management/detention systems used to control the quantity and quality of stormwater flow. During a storm event the water is detained underground and held for slow release. This detention process results in the settlement of particles and pollutants that can be regularly cleaned out by the Town's Department of Public Works.

There are also privately owned and maintained stormwater systems throughout the Town, most notably the retention/wet pond on the Navy Federal Credit Union campus in the southeastern quadrant of Town. The system was designed in 1995 in full compliance with the Bay Act. The system includes a Bentonite layer and vegetation for filtration of the retained stormwater and is regularly inspected by the Department of Public Works to ensure it is not leaking into the Town's streams. Navy Federal plans to enhance their current facilities with new environmental technologies.

#### Air Quality

Air quality improvements are coordinated on a regional level through the Metropolitan Washington Council of Governments. The Clean Air Act requires the U.S. EPA to set national air quality standards to reduce pollutants that can harm our health and environment. These national standards limit the concentrations of six pollutants: carbon monoxide, lead, nitrogen dioxide, ground-level ozone, particulate matter, and sulfur dioxide.

Federal standards have been adopted to regulate emissions from vehicles, power plants and other sources of greenhouse gases. The Virginia Clean Economy Act establishes renewable portfolio and energy efficiency standards. Virginia has joined the Regional Greenhouse Gas Initiative, a program to cap and reduce carbon emissions from the power sector in the eastern United States. Virginia also implements programs to reduce methane emissions and has joined the regional Transportation Climate Initiative to reduce carbon emissions from the transportation sector.

The area remains classified as a non-attainment area for ozone. Eighteen air quality monitors located throughout the Washington, D.C. region measure pollutant concentrations throughout the day. Three are in Fairfax County, and the closest sampling station (testing facility) to the Town is in Annandale.

#### Energy

Energy use is an essential component of residential life and commercial enterprise. The Town recognizes that reliable and affordable energy must be readily available for basic functions of homes, businesses, and their multiple (and ever-increasing) devices, but must be provided in an environmentally friendly manner to reduce air pollution and address ~~future weather conditions~~climate change. While the Town does not have its own utility for residents and businesses, it seeks to ensure that resilient sources of energy can be tapped, including traditional and renewable sources such as solar and geothermal.

### *State Goals*

The Commonwealth of Virginia's 2022 Energy Plan focuses on the use of nuclear, natural gas, renewables, and new energy sources to satisfy the increasing energy needs of the Commonwealth. The Virginia Clean Economy Act establishes renewable portfolio and energy efficiency standards and promotes offshore wind and solar generation. Virginia has also joined two regional programs – the Regional Greenhouse Gas Initiative (RGGI) and the Transportation and Climate Initiative (TCI) – to reduce carbon emissions from the power and transportation sectors, respectively.

### *Town Facilities and Operations*

In 2018, the CSC conducted an energy use and greenhouse gas inventory for Town facilities and operations using baseline data from 2016. The inventory calculated energy use and greenhouse gas emissions from electricity, natural gas and vehicle fleet fuel use. Streetlights, park lights and several town buildings were identified as the largest energy users with the highest energy cost to the Town. The cost of gasoline and diesel fuel for vehicles was also significant.

### *Residential and Commercial Changes*

The nature of Vienna's single-family residential character is evolving from modest, mid-20th century homes to larger, multi-story homes. New multi-story homes have larger square footage and require increased heating and air conditioning, though the new homes are sometimes constructed with more efficient energy and water systems. There are also more townhomes, duplexes and other attached and multi-unit residential facilities.

### *Waste Disposal*

#### *Solid Waste Disposal*

The Town offers curbside waste collection to all Town residences, once weekly Monday-Friday. (The Town does not collect waste at assisted living facilities, which are considered commercial establishments.) Waste collection includes household trash, yard waste (20 container maximum pickup limit per day; containers should not weigh more than 20 lbs.), brush, and bulk items in a pile no larger than 8' x 4' x 4'. Seasonal yard waste and plant collections occur in January, when Christmas trees can be collected via curbside collection, and in the late fall when vacuum trucks collect leaves swept to the curb. While the Town previously had a leaf mulch program wherein residents could obtain free leaf mulch, the program was cancelled for 2023 and thereafter; leaves are now temporarily stored at Public Works' Beulah Road facility and then hauled out of town for disposal.

The Town does not pick up household hazardous waste products, including but not limited to fluorescent light tubes, fuel tanks, insecticides, paints, oil, and solvents. These may be disposed of at the Fairfax County Transfer Station at 4618 West Ox Road.

### *Recycling*

As with waste collection, the Town collects household recycling once weekly Monday-Friday. The Town provides "single stream" recycling, meaning recyclable materials may be comingled. The Town does not offer glass recycling; Fairfax County offers glass recycling bins at locations



throughout the county for intake glass. The two closest bins for Town residents are at 431 Mill Street NE and at the Providence Community Center at 3001 Vaden Drive.

The Town also offers drop-off battery recycling for almost any size regular or rechargeable battery, including lithium-ion and single-use batteries. Residents may drop off batteries for recycling at either Town Hall or the Community Center for recycling during business hours. They can also bring their batteries, ~~as well as their electronics and scrap metals.~~ to the Northside Property Yard on Quarterly Recycling Days, ~~to be held in~~ held every March, June, September, and December; or to either the Fairfax County I-66 or I-95 Transfer Station at any time.

### *Composting*

Though the Town does not offer composting services at this moment, residents are encouraged to compost household materials to the extent possible. ~~While home composting creates nutrient-rich soils that can be reused, r~~ Residents who are unable to take advantage of home composting can choose to dispose of their compostables at either the Fairfax County I-66 or I-95 Transfer Station or at any Fairfax County farmers market (excluding the Vienna Farmers Market). Alternatively, there are private companies that will pick up compost from residents' homes for a fee.

### **Goal 2: Reduce sources of pollution within the Town.**

Pollution creates both human health and environmental hazards, contributes to ~~climate changes~~ severe weather events, and reduces the attractiveness of a community. Mitigating pollution to the greatest extent possible is ~~not just~~ critical to keeping Vienna a community of choice both today and in the future ~~but is also the morally and ethically right thing to do for future generations' benefit.~~

#### **Policy 2.1: Protect and preserve water resources and improve water quality.**

Strategy 2.1.1: Adopt and promote policies encouraging residents, businesses and Town staff to reduce use of lawn chemicals and pesticides that result in polluted stormwater runoff.

Strategy 2.1.2: Adopt and promote policies encouraging residents, businesses, and Town staff to conserve water and use water-efficient products.

Strategy 2.1.3: Support collaborations between the Town and Fairfax County on stream restoration and enhancement projects that improve wildlife and aquatic habitat, increase groundwater recharge, stabilize stream flows, and decrease sedimentation. See also Strategy 1.1.2.

#### **Policy 2.2: Maintain effective stormwater management practices**

Strategy 2.2.1: Adopt policies reducing the amount of impervious surface in Town.

Strategy 2.2.2: Promote using permeable pavers and advanced rainwater collection surfaces for parking lots and sidewalks.

Strategy 2.2.3: Implement stormwater programs, policies and ordinances that meet or exceed state and federally mandated stormwater and Chesapeake Bay protection requirements.

Strategy 2.2.4: Enforce the Town's stormwater management regulations, erosion, and sedimentation control requirements, and Chesapeake Bay Preservation Act ordinance.

Strategy 2.2.5: Encourage tree preservation and planting as a means of stormwater management and erosion control. [See also Strategy 1.1.2.](#)

Strategy 2.2.6: Improve public and private stormwater infrastructure on an as-needed basis.

Policy 2.3: Protect air quality by reducing emissions that are harmful to human health and the environment.

Strategy 2.3.1: Adopt and promote policies encouraging residents, business and Town staff to reduce energy use, purchase energy-efficient products, and use low-pollution transportation options.

Strategy 2.3.2: Reduce single-use occupancy vehicle travel by ~~supporting and encouraging flexible work schedules and telecommuting policies;~~ promoting transit and bicycle use; enhancing sidewalks, trails and pathways around Town; and establishing opportunities for visitors to park once and walk to multiple destinations.

Strategy 2.3.3: Take steps to reduce energy use and greenhouse gas emissions at sources identified in the CSC's energy use and greenhouse gas inventory.

Strategy 2.3.4: Continue to seek grants under the Congestion Mitigation for Air Quality (CMAQ) program for projects that reduce criteria air pollutants regulated from transportation-related sources.

[Strategy 2.3.5: Encourage the installation of electric vehicle charging stations to promote the expansion of electric vehicles.](#)

[Strategy 2.3.6: Implement new traffic signal system and signal timing strategies that reduce stops leading to increased vehicle emissions.](#)

Policy 2.4: Identify and encourage means of reducing energy consumed through traditional sources.

Strategy 2.4.1: Promote solar panel installation, particularly through programs such as Solarize Vienna, as well as energy efficient products and upgrades in new construction, renovations, and remodels.

Strategy 2.4.2: Encourage businesses to reduce their energy consumption through LEED, ENERGY STAR, and the Commercial PACE (Property Assessed Clean Energy) program in Virginia.

Policy 2.5: Encourage reduction and proper disposal of household waste.

Strategy 2.5.1: Maintain the Town's robust recycling program and develop strategies to increase recycling and reduce the amount of waste generated by residents, businesses and the Town.

Strategy 2.5.2: Continue to look for an appropriate food waste drop-off site in Vienna while exploring the feasibility of establishing a town food waste collection program.

Strategy 2.5.3: Engage in outreach-education efforts to encourage composting at home and promote use of county food waste drop-off sites and private compost collection services.

## Resiliency and Sustainability

Resiliency refers to the capacity of a community to anticipate, prepare for, respond to, and recover from significant multi-hazard threats with minimal damage to social well-being, health, the economy, and the environment. Resiliency is essential for communities like Vienna to prepare for and adapt to expected and unexpected impacts of ~~future weather conditions~~climate change. These impacts include more frequent extreme weather events, such as droughts, floods, storms, and heat waves. Additional impacts include changes to wildlife and habitats, increases in mosquito and tick-borne diseases, and related human health impacts. The Town should integrate resiliency into its policies, planning, programs and infrastructure, while also seeking innovative approaches to reduce greenhouse gas emissions and promote energy efficiency and sustainability.

Sustainability is a way of living that allows communities to meet current needs without compromising the ability of future generations to meet their needs as well. Pursuing community sustainability is especially important because many natural resources are finite, and the local effects of a changing environment are becoming more evident. Vienna has embraced the goal of sustainability to protect our natural environment and conserve finite resources, ~~and it~~The Town should continue to ~~seek out~~explore and adopt new and innovative approaches to ~~lower~~mitigating greenhouse gas emissions, ~~increase and promoting~~ energy efficiency, and support sustainable practices.

These environmental goals are closely connected to the Town's emergency preparedness and infrastructure efforts, as described in the Community Facilities and Infrastructure chapter. The Town works with Fairfax County and the Commonwealth of Virginia to plan for emergencies, keep essential services running, and communicate with residents during extreme weather and other hazards. By connecting sustainability with emergency planning, Vienna strengthens its ability to protect residents and recover quickly from future challenges.

## Partnerships and Collaboration

The Town chartered the Conservation and Sustainability Commission (CSC) to guide efforts related to sustainability, conservation, and resiliency. The CSC collaborates with Town Council, other boards and commissions, Town departments, and the broader community to achieve its mission. The Town also participates in sustainability initiatives at the state, county, and regional levels, including efforts such as Fairfax County's Community-Wide Energy and Climate Action Plan (CECAP), the Local Energy Alliance Program, and Solarize Virginia.

## Community Sustainability Programs and Events

Vienna works to increase public awareness of environmental issues through a variety of programs and events aimed at educating residents and businesses and encouraging sustainable practices.

### *Solarize Vienna*

Launched in 2015, Solarize Vienna promotes solar installations for homes and businesses through bulk purchase discounts and partnerships with vetted solar installers. Participants are offered a federal investment tax credit which has ranged over the years under federal law. In 2023, the Inflation Reduction Act (IRA) increased the tax credit for solar energy improvements to 30%.

Solarize Vienna has also partnered with installers for fixed pricing and installation of electric vehicle (EV) chargers, which allows participants to bundle solar and EV charger installation. Solarize Vienna is run by the Local Energy Alliance Program in partnership with the Northern Virginia Regional Commission.

#### *Vienna Eco-Efficient Homes Initiative*

The Vienna Eco-Efficient Homes Initiative is managed by the CSC and recognizes architects, remodelers, builders, renters and homeowners who incorporate energy conservation and efficiency into design and construction. Recognized actions include installing grid-connected solar panels or shingles; participation in Solarize Vienna; construction to meet an independent third-party certification program like LEED, Energy Star, NAHB's National Green Building Standard, Earth Craft House or Passive House; 70 or better score on the Home Energy Rating Scale for existing homes or 65 or better for new homes; installing advanced energy efficiency technologies such as geothermal heating/cooling or solar heat collectors; taking steps to reduce total energy consumption and waste; and achieving 30% of tree canopy coverage by 10 years after development.

#### *Sustainability Challenge*

The Sustainability Challenge is a voluntary, free self-certification program designed to help Vienna businesses, nonprofits, and community organizations achieve and model sustainability for the community. Organizations evaluate their current practices and document their sustainability activities, using a certification checklist to benchmark and set goals in the areas of energy, water, waste reduction, purchasing, and transportation. Participants who achieve the required number of points each year are recognized by the Town.

#### *Green Expo*

The annual Green Expo showcases local and regional examples of environmentally friendly products, services and practices and educates the public on how to live more sustainably. Exhibits focus on green landscaping ideas, composting, recycling, energy efficiency, solar power, water conservation, wildlife conservation and more. The expo also highlights winners of the annual student environmental creativity contest, where students submit artwork and essays in response to prompts about environmental sustainability.

#### *Arbor Day Tree Plantings*

Each year on the last Friday in April, the Town's Parks and Recreation Department and Tree Advocacy Committee hold tree planting events throughout the Town at different public sites. Elected officials, Town staff, scouting groups, and community members come together as volunteer tree planters to commemorate Arbor Day and the Town's commitment to increasing its tree canopy.

#### *Thermal Cameras*

Thermal cameras are available on loan for Town residents to identify hot and cold spots in their house caused by air leaks or poor insulation. These are some of the easiest home fixes to make, and these repairs have a direct financial benefit related to energy costs. The cameras attach to

smartphones and take thermal photos of walls and around doors and windows. Two Android and two iPhone-compatible cameras are available for checkout at the Community Center.

#### *Native Plants Sale*

Native plant sales are held in the spring and fall each year at the Community Center to make it easier for residents to acquire plants that enhance the population of pollinators and other beneficial insects and birds in the region. Information on native plants and sustainable garden practices is also available during the sales.

### **Goal 3: Serve as a model for small communities in environmentally friendly, sustainable, and resilient operations.**

Though Vienna may not have the same resources as larger jurisdictions, it can be a leader in how smaller jurisdictions use available resources to make decisions and changes that positively impact the environment and prepare for a future increasingly impacted by ~~severe weather events~~~~climate~~ **change**. Through taking energy-conserving and sustainable action with Town purchasing, operations, and policies, it demonstrates the behavior it wishes to encourage and provides both the encouragement and the structure for others within the Town to do the same.

Policy 3.1: Invest in environmentally friendly, ~~resilient~~, and sustainable upgrades within the Town's facilities and utilities.

Strategy 3.1.1: Continue to make environmentally responsible, energy-saving renovations and upgrades at Town facilities.

Strategy 3.1.2: Continue to coordinate with Fairfax County and other partners on environmentally friendly updates to facilities and infrastructure that are not Town-owned.

Strategy 3.1.3: Require the adoption and implementation of ~~cutting-edge~~ green building practices ~~(e.g., LEED)~~ for design, construction and operations of new and renovated Town facilities, and revise Town procurement policies to require purchase of Energy Star or other energy-efficient products and equipment.

Strategy 3.1.4: Invest in a Town fleet that includes low-emission and alternative fuel vehicles and install electric vehicle charging infrastructure in Town.

Policy 3.2: Develop, implement, and maintain sustainability initiatives, policies, and programs that meet the needs of the Town's current and future citizens and businesses.

Strategy 3.2.1: Monitor existing programs' efficiency and effectiveness; improving, modifying, or eliminating as needed to best suit the Town's needs and take advantage of new research and technologies pertaining to sustainability.

Strategy 3.2.2: Identify, develop, and/or promote programs so all residents and businesses can benefit from energy efficient improvements that save money on utility bills, regardless of income level.

Strategy 3.2.3: Consider ~~climate change~~future weather conditions, energy use, and the environment when making land use and zoning decisions.

Policy 3.3: Encourage green building strategies in new construction and renovations.

Strategy 3.3.1: Promote the adoption of third-party certified energy efficiency programs for new residential and commercial construction and major renovations in Town.

Strategy 3.3.2: Adopt policies and programs and utilize incentives to educate and encourage homeowners, homebuilders, and contractors to prioritize sustainable choices when renovating or constructing homes or commercial buildings.

Strategy 3.3.3: Advocate that Fairfax County adopt standards that incorporate sustainability standards in its building code for all new construction and renovation.

Policy 3.4: Develop and maintain a resiliency plan that addresses the effects of ~~climate change~~future weather conditions.

Strategy 3.4.1: Assess and update emergency plans for extreme weather events.

Strategy 3.4.2: Ensure that stormwater management practices are up-to-date and account for increases in flooding events.

Strategy 3.4.3: Work with regional and state agencies in combating the spread of vector-borne diseases that may be exacerbated by ~~climate change~~future weather conditions.

#### **Goal 4: Engage and empower the community to achieve community goals for environment and sustainability.**

Vienna residents are engaged in their community and understand that the decisions we make today impact future generations. By encouraging greater participation in environmental and sustainability events and programs and by recognizing those who commit to environmentally friendly and sustainable ways of life, the Town, residents, businesses, institutions and the environment all benefit.

Policy 4.1: Increase public awareness and education on environmental issues and sustainability.

Strategy 4.1.1: Expand public outreach through Town communication channels (e.g., newsletter, website, and social media) to share tips, resources, and event information related to sustainability.

Strategy 4.1.2: Develop and distribute seasonal guides (e.g., “Sustainable Spring,” “Eco-Friendly Fall”) highlighting timely actions residents and businesses can take.

Strategy 4.1.3: Partner with schools, libraries, and community organizations to offer sustainability workshops, speakers, and student projects.

Strategy 4.1.4: Continue and enhance annual community events like the Green Expo, native plant sales, and student environmental creativity contest.

Policy 4.2: Encourage hands-on resident participation in sustainability programs.

Strategy 4.2.1: Expand volunteer opportunities such as tree planting days, stream cleanups, invasive species removal, and garden builds.

Strategy 4.2.2: Launch a “Sustainability Ambassador” program to train and empower residents to lead initiatives in their neighborhoods or civic associations.

Strategy 4.2.3: Provide toolkits for ~~HOAs~~, schools, and civic groups to host their own green events and projects.

Policy 4.3: Recognize and incentivize community sustainability leadership.

Strategy 4.3.1: Publicly recognize residents, students, businesses, and organizations that demonstrate leadership in sustainability through awards, spotlights, or Town Council recognition.

Strategy 4.3.2: Provide mini-grants or in-kind support for neighborhood-scale environmental projects (e.g., rain gardens, pollinator habitats, composting initiatives).

Strategy 4.3.3: Expand promotion and participation in the Sustainability Challenge program for businesses and nonprofits.