Update on Community Goals

The following Table of Contents is provided for reference of how the proposed Community Goals will be incorporated into the Environmental Action Plan.

Goals

Guiding Goals

1. Continue to Advance Sustainability Initiatives in the Community
2. Reduce Overall, Community-Wide Greenhouse Gas Emissions and the Intensity of Greenhouse Gases Emitted from Different Activities
3. Continue to Grow and Deepen Local Partnerships in Order to Further the Implementation of the Environmental Action Plan (EAP)

Community Goals

1. Promote reducing GHG emissions at a speed and scale consistent with current science
2. Ensure that the transition to a low carbon future is effective, affordable, equitable and inclusive and prioritize actions that increase financial stability of Harrisonburg households and businesses
3. Promote adoption of clean, renewable energy
4. Prioritize actions that have intersectional benefits with other environmental and City priorities
5. Promote public engagement in GHG reduction emission planning including increasing public education, awareness, and involvement
6. Promote local climate resiliency and adaptation measures

Focus Area 1 - Buildings and Energy

1. Encourage Producers of Electricity Supplied to the City to Include More Carbon Free Sources
2. Understand the City's Energy Use
3. Decrease Energy Use Intensity of Municipal Buildings
4. Decrease Energy Use Intensity of City School Buildings
5. Optimize Energy Use of Water Operations
6. Encourage Efforts to Improve Energy Efficiency and Increase Renewable Energy and Sustainable Energy Sources

Focus Area 2 - Land Use and Green Space

1. Modernize and Establish Enduring Land Use and Development Patterns
2. Maintain and Create a Well-Distributed and Accessible Parks and Recreation System
3. Maintain and Increase a Healthy Tree Canopy
4. Evaluate Opportunities for Underutilized Public and Private Lands and Consider Opportunities to Rehabilitate and Create New Natural Habitats

Focus Area 3 - Regional Food Systems

1. Promote Accessibility to Local, Healthy, and Sustainably Produced Food
2. Support Sustainable Food Production, Selection, Distribution, and Disposal Practices

Focus Area 4 - Sustainable Transportation

1. Develop an Alternative Fuel Fleet Program
2. Implement Sustainability Practices into Municipal Fleet Management

3. Increase Public Transit Ridership
4. Traffic Signal Optimization and Timing Improvements
5. Support Alternative and Low-Carbon Forms of Transportation and Improved Fuel Efficiency
6. Continue to Coordinate Land Use Planning and Regulations with Transportation Planning

Focus Area 5 - Waste Reduction and Recycling
1. Support and Promote the Reduction of Refuse in Landfills
2. Support and Promote the Reuse of Usable Items
3. Support and Promote Recycling
4. Support and Promote Healthy and Safe Solid Waste Disposal

Focus Area 6 - Water Resources
1. Protect and Secure Drinking Water Sources
2. Implement the Water Use and Water Loss Management Plans
3. Protect Stream Health Through Sanitary Sewer Management
4. Protect and Enhance Water Quality of Surface Water and Stormwater Runoff

Community Goals

The overarching principle of community goals is to empower our entire community to work together to slow the effects of climate change. Reaching the necessary greenhouse gas reduction goals will be reliant on choices made within the community including lifestyle changes in how we live, work, and travel. These community goals should be used to inform future implementation of climate and environmental action. It is important to note that these community goals are the City of Harrisonburg's aspirational vision for our community. These do not represent community goals as voiced by the community through public engagement. During the development of Phase I of the EAP, a traditional community engagement process was conducted. An additional updated community engagement process will be an important future iteration of this Action Plan.

Community Goal 1 – Promote reducing GHG emissions at a speed and scale consistent with current science

The Harrisonburg community must work together toward reducing Greenhouse Gas emissions to a level that aligns with the United States' Nationally Determined Contribution in order to minimize the impacts of climate change[1]. Specifically, a reduction of 45% in GHG emissions from 2016 levels is needed by 2030 in order to limit warming to 1.5-2°C (2.7-3.6°F) by 2050. Achieving this will require concerted efforts including improvements to building efficiency, a decreased use of fossil fuels in transportation, and a transition to renewable energy sources.

Over the next decades, Harrisonburg will see an increased risk of extreme heat events, flooding, and drought conditions. Climate change will also exacerbate public health threats like infectious diseases, such as Lyme and West Nile, and air pollution from heat-related smog and wildfires. Agriculture in the Shenandoah Valley is vulnerable to increased risk of water shortages, damage from invasive species, and extreme heat[2].

While some of this change is unavoidable, Harrisonburg can do its part to quickly lower emissions in hopes of avoiding the worst of these impacts. It is worth noting that a 45% reduction by 2030 is incredibly ambitious. Accomplishing these goals will require both staff time and funding resources, both of which are currently limited. However, 45% reduction by 2030 and carbon neutrality by 2050 are goals necessary according to current science and are aligned with many peer cities across the nation.

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[1]https://unfccc.int/sites/default/files/NDC/2022-06/United%20States%20NDC%20April%2021%202021%20Final.pdf
[2]https://mostcenter.umd.edu/sites/default/files/2020-08/understanding-virginias-vulnerability-to-climate-change.pdf

Community Goal 2 – Ensure that the transition to a low carbon future is effective, affordable, equitable and inclusive and prioritize actions that increase financial stability of Harrisonburg households and businesses

Historically disadvantaged and lower-income communities and households are disproportionately impacted by climate change. These groups also tend to have the fewest resources to help mitigate climate change impacts, such as access to air conditioning and filtration, the ability to pay for increased energy expenses during extreme weather events, or adequate insurance to recover from climate-based damage. These communities are also more likely to have pre-existing health conditions that put them at further risk from air pollution and extreme heat.

Fortunately, many climate solutions can also increase the financial stability and health outcomes of the historically disadvantaged and low-income communities, like home weatherization, energy efficiency renovations, rooftop solar, effective public transit systems, bicycle and pedestrian infrastructure, and green space access and tree cover.

As the City moves towards a low carbon future, our actions need to consider ways to increase resilience with equitable access and participation. The burdens and benefits of climate change policy should be fairly distributed.

Community Goal 3 – Promote adoption of clean, renewable energy

We need energy to power many of our daily activities. Cars, homes, businesses, and schools all require energy. Traditionally, these activities have been powered by fossil fuels that emit greenhouse gases when burned. While Municipal goals and plans are somewhat easier to develop since the City is mostly in control of the buildings and operations that result in emissions, Municipal emissions only account for approximately three to four percent of the total Harrisonburg Community emissions. The City should prioritize and incentivize actions that increase the penetration of solar, wind, geothermal and other clean, renewable energy forms on our grid. Additionally, the City can incentivize and educate the public on ways to lower the emissions of their home, travel, and lifestyles. The City can also publicize funding opportunities and technical assistance for energy efficiency renovations and transitioning to clean, renewable energy.

Community Goal 4 – Prioritize actions that have intersectional benefits with other environmental and City priorities

As the City develops plans and programs, it is important to note that some actions have additional benefits that are not directly related to reducing greenhouse gas emissions. These benefits may include cleaner air, green job creation, economic growth, health benefits, connection to community, active travel, increased biodiversity, sustainable behaviors and lifestyles, resilience, improved resource efficiency, and improved general quality of life. For example, in addition to carbon sequestration, tree canopy cover reduces energy use in nearby buildings, improves air and water quality, improves neighborhood

appearance and property values, increases wildlife habitat, reduces the urban heat island effect, helps to manage stormwater, and provides shade on sidewalks to make walking more appealing. As another example, active transportation reduces energy used in transportation, improves health outcomes, increases connectedness to nature and community, and reduces wear on public road infrastructure. Where possible, the City should prioritize action that reduces greenhouse gas emissions and meets other City priorities.

Community Goal 5 – Promote public engagement in GHG reduction emission planning including increasing public education, awareness, and involvement

Traditional public engagement focuses on the public hearing format whereby citizens show up to a scheduled meeting at a public facility and get a chance to speak. Often the public speaking portion occurs at the bookends of the meeting, with individuals given a limited time to speak. This set-up discourages exploration of viable alternatives, creating instead a situation in which participants are pushed toward one side or the other of an all-or-nothing dichotomy. The participants who speak self-select and often are not representative of the community. Rarely do individuals get a chance to have a dialogue or even a conversation; instead they direct their comments to the decision makers. Final actions involve little to no co-creation and decision makers have little information about what the community, as a whole, supports.

Public engagement in recent years has also included public surveys and open houses, which offer more potential for reaching a broader diverse group and expressing interest in more ideas. While valuable, these processes still lack structure, discourse, dialogue, and deliberation. As a result of the minimal discourse in traditional public engagement, many contentious items remain a hot topic and participants are either winners or losers. The process can lead to feelings of disenfranchisement, distrust, and polarization. Lastly, the traditional public input process can lead to less informed, sustainable, and legitimate decisions.

To cultivate more meaningful public engagement, future engagement processes should utilize structures and processes, such as Deliberative Democracy, to empower community members to be active in decision-making. These structures and processes aim to create a space whereby all people within the community have a chance to be heard. While the ideal state of "all" is not possible outside of a direct democracy, we can design our decision-making processes to be more representative of our community. Being more inclusive means not only including diverse group identities, but also making sure that the loudest and most frequent voices are not the only ones at the table. To achieve this, the Deliberative Democracy approach aims to bring individuals and policy makers together in various formats for face-to-face interaction with a facilitator who is equipped to help the group engage and talk through complex problems that often involve different value prioritization and difficult tradeoffs.

Environmental issues are often considered "wicked problems[3]" because there are no easy solutions, many interdependent factors that take years to see change and impacts, and often involve tradeoffs. Engaging with the public from different organizations, institutions, communities, and backgrounds will help to develop more holistic responses as well as reducing disparate impacts. The public includes, but is not limited to:

- Harrisonburg residents
- Harrisonburg businesses
- Civic and community organizations
- Educational institutions
- Faith organizations
- Homeowners and renters
- Property managers and landlords
- Low-income households and public housing residents
- Recent immigrant communities and non-English speakers
- Harrisonburg customers, tourists, and visitors

Community Goal 6 – Promote local climate resiliency and adaptation measures

Scientific analyses find that the climate is expected to become generally warmer, wetter, and weirder compared to historical trends. Changes predicted include more frequent extreme heat events, warmer winters, more frequent droughts, increased rain intensity, increased inland and urban flooding, and more severe storm and wind events[4]. The growing frequency and intensity of the impacts will be felt by community members and make it harder for the most vulnerable populations to seek relief or adapt.

The previous Community Goals primarily addressed mitigation efforts which focus on the reduction or elimination of actions or behaviors that contribute to climate change. Mitigation is often described as one of three essential pillars for addressing climate change with resilience and adaptation being the other two. Resilience is defined as the capacity of a system (whether social, economic, or natural) to cope with a hazardous event, trend, or disturbance, in this case those caused by climate change. Adaptation is defined

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[3] The term "wicked problems" refers to complex, multifaceted problems with lots of interdependencies and no easy solutions which often require trade-offs. Stony Brook University notes "Climate change, like problems in education policy and public health, is a wicked problem. It avoids straightforward articulation and is impossible to solve in a way that is simple or final. Our changing conversations around climate science and conservation, the unique regional factors that determine the local consequences of climate change, and our ability to present endless possible solutions (as well as the irreversibility of these solutions) require we approach climate change with holistic and collaborative reasoning in search of long-term, future focused solutions." For more information see: https://www.stonybrook.edu/commcms/wicked-problem/about/What-is-a-wicked-problem

[4] For more information about predictions for climate change impact in Virginia, read Fairfax County's February 2022 Climate Projections Report: https://www.fairfaxcounty.gov/environment-energy-coordination/sites/environment-energy-coordination/files/assets/documents/resilient%20fairfax/resilient%20fairfax_climate%20projection%20report_final%20august%202022%20a-1a.pdf

as changing human systems and behaviors to better withstand the effects of the changing climate, for example, increasing greenspace to better absorb increased rainfall.

Resiliency and adaptation measures can be applied to all infrastructure, including built, nature-based infrastructure, or natural areas. Resilient infrastructure and buildings can withstand climate impacts, keep residents safe, and reduce service disruptions. For example, structures prone to urban flooding can implement floodproofing techniques like installing watertight shields on windows and doors. Nature-based infrastructure, also called green infrastructure, use, combine, or emulate nature into the built environment to increase resilience. While there is no universal definition, the following clarify the potential scope of mimicking or using nature in the built environment. The Nature Conservancy defines nature-based solutions as "project solutions that are motivated and supported by nature and that may also offer environmental, economic, and social benefits, while increasing resilience.[5]" Meanwhile, the World Bank Group defines the term green infrastructure as "intentionally and strategically preserving, enhancing, or restoring elements of a natural system … and combines them with gray infrastructure to produce more resilient and lower-cost services.[5]" Lastly, the Environmental and Energy Study Institute defines nature-based solutions as "Restoring and/or emulating nature in order to increase human, ecosystem, and infrastructure resilience to climate impacts. These solutions often result in environmental, economic, and social co-benefits, including carbon sequestration.[5]" For example, trees can reduce the impact of heat waves through natural cooling and absorb excess water during storms. Natural areas enhance resiliency through absorbing, resisting, or minimizing the effects of change or natural disasters. For example, protecting existing forests or restoring a wetland can help filter pollutants out of water. Natural areas that provide resilient benefits should be protected, restored, and expanded due to their many co-benefits, such as habitat for plants and wildlife.

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[5] Definitions and more information can be found from
Luedke, H. (2019). *Fact sheet: Nature as resilient infrastructure – an overview of nature-based solutions* [White Paper]. EESI. https://www.eesi.org/papers/view/fact-sheet-nature-as-resilient-infrastructure-an-overview-of-nature-based-solutions