



Environmental Performance Standards Advisory Committee

Agenda

September 25, 2019 5:00 – 7:00 pm
City Hall, 409 South Main Street, Room 011

5:00-5:05pm	1. Public Input
5:05-6:15pm	2. Discussion of Updated EAP Draft and Endorsement Decision
6:15-6:35pm	3. Schedule Update & Next Steps a. Additional Updated to EAP Draft b. Council Meeting
6:35-6:55	4. Revisions to Bylaws and Terms a. Vote to recommend amended bylaws to City Council
6:55-7:00pm	5. 2019 Meeting Dates a. City Council Meeting - TBD b. December 4, 2019 *Not the 4 th Wednesday
7:00pm	6. Adjourn

Attachments:

1. Redlined Draft Environmental Action Plan
2. Staff Responses to Public Comment
3. Public Comment



Environmental Action Plan

Phase I

Created by Harrisonburg City Staff and the Environmental Performance Standards Advisory Committee

Draft Version: ~~August 19~~September 5, 2019

Acknowledgements

The City of Harrisonburg expresses appreciation to all the individuals who contributed to the preparation of this document.

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Introduction

The Environmental Action Plan (EAP) is a road map for city leaders, staff, and community members to implement sustainability visions and principles. Sustainability is defined by the UN World Commission on Environment and Development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” To-date, the City of Harrisonburg has taken steps to address the quality and care of our natural resources; however, the latest science indicates that more ambitious actions are required to mitigate the impacts of environmental degradation and the changing climate that will affect our community’s health, economy, and well-being.

Protection of natural assets such as air, creeks and rivers, mountains, trees, open space, and important views are critical to maintaining Harrisonburg’s quality of life. The quality of the physical environment – attractive streets, buildings, parks, and open space – has a direct impact on Harrisonburg’s economy, the well-being of its neighborhoods, and the successful stewardship of its unique natural and cultural resources. The community expects a high level of excellence in building design, streetscapes, pedestrian amenities, preservation of special spaces, conservation of natural resources, and enhancement of community distinctiveness. Protecting our natural environment, supporting a wide range of social and cultural amenities, and providing ongoing educational opportunities are the building blocks for attracting new residents and businesses.

It should also be acknowledged that sustainability is also about difficult choices and trade-offs today in [an attempt to improve quality of life in the future. Like many other communities, the City is faced with numerous current and future challenges such as flooding, extreme fluctuation in weather, aging infrastructure, increased energy costs, and supply of water as our demands increase. Effectively preparing for and responding to current and projected climate change requires an ongoing evaluation and a series of action steps, not a one-time assessment. It calls on our community to adopt policies and practices that makes environmental sustainability and resilience a part of the comprehensive planning of our community. It also calls on us to strengthen existing efforts and build partnerships throughout the community to reduce Harrisonburg’s vulnerability to the changing environment.](#)

The development of the EAP is designed to accomplish this goal. The EAP builds upon existing city plans, programs and strategies, and proposes measures to accelerate advancements in sustainability, of which economic vitality, environmental protection, and health and well-being are collectively considered to be critical pieces of achieving sustainability goals and reducing greenhouse gas emissions. Adopting and implementing the EAP helps the City support global targets for a stable climate and a resilient community. The plan includes recommended policy changes in the public sector and incentives in the private sector, as well as recommended actions for both the public and private sectors.

Implementing policies and incentives for our City not only addresses environmental concerns but will also have many co-benefits. For example, improving access to multi-modal transportation improves public health, improves air quality, reduces congestion, and increases safety. Communities that make sustainable development choices are better positioned to preserve landscapes, support robust food systems, and maintain the health and integrity of watersheds, forests, and wildlife habitats.

Environmental Performance Standards Advisory Committee

While City staff has led the effort to develop the EAP, members of the Environmental Performance Standards Advisory Committee (EPSAC) have played an important advisory role in the development of the plan. The EPSAC was established in 2017 to help the City “create a set of environmental performance and sustainability standards for public and private development and redevelopment projects”. On October 23, 2018, EPSAC presented to City Council and requested staff time be appropriated to create an EAP. City staff then worked with EPSAC to create this document which is Phase 1 of the EAP.

Community Input

The draft EAP was developed by ~~EPSAC members and~~ city staff ~~and~~ EPSAC members and then presented to the public at an Open House meeting on June 5, 2019. Approximately 50 members of the public attended to learn more about the process. Comments were solicited in writing from June 5 through June 26 and then reviewed by EPSAC members and city staff and the EAP was revised based on comments.

Scope of Plan and Plan Organization

The EAP is organized into six **focus areas**, areas in which action can be taken to improve the environment and sustainability (Buildings and Energy, Land Use and Green Space, Regional Food Systems, Sustainable Transportation, Waste Reduction and Recycling, and Water Resources). Each focus area has **goal statements**, which are overarching statements describing the direction the community wants to go. Goal statements describe a desired end state for each focus area and reflect the values of the community. Goal statements are qualitative in nature. Each goal has a section that answers the question: **Where are we now?** The City has already taken steps to achieve some goals. When relevant, those actions and initiatives are summarized under each goal statement. This section does not include actions or initiatives by private businesses or community organizations. Each **strategy** within the goal describe *possible* approaches and methods for attaining the goal. The **tasks** listed for each strategy are *possible* actionable items that are steps towards meeting each strategy. Strategies and tasks may be implemented by city departments, private businesses, or community organizations.

It must be noted that during implementation, the City and the community are not limited to implementing only the strategies and tasks described in the EAP nor must those strategies be utilized. There will be instances when new, unforeseen opportunities arise that would support particular goals, but the opportunity was not identified as a potential strategy in the EAP. Likewise, the City and the community might also find that an identified strategy or task is not feasible or no longer appropriate.

Focus Areas

1. **Buildings and Energy:** Improving energy efficiency and reducing energy use in buildings will reduce greenhouse gas (GHG) emissions. There are opportunities to promote energy generation

on-site at public and private properties. There are also ways to reduce the energy consumption of the water and sewer systems that provide services to properties in Harrisonburg.

2. **Land Use and Green Space:** Regulating and guiding the sustainable use of publicly-owned and privately-owned lands and green spaces provides opportunities for promoting positive social and environmental outcomes and an efficient use of resources.
3. **Regional Food Systems:** A food system is generally understood to be the chain of activities connecting food production, processing, distribution, consumption, and waste management. Helping people to understand how the dozens of choices they make every day (what we eat, what we buy, how we use or consume these items, and how we dispose of them) impacts the community will contribute to a sustainable food system and a healthy environment.
4. **Sustainable Transportation:** Sustainable transportation includes alternative fuel public transportation fleets, increasing usage of public transportation, traffic signal optimization, increasing bicycle and pedestrian options, and more.
5. **Waste Reduction and Recycling:** The City of Harrisonburg seeks to determine a sustainable, long-term, and fiscally responsible refuse and recycling program that consistently supports and promotes the reduction of solid waste, the reuse of usable items, and the recycling of materials.
6. **Water Resources:** The watersheds and water systems we depend on to provide clean drinking water must be protected for public health as well as health of aquatic ecosystems. Water resources can be protected by managing drinking water sources, water use, the sanitary sewer system, and stormwater runoff.

Goals

Guiding Goals

- ~~Reduce Overall, Community-Wide Greenhouse Gas Emissions and the Intensity of Greenhouse Gases Emitted from Different Activities~~ ~~Reduce Greenhouse Gas Emissions~~
- 1. ~~_____~~
- 2. ~~Ensure community resilience to changing environmental conditions~~ Ensure Community Resilience to Changing Environmental Conditions
- 3. ~~Ensure That Environmental Benefits And Risks aAre Fairly aAnd Justly Distributed iIn Our Community~~
- 1. ~~with Continue to Ggrow and /Deepen -Llocal Ppartnerships in Oorder to Ffurther Environmental Action Plan Implementation~~
- 4. ~~_____~~

Focus Area 1 - Buildings and Energy

1. Understand the City's Energy Use
2. Decrease Energy Use Intensity of Municipal Buildings
3. Decrease Energy Use Intensity of City School Buildings
4. Optimize Energy Use of Public Utilities Operations
5. Encourage Efforts to Improve Energy Efficiency and Increase Renewable Energy and Sustainable Energy Sources ~~Promote Energy Efficiency and Renewable Energy in the Private Sector~~

~~5.~~

Focus Area 2 - Land Use and Green Space

1. Modernize and Eestablish 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 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
Improve Transportation Safety for All Modes
- 5.
- ~~6.~~ Continue to Coordinate Land Use Planning and Regulations with Transportation Planning
Bicycle and Pedestrian Improvement
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~~ Promote the ~~recycling~~ Recycling of appropriate ~~Appropriate materials~~ Materials and meeting ~~Meeting the state~~ State-mandated ~~Mandated recycling~~ Recycling requirement
Requirement
4. Support and Promote Sanitation, the Health and Safety of Staff, Residents, and Visitors
Citywide 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

Public and Private Sector Considerations

The EAP covers sustainability initiatives in both the public and private sector and will be developed in three phases.

The EAP recommends policies and regulations for the public sector. The public sector includes Harrisonburg City Government as well as Harrisonburg City Public Schools (HCPS). The Harrisonburg Electric Commission (HEC) is a municipal utility, with four major areas of relationship to the city: 1) The City owns HEC; 2) HEC Commissioners are appointed by City Council; 3) HEC operates under City code; and 4) HEC makes mandatory payments into the City's general fund. In day-to-day activities, however, HEC operates independently from the City.

The EAP includes incentives and suggestions for making changes in the private sector. Since Virginia is a Dillon Rule state, the City can only regulate the private sector on matters where the State General Assembly has expressly granted the ability for the City to do so by statute, private act, or charter. For example, the EAP can outline ways to encourage and incentivize private citizens to reduce plastic consumption, but it cannot suggest the City adopt a regulation to ban plastic shopping bags in the City because the General Assembly has not authorized the City to do so.

EAP Phases of Development

The development of the EAP will be completed in three phases (1, 2, and 3). ~~Each phase will be presented to City Council for adoption prior to initiating the next phase.~~ Phase 1 will be presented to City Council for adoption or endorsement prior to initiating Phase 2 and 3.

This document represents Phase 1 of the EAP and describes goals, co-benefits, and strategies, and identifies tasks and responsible parties (such as a city department, private businesses, or community organizations). This document is intended to lay the groundwork for future phases of EAP development and implementation of strategies towards environmental sustainability.

Phase 2 will involve inventorying (gathering data and studying) municipal and community activities to develop baselines to be later used for measuring progress towards achieving goals. For example, Goal 1 includes a strategy to complete municipal and community-wide greenhouse gas emissions inventories. The inventories will provide a snapshot in time of greenhouse gas emissions coming from different sources. During Phase 2, the EPSAC will also work to determine other things that can be inventoried at different points in time so show progress towards meeting the goals of the EAP. Updates to the EAP may be made at this time.

During Phase 3, city staff and EPSAC will ~~work together to add to and update the EAP. Considering~~ consider baseline data gathered and all learned information, ~~targets will be established~~ targets with statements that define a percentage reduction or increase by a specific year. For example, during Phase 2, for Goal 9 – Maintain and Increase a Healthy Tree Canopy, city staff and EPSAC might choose to inventory tree canopy cover using available aerial photography and planimetric surveys from 2015. The baseline could be represented as either the total acreage of tree canopy cover in the City or a percentage of the City covered by tree canopy. Then during Phase 3, a target might be developed to state “Maintain an overall tree canopy of at least 40 percent by the year 2030.”

~~Goals and strategy statements may also be revised at this time.~~ It is possible that Phase 2 and Phase 3 may occur at the same time, as different baselines and targets may take longer than others to determine.

[Additional updates to the EAP, particularly with goals and strategy statements may, also be revised at this time.](#) The updated EAP will be presented to City Council for consideration to adopt.

~~For example, during Phase 2, for Goal 9 – Maintain and Increase a Healthy Tree Canopy, city staff and EPSAC might choose to inventory tree canopy cover using available aerial photography and planimetric surveys from 2015. The baseline could be represented as either the total acreage of tree canopy cover in the City or a percentage of the City covered by tree canopy. Then during Phase 3, a target might be developed to state “Maintain an overall tree canopy of at least 40 percent by the year 2030.”~~

[Guiding Goals](#)

The EAP and implementation of the EAP are ~~influenced~~[guided](#) by ~~four~~[four overarching](#) goals. While many goals within each focus area contribute to reducing green house gas emissions ([Guiding Goal 1](#)), there are also many other goals that are focused on [adaptation and resilience to changing environmental conditions \(Guiding Goal 2\)](#) and [environmental justice \(Guiding Goal 3\)](#).

[Guiding Goal 1 – Reduce Overall, Community-Wide Greenhouse Gas Emissions and the Intensity of Greenhouse Gases Emitted ~~From~~ Different Activities](#)

Gases that trap heat in the atmosphere are called [greenhouse gases](#) (GHGs). The main GHGs are carbon dioxide, methane, nitrous oxide, and fluorinated gases. The Earth is habitable because of a natural greenhouse effect brought about by water vapor and carbon dioxide. However, humans are altering the relative composition of atmosphere by introducing excess greenhouse gases into the atmosphere, mainly by burning fossil fuels. The additional carbon dioxide traps radiation in the atmosphere, amplifying the natural greenhouse effect, and producing warming. Warming is manifested in many ways, not just increasing surface temperatures, but also melting ice, and changing the hydrological cycle and rainfall patterns. If GHG emissions continue as they have, the earth is on course to rise 4 degrees Celsius or more. This could create a rise in sea level, collapse ocean fisheries, create more frequent extreme weather events, and place predictable agricultural conditions in jeopardy. Reduction of GHG emissions in the public and private sector is a goal that cuts across all the focus areas.

[Where Are We Now?](#)

Many of the existing initiatives described within each focus area contribute to reducing greenhouse [gases](#). At the time of adoption of EAP Phase 1, a GHG emissions inventory for municipal operations and for the community has not yet been initiated.

[Strategy 1.1 – ~~Consider Completing~~\[Complete\]\(#\) a GHG Emissions Inventory](#)

The first step towards reducing GHG emissions is understanding where our emissions are coming from. There are two inventories that will be completed: ~~the community wide inventory which includes emissions created by the community as well as the~~ [a municipal inventory, which would capture emissions created by municipal operations and as](#) ~~the community-wide inventory which includes emissions created by municipal operations as well as the Harrisonburg community.~~ Both inventories will consider electricity, natural gas, transportation fuels, and waste used and generated by buildings, vehicles, and other operations.

Task	Responsible Party
Consider becoming <u>Become</u> a member of ICLEI. Local Governments for Sustainability (ICLEI), formerly the International Council for Local Environmental Initiatives, provides tools and support for local governments to inventory greenhouse gas emissions.	City Manager's Office, City Council
Consider c <u>ompleting</u> a community-wide GHG emissions inventory.	City Department TBD
Consider c <u>ompleting</u> a municipal GHG emissions inventory.	Facilities Manager
Measure progress by conducting new community-wide and municipal inventories. (It is recommended that community-wide inventories be completed once every two years and municipal inventories be completed once every three to five years.)	City Department TBD, Facilities Manager

Strategy 1.2 - ~~Consider Setting~~ Set Targets for GHG Emission Reductions

Set targets for GHG emissions reductions for the City of Harrisonburg based on best available science and maximum extent practicable. Hundreds of communities across the USA have set targets, including the Town of Blacksburg, the Cities of Charlottesville, Roanoke, and Richmond, and Arlington and Fairfax Counties. Meeting community-wide targets will require action from the whole community.

Task	Responsible Party
Consider analyzing <u>Analyze</u> the emissions inventories and recommend to City Council targets for reductions.	City staff <u>Departments</u> , EPSAC
Set targets for GHG emissions reductions. Recommendations will be presented by EPSAC and city staff during Phase 3 of EAP development and presented to City Council to consider for adoption.	City Council

Guiding Goal 2 – Ensure ~~C~~ommunity ~~R~~esilience to ~~C~~hanging ~~E~~environmental ~~C~~onditions:

Resilient communities are able to minimize disasters and are capable of bouncing back from adverse situations. They do this by actively influencing and preparing for social, economic, and environmental change by identifying vulnerabilities, identifying opportunities, planning for forthcoming disasters, and taking action to become more resilient.

While resiliency planning can be applied to preparing for and responding to natural and man-made disasters, as well as, economic collapse, the focus of the EAP is on the environment and environmental sustainability.

Where Are We Now?

<u>Initiative</u>	<u>Summary</u>	<u>Status</u>
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Environmental Performance Standards Advisory Committee (EPSAC)	City Council first appointed community members to the newly created EPSAC in November 2016.	Ongoing
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Strategy 2.1 – Continue to [S](#)seek [W](#)ways to [I](#)improve [C](#)community [R](#)resilience-

Task	Responsible Party
Continue to seek ways to improve community resilience when considering new and changes to existing policies, procedures, programs, and projects.	City Departments, Community Organizations, Private Businesses
Continue to seek opportunities for partnership and collaboration and potential for co-benefits, such as air-pollution impacts, community health, reduced fuel costs, employment and economic development opportunities, etc.	City Departments, Community Organizations, Private Businesses

Strategy 2.2 – [E](#)valuate a [P](#)otential [C](#)reate a new [C](#)ity Sustainability Coordinator [P](#)osition

[A “sustainability coordinator” cwould coordinate and support the goals of the EAP. Responsibilities of a sustainability coordinator vary across localities but generally involve managing, facilitating, and advising the development, implementation, monitoring, and improvement of City policies, programs, and initiatives that promote local environmental, energy, economic, and social sustainability. Examples of work they might do include, but are not limited to: leading the planning of city sustainability initiatives and programs; directly managing sustainability initiatives and programs; facilitating collaboration of interdepartmental/agency task forces, teams and working groups; coordinating the management, measuring, and monitoring of sustainability initiatives and programs; promoting sustainability with city staff; communicating sustainability goals and progress to the public; engaging with community/stakeholder groups \(e.g. neighborhood organizations, environmental advocates\); and applying for grant funding to support sustainability efforts.](#)

Task	Responsible Party
Evaluate existing department duties and the need for a Sustainability Coordinator Position	City Manager’s Office, City Departments
If needed, cCreate a job description for a Sustainability Coordinator and determine reporting structure (who the position reports to).	City Manager’s Office, City Council
If needed, bBudget for and hire a Sustainability Coordinator.	City Manager’s Office, City Council

Guiding Goal 3 – Ensure that Environmental Benefits and Risks are Fairly and Justly Distributed in Our Community

Communities of color and low-income communities are disproportionately impacted by and vulnerable to climate change because they often possess few adaptive resources to recover after natural and man-made disasters.

“Environmental justice is fair treatment and meaningful involvement of all people with respect to development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no population bears a disproportionate share of negative environmental consequences resulting from industrial, governmental, and commercial operations or policies. Meaningful involvement means people have an opportunity to participate in decisions about activities that may affect their environment and/or health; the public’s contribution can influence the regulatory agency’s decision; community concerns will be considered in the decision making process; and decision makers will seek out and facilitate the involvement of those potentially affected.”¹

Guiding Goal 4 – Continue to Grow and Deepen Local Partnerships in Order to Further Environmental Action Plan Goals Implementation
~~partnerships with Rockingham County, James Madison University, and others...~~

Where Are We Now?

<u>Initiative</u>	<u>Summary</u>	<u>Status</u>
<u>JMU Liaison Committee²</u>	<u>This committee is composed of two members of City Council and the City Manager who meets with the JMU President and their leadership team. The committee meets quarterly and is an opportunity to provide updates on significant projects and projects, and an opportunity to discuss timely and important issues.</u>	<u>Ongoing</u>
<u>City/County Liaison Committee³</u>	<u>This committee is composed of two members of City Council and two members of the Board of Supervisors, as well as, the City Manager and the County Administrator. The committee meets quarterly and is an opportunity to provide updates on significant projects and projects, and an opportunity to discuss timely and important issues.</u>	<u>Ongoing</u>

¹ <https://www.epa.gov/environmentaljustice/learn-about-environmental-justice>

² <https://www.harrisonburgva.gov/jmu-liaison-committee>

³ <https://www.harrisonburgva.gov/city-county-liaison-committee>

Focus Area 1 - Buildings and Energy

Commercial and residential buildings account for 39 percent of carbon dioxide emissions in the United States annually, due to heating, cooling, lighting, and powering electrical equipment (United States Green Building Council). Improving energy efficiency and reducing energy use in buildings will reduce greenhouse gas (GHG) emissions (GHG emissions). ~~Five goals are included in this focus area.~~

~~Electricity generation and use is a one of the several major contributors of GHG emissions in the US. large contributor to GHG emissions. The Harrisonburg Electric Commission (HEC), which is a public utility that serves all residential and non-residential uses within the City, does not generate electricity for sale, but purchases electricity from Dominion Energy and distributes electricity to customers. When HEC was created by City Council in 1956, it was created such that the electric system was free from the jurisdiction, direction, and control of other city officers, employees, and the City Council. HEC was created by City Council in 1956 as an independent, nonpolitical commission, which means that the City does not have authority to direct HEC.⁴~~

~~Five goals are included in this focus area.~~

Co-Benefits

Co-Benefits to improving energy efficiency and reducing energy use in buildings include: ~~S~~aving money through reduced costs for heating and cooling, improved thermal comfort and indoor air quality, local jobs in the energy efficiency field, hedging against utility price increases and improved health. ~~Energy conservation changes will be consistent with maintaining water quality of Harrisonburg's water supply and maintaining environmental and biodiversity requirements of the existing permits as discussed in the water section of the EAP.~~

Goal 1 - Understand the City's Energy Use

Creating an inventory of energy used by municipal operations is the first step to understanding the consumption, environmental impact, and areas that could be improved upon.

⁴ ~~In January 2011, through a contract with the Virginia Municipal Electric Association (VMEA), in which HEC is one of seven members, HEC entered a 20-year power supply contract with Dominion Energy. The contract remains in effect through May of 2031. The contract is a full requirements contract, which means that HEC cannot purchase power from any other entity nor can it build generation, renewable or otherwise, to offset energy purchases from Dominion. Additionally, the retail customers of HEC may not enter into contracts to purchase power from any other entity; however, rooftop solar installations by its customers are allowed behind the customer's meter under HEC's parallel connection agreement (net metering agreement).~~

Where Are We Now?

Initiative	Summary	Status
Create and support the Facilities Management Program	Harrisonburg has a Facilities Manager who monitors energy use in municipal buildings.	Complete

Strategy 1.1 – Consider Conducting an Inventory Energy Used by Municipal Operations

The energy inventory would describe energy use of different areas of municipal operations, including, but not limited to: fleet vehicles, buildings, street lighting, and distribution of water and sanitary sewage. Task

Task	Responsible Party
Consider creating a standard operating procedure for the inventory, including: what software will be used to complete the inventory, and what should be included (electric, gas, water, and sanitary sewer)	Facilities Manager
Consider completing the inventory. Include local partners such as universities or private consultants.	Facilities Manager
If an energy inventory is completed, to establish an inventory maintenance plan that includes how often the inventory should be updated and who is responsible.	Facilities Manager
If an energy inventory is completed, to share findings of energy inventory with other city departments and the public.	Facilities Manager, Director of Communications

Goal 2 - Decrease Energy Use Intensity of Municipal Buildings

Energy Use Intensity, or EUI, expresses a building’s energy use as a function of its size and other characteristics. It is usually expressed as energy per square foot per year and is calculated by dividing the total energy consumed by the building in one year by the total gross floor area of the building.

Where Are We Now?

Initiative	Summary	Status
Facilities Management Program	The Facilities Manager coordinates maintenance and energy efficiency upgrades on municipal buildings.	Complete

Strategy 2.1 – ~~Consider the Creation of~~ Create a City Internal Energy Team

The Internal Energy Team (IET) may consist of current staff members and/or new positions that will be trained in a high level of proficiency in HVAC, electrical, and plumbing skills, specifically focusing on energy efficient design.

Task	Responsible Party
Consider establishing Create an Internal Energy Team (IET). The IET would be led by the Facilities Manager.	Facilities Manager, City Manager's Office
Consider assessing Assess municipal buildings, facilities, and energy uses to identify maintenance needs and capital improvements. All buildings should be audited initially, and then conditioned or occupied buildings should be audited every five years.	IET
Consider establishing Establish an operations and maintenance program and capital improvement schedule, prioritized based on needs and available funding.	IET
Consider creating Create procedures so that the IET is consulted on the design of mechanical/electrical/plumbing/architectural finishes in new building and retrofit projects so the team's knowledge and expertise of equipment and systems maintenance can be incorporated in design decisions.	IET

Strategy 2.2 – Consider Establishing an Energy Efficiency and Healthy Building Standard

Design and construct municipally-owned buildings and facilities to be energy efficient and “healthy”. Healthy buildings are not just energy efficient but increase the health, productivity, and quality of life of building user by considering factors such as air quality, thermal control, lighting, workplace ergonomics and environmental quality, access to the natural environment, and land use and transportation.

Task	Responsible Party
Consider creating a policy that requires the most recent edition of the International Energy Conservation Code (IECC) to be used in the design of municipal projects, including major retrofits. Where ever the most recent edition of the IECC is more stringent than the currently adopted Virginia Energy Conservation Code, the provisions of the most recent edition of the IECC should be adhered to. The same criteria should apply to all major retrofits.	IET
Consider healthy building standards when designing new construction or retrofit projects.	IET
Consider creating a process to check commissioning reports after project completion to ensure that all systems and components newly installed or retrofitted are designed, installed, tested, operated, and maintained according to the operational requirements and expectations.	IET

Strategy 2.3 - Consider Establishing a Cost Analysis Standard

Cost analysis allows for a fuller understanding of the total costs of a project over time and will help the decision-making process.

Task	Responsible Party
Consider developing a cost-analysis methodology for new municipal construction or retrofit projects. The analysis should consider construction type and materials used and life cycle costs as well as anticipated operating costs.	IET
Consider creating a policy that requires a cost-analysis be performed on new construction or retrofit projects. The cost-analysis will allow for a full understanding of the total costs of construction or retrofit projects over time, as well as anticipated benefits.	IET

Strategy 2.4 - Consider Generating Energy On-Site

On-site energy generation will be encouraged and planned for to reduce the amount of on-grid energy used for things like heating, cooling, and powering electrical equipment.

Task	Responsible Party
Consider creating Create a procedure for determining the cost effectiveness of on-site energy generation that weighs the pros and cons of each project. Consider third-party financing or ownership. This procedure will be used to determine if on-site energy generation will be pursued in different locations.	IET
If feasible, consider constructing new municipal buildings so they are solar photovoltaic installation ready.	IET
Investigate existing municipal buildings and facilities for possible solar photovoltaic installation on rooftops and as ground arrays.	IET
If life-cycle analysis shows on-site energy generation to be cost effective, actively pursue funding and installation of solar photovoltaic arrays.	Facilities Manager, City Manager's Office

Goal 3 - Decrease Energy Use Intensity of City School Buildings

Energy Use Intensity, or EUI, expresses a building's energy use as a function of its size and other characteristics. It is usually expressed as energy per square foot per year and is calculated by dividing the total energy consumed by the building in one year by the total gross floor area of the building.

Implementation of the following strategies and tasks are the responsibility of Harrisonburg City Public Schools.

Where Are We Now?

Initiative	Summary	Status
<u>Sustainability Culture Division Leaders</u>	HCPS is creating a culture of conservation and energy efficiency at all division owned and maintained facilities.	Ongoing

Strategy 3.1 - Consider Creating a Superintendents Advisory Committee on Energy Conservation
 Harrisonburg City Public Schools (HCPS) will consider creating an advisory committee composed of students, faculty, administrators and external stakeholders.

Task	Responsible Party
Consider establishing <u>Establish</u> the Superintendent's Advisory Committee on Energy Conservation (SACE).	HCPS Assistant Superintendent of Operations
Consider establishing <u>Establish</u> a baseline EUI for each division-maintained building.	HCPS SACE
Consider completing <u>Complete</u> an energy audit of each division-maintained building.	HCPS SACE
Consider developing <u>Develop</u> a written report outlining HCPS's current energy conservation steps and develop actionable recommendations to reduce the division's overall carbon footprint. <u>EUI.</u>	HCPS SACE

Strategy ~~4.3~~ 4.2 - Consider Establishing an Energy Efficiency and Healthy Building Standard
 All school division owned buildings and facilities will be designed and constructed with consideration of energy efficiency and cost analysis.

Task	Responsible Party
Consider creating a policy that requires <u>Require</u> the most recent edition of the International Energy Conservation Code (IECC) to be used in the design of school division projects, including major retrofits. Wherever the most recent edition of the IECC is more stringent than the currently adopted Virginia Energy Conservation Code, the provisions of the most recent edition of the IECC should be adhered to. The same criteria should apply to major retrofits.	HCPS Central Office Administration
Consider developing <u>Develop</u> a cost-analysis methodology for school division new construction or retrofit projects. The analysis should consider construction type and materials used.	HCPS Central Office Administration
Consider performing a <u>Require</u> cost-analysis on new construction or retrofit projects. The cost-analysis will allow for a full understanding of the total costs of construction or retrofit projects over time.	HCPS Central Office Administration

Strategy 3.3 - Consider Generating Energy On-Site

On-site energy generation will be encouraged and planned for in order to reduce the amount of on-grid energy used for things like heating, cooling, and powering electrical equipment.

Task	Responsible Party
Consider investigating school division owned buildings and facilities for possible solar photovoltaic installation. Pursue funding and installation if life-cycle analysis shows the project to be cost-effective. Ground arrays should also be included in the analysis.	HCPS SACE, HCPS Central Office Administration
If cost-effective, consider constructing new school division owned buildings so they are solar photovoltaic installation ready.	HCPS Central Office Administration

Goal 4 - Optimize Energy Use of Water and Sewer Operations

The Department of Public Utilities (HPU) is responsible for providing water services to approximately 16,000 residential and commercial customers in the City of Harrisonburg and some parts of Rockingham County. Raw water supply from four sources, treatment, and distribution of the water are all parts of HPU operations. There are energy needs associated with each part of these operations and HPU strives to make the most effective use of energy.

Where Are We Now?

HPU has been making efforts to strategically improve water distribution so that system assets use less electrical power. HPU does this in four ways: load reduction, system configuration, optimization of component efficiencies, and optimization of use within the electrical rate structure. These improvements in water distribution are incorporated into the Potable Water System Management Plan and Raw Water Supply Management Plan. HPU has decreased electrical consumption by 936,771 kilowatt hours per year (or by 21%) during the last five years. HPU energy directed activities since 2006 have reduced electrical energy consumption intensity by 17% from 1,845 kW-hrs/MH to 1,528 kW-hrs/MG.⁵

Initiative	Summary	Status
Energy Load Reduction	In Harrisonburg, the water system has nine independent zones, each with unique energy load requirements. To reduce the energy load, some water customers have been moved into a more efficient zone. The run times on the pumps have decreased to reduce the amount of electricity used and increase the lifespan of the pumps.	Ongoing
System Configuration	HPU strives to configure the water supply system so that water is pumped against the least resistance possible.	Ongoing

⁵ City's Green Efforts - Electrical Optimization Strategy
<https://www.harrisonburgva.gov/sites/default/files/green/Green%20Effort%20Lowers%20Water%20Costs.pdf>

Optimization of Component Efficiencies	Components of the water distribution make a big impact on energy use and efficiency. When possible, HPU makes changes or replaces components such as pump and motor units.	Ongoing
Optimized Use Within the Electrical Rate Structure	Electrical companies provide incentives within their rate structure to encourage more use during lower demand periods and less use during higher demand periods. HPU can work in-sync with the electrical company through best management practices and enhancing the maturity of the computerized Supervisory Control and Data Acquisition (SCADA) System.	Ongoing
Potable Water System Management Plan	HPU's Energy Use Management Plan is being drafted into a new "Potable Water System Management Plan" with general principles and strategies for optimizing energy usage in Public Utilities operations. The Plan identifies benchmarks in kilowatt hours of electricity used per million gallons water usage. The Plan recommends that strategies must remain consistent with water operations permit obligations and recommends that all investments must meet financial payback goals within the lifecycle of the new asset.	Ongoing
Raw Water Supply Management Plan ⁶	HPU's Energy Use Management Plan was first written into the "Raw Water Supply Management Plan" under topics for normal operations. Included are guidelines for optimizing water source selection and for determining benchmarks for water and electrical energy consumption	Complete

Strategy 4.1 - Continue to Optimize Energy Use by Implementing Existing HPU Plans

Task	Responsible Party
Continue to develop and support energy management into the goals of the Raw Water Supply Management Plan; refine the opportunities for energy management in configuring, commissioning, using and retiring system assets.	Public Utilities
Consider refining the goals of energy management into the "Potable Water System Management Plan" including opportunities to engage 1) energy efficient system architecture, 2) asset management best practice principles, 3) technology advancements, 4) building energy management 5) coordination with the electrical purveyor to shed energy usage during peak load periods and 6) considerations for alternative energy sources.	Public Utilities

⁶ [Raw Water Supply Management Plan \(RWSMP\)](https://www.harrisonburgva.gov/sites/default/files/Water/Operations/Raw%20Water%20Supply%20Management%20Plan%2006.2019.pdf)

<https://www.harrisonburgva.gov/sites/default/files/Water/Operations/Raw%20Water%20Supply%20Management%20Plan%2006.2019.pdf>

Goal 5 – ~~Promote~~Encourage Efforts to Improve Energy Efficiency and Increase Renewable Energy and Sustainable Energy Sources~~in the Private Sector~~

While reduction of energy use plays a big role in decreasing energy dependence, an increase in the percentage of energy produced by renewable and sustainable sources can also help Harrisonburg enhance its energy resilience. Renewable and sustainable energy sources ~~is~~are not limited to solar photovoltaic, but may include solar hot water installations, wind power generation, geothermal energy capture, methane capture from wastewater treatment ~~and~~, landfill operations, and more.

~~There are approximately 18,000 housing units in Harrisonburg. (U.S. Census Data, 2017)~~ While the City is not able to require energy use reduction on private property, there are ways to advocate and ~~incentive~~incentivize energy efficiency and energy use reduction.

Where Are We Now?

Initiative	Summary	Status
Harrisonburg Electric Commission (HEC) Home Energy Audit Program ⁷	HEC has a Home Energy Audit Program where energy audits can be requested to help homeowners better understand where energy (heat) is being lost in their homes. Current program does not have the capacity to handle interest.	Ongoing
HEC Energy Share Program ⁸	A program where HEC customers can donate a set amount or round up their monthly electric bill to assist those in need. Currently, additional monies collected are equally split between the Salvation Army and People Helping People.	Ongoing
HEC Net Metering Program ⁹	HEC offers <u>has</u> a net metering program for customers who wish to generate a portion of their own power using solar panels. Program is capped at 2% of peak hour demand in the City.	Ongoing
<u>Renewable Energy Certificates</u> ¹⁰	<u>HEC offers an existing program allowing customers to purchase renewable energy certificates on top of their regular electricity bills. This allows HEC to purchase electricity that was generated from green sources.</u>	<u>Ongoing</u>

Strategy 5.1 – ~~Consider Promoting~~Encourage Energy Use Reduction Initiatives in ~~Residential Homes~~Residential and Non-Residential Buildings and Operations

Task	Responsible Party
Encourage community organizations to work together to create and promote resources that homeowners, and renters, <u>businesses, and industries</u> can utilize to identify efficient and simple upgrades and reduce	Community Organizations

⁷ https://www.harrisonburgelectric.com/programs/energy_audit

⁸ https://www.harrisonburgelectric.com/programs/energy_share

⁹ https://www.harrisonburgelectric.com/go_green/net-metering/

¹⁰ https://www.harrisonburgelectric.com/go_green/renewable_energy

energy waste. Partners/organizations may include, but are not limited to, real estate agents and builders.	
Establish an energy audit program and promote the advantages of energy audits and weatherization-	Community Organizations
Consider promoting the advertisement of high-performance homes and living units in the real estate market by publishing the advantages of energy efficient properties to homeowners, renters, and rental companies.	Community Organizations
Promote establishment an accessible residential weatherization program for people in need.	Community Organizations
Consider a program where HEC customers can donate toward a fund for helping those in need to weatherize their homes. HEC would collect the donations and a community organization would provide the service.	HEC, Community Organizations
Evaluate a “peak demand shaving” program where residential and non-residential customers would be incentivized to reduce energy use during peak demand periods by way of a water heater switch. =	HEC
Create and promote resources that business owners and industries can utilize to identify efficient and simple upgrades and reduce energy waste.	Community Organizations

Strategy 5.2 — Consider Increasing Commercial and Industrial Energy Conservation Behaviors

Task	Responsible Party
Create and promote resources that business owners and industries can utilize to identify efficient and simple upgrades and reduce energy waste.	Community Organizations
Promote the advantages of energy audits and weatherization.	HEC, Community Organizations
Support efforts to reduce energy use and increase renewable energy use.	Community Organizations

Strategy 5.23 - ~~Consider Incentivizing~~ Encourage the Construction of High-Performance Residential Buildings and Operations

Task	Responsible Party
Explore the use of financial incentives to encourage the construction of high-performance buildings in the private sector and increase the performance of existing properties. Incentives c would be applicable to homeowners-property owners performing alterations and additions.	Community Organizations
Explore the use of financial incentives to encourage the use of renewable and sustainable energy sources, including but not limited to: solar photovoltaic, solar hot water installations, wind power generation,	Community Organizations

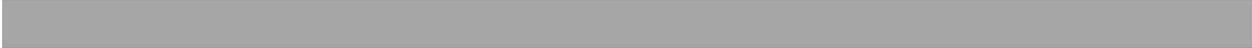
[geothermal energy capture, methane capture from wastewater treatment and landfill operations, and more.](#)

Promote energy efficient and high-performing rental [\(residential and non-residential\)](#) properties through publicizing the advantages of these properties to commercial and residential rentals.

Community
Organizations



DRAFT



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Focus Area 2 - Land Use and Green Space

The City of Harrisonburg aims to regulate and guide the use of land and green spaces to, among other things, promote positive social and environmental outcomes and promote the mindful use of resources. Green spaces can include undeveloped and developed lands that have natural and/or man-made green infrastructure made up of natural vegetation (ex. grass, trees, and other vegetation) and/or vegetative technologies. Green spaces can benefit the environment by filtering pollutants, providing shade and lowering temperatures in urban areas, and reducing erosion of soil into waterways. Four goals are included in this focus area.

Co-Benefits

Sound land use and green space planning can reduce public service infrastructure (such as transportation, stormwater facilities, and utilities) and service costs, improve watershed integrity and carbon sequestration, reduce car dependency and transportation costs, support wildlife habitat and ecosystem health, preserve rural and scenic landscapes, and reduce electricity used from air conditioning through increased shade cover from tree canopy. Sound land use and green space planning can also promote mental and physical health by providing psychological relaxation and stress alleviation, support physical activity, and promote social interaction.

Goal 1 – Modernize and Establish Enduring Land Use and Development Patterns

The way a city plans for new development, redevelopment, and infill development including the location and distribution of different land uses, buildings, housing, transportation facilities, utilities, and green space resources can have a tremendous effect on the day-to-day quality of life of its community members. For example, where and how development occurs contributes to the achievement of environmental and sustainability goals by reducing the overall energy use of residents within buildings and transportation, promoting social interactions and healthy lifestyles, and reducing costs, including but not limited to construction and maintenance of public service infrastructure and private infrastructure, utilities, and health care.

Where Are We Now?

The City of Harrisonburg regulates land use and development patterns through its Zoning Ordinance, Subdivision Ordinance, and Design and Construction Standards Manual (DCSM).

Initiative	Summary	Status
Update Comprehensive Plan ¹¹	The City's Planning Commission, with staff support, developed the 2018 Comprehensive Plan, which was adopted by City Council on November 13, 2018. Comprehensive Plans are reviewed once every five years during which a determination is made whether updates are desired.	Complete for 2018, Ongoing

¹¹<https://www.harrisonburgva.gov/comprehensive-plan>

Comprehensive Update of the Zoning ¹² and Subdivision ¹³ Ordinances	This task has been initiated by the Department of Planning & Community Development. As of early-2019, an evaluation of land use ordinances and regulations is currently underway.	Ongoing
Update the Design and Construction Standards Manual (DCSM) ¹⁴	The DCSM provides design and construction standards for projects within the City of Harrisonburg. The DCSM is amended as needed in coordination with new or amended regulations.	Ongoing

Strategy 1.1 – Continue to **Review-Evaluate** the Zoning Ordinance and Subdivision Ordinance and Make Updates as Needed

The Zoning Ordinance and Subdivision Ordinance regulate how land is used and how land is developed. These ordinances are the primary tools in implementing the vision, goals, and objectives of the Comprehensive Plan and other city plans. Failure to keep the ordinances up to date and relevant can unintentionally prohibit the implementation of city plans.

Task	Responsible Party
Complete the review and evaluation of the Zoning and Subdivision Ordinances.	Community Development
Continue to Comprehensively Update the Zoning and Subdivision Ordinances.	Community Development
Continue to Review the Zoning and Subdivision Ordinances at least once annually and amend, as needed.	Community Development

Strategy 1.2 - Continue to Coordinate Land Use Planning and Regulations with Transportation Planning

Refer to chapter on Sustainable Transportation.

Strategy 1.3 – Continue to Promote High Density, Compact, and Mixed Use Development, Where Appropriate

High density, compact, and mixed use development, as opposed to low density, car-dependent, suburban sprawl, can help make communities more sustainable, economical, and healthy. High density and mixed use neighborhoods that are designed well with a mixture of housing types (single-family detached, duplex, townhomes, and apartments) located among public transit routes, jobs, schools, shops, services, green space, and walking and biking facilities can encourage behaviors that contribute to reducing traffic congestion and vehicle emissions, and can provide opportunities for more social interactions. This type of

¹² <https://www.harrisonburgva.gov/zoning>

¹³ <https://www.harrisonburgva.gov/subdividing-property>

¹⁴ <https://www.harrisonburgva.gov/dcsm>

planning and development is encouraged within selected areas of the City identified in the Comprehensive Plan’s Land Use Guide as “Mixed Use”.

Task	Responsible Party
Consider developing Develop Small Area Plans for areas designated in the Comprehensive Plan’s Land Use Guide as “Mixed Use Areas.” Small Area Plans may be concentrated along a transportation corridor and around a center to create “healthy connected neighborhoods” that would offer safe convenient access to goods, services, and jobs reachable on foot, bicycle, and public transit. Community members within these areas would be consulted to address needs and desires that are specific to the neighborhood.	Community Development, Public Works, HDPT
Continue to comprehensively update the Zoning and Subdivision Ordinances. This task should include review of the ordinances for their support of recommended residential densities and land development patterns described in the Comprehensive Plan.	Community Development

Goal 2 – Maintain and Create a Well-Distributed and Accessible Parks and Recreation System

The Department of Parks and Recreation maintains 11 city parks with a variety of green spaces including, but not limited to, a golf course, soccer and ball fields, shared use paths and trails, wooded and forested lands, and properties with water features such as ponds and streams.

Where Are We Now?

Initiative	Summary	Status
Comprehensive Recreation and Parks Master Plan ¹⁵	Harrisonburg Parks and Recreation completed a public survey that helped to gather data to reveal many patterns and needs. This plan was last updated in 2013. Plan can be amended or updated as needed.	Completed
Smithland Road Park Master Plan ¹⁶	This 175-acre park has four full sized soccer fields, natural surface trails, comfort stations, and a pavilion. This plan was created in 2004. Plan can be amended or updated as needed.	Completed
Ramblewood Park Master Plan ¹⁷	This 60-acre park has softball fields, a press box, restrooms, and maintenance building. This plan was created in 2012. Plan can be amended or updated as needed.	Completed

¹⁵ <https://www.harrisonburgva.gov/parks-plan>

¹⁶ https://www.harrisonburgva.gov/sites/default/files/Parks/files/smithland_road_park_mp_rev_9-7-04.pdf

¹⁷

<https://www.harrisonburgva.gov/sites/default/files/Parks/files/Ramblewood%20Park%20Master%20Plan%20Report-Final.pdf>

Purcell Park Master Plan	This 67-acre park has three softball/baseball fields, four tennis courts, a playground, three picnic shelters, several restrooms, a 1.5-mile walking trail, and has a portion of the Bluestone Trail running through it. Plan can be amended or updated as needed.	Being Developed
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Strategy 2.1 - Continue to Update the Comprehensive Recreation and Parks Master Plan and Associated Park Plans

Task	Responsible Party
Update the Comprehensive Recreation and Parks Master Plan.	Parks and Recreation
Complete the Purcell Park Master Plan.	Parks and Recreation
Participate in the planning process by attending meetings (public open houses, public meetings, etc.) and providing input on the Comprehensive Recreation and Parks Master Plan.	Community organizations Community Organizations

Strategy 2.2 - Continue to Expand Sidewalks, Shared Use Path, and Trail Facilities to Connect People to Places They Want to Go, Including Private and Public Green Spaces

Task	Responsible Party
Continue to implement projects such as the Northend Greenway and identify opportunities to construct new shared use path and trail opportunities as described in the City’s Bicycle and Pedestrian Plan. ¹⁸	Public Works
Continue to require new private developments to dedicate easements to the City and to construct shared use paths identified in the City’s Bicycle and Pedestrian Plan.	Public Works, Community Development
Review the City’s Subdivision Ordinance and Design and Construction Standards Manual (DCSM) and amend as needed to support the implementation of sidewalks, shared use paths, and trail facilities planned for in the City’s Bicycle and Pedestrian Plan.	Public Works, Community Development

Goal 3 – Maintain and Increase a Healthy Tree Canopy

Trees provide many ecological benefits, such as improved nutrient cycling, carbon sequestration, provision of habitat for birds and other animals, improved stormwater management, and improved atmospheric quality. Trees also provide oxygen, improve health for residents, provide recreational space, and provide shade and beautification.

¹⁸ <https://www.harrisonburgva.gov/bicycle-pedestrian-plan>

Where Are We Now?

Harrisonburg staff develops and maintains critical riparian buffers/no-mow zones on city property located along waterways to reduce erosion, reduce nutrient runoff, and increase canopy coverage. The City also maintains Tree City USA status. Tree City USA is a national program that requires participating cities to spend \$2 per capita on associated tree work (in 2018 Harrisonburg spent \$11 per capita). It also requires participants to have a tree care ordinance that establishes a tree board and policy for planting, maintaining, and removing trees from streets, parks, and public spaces, to hold an Arbor Day event, and to plant trees.

Initiative	Summary	Status
Tree City USA	This nationwide program helps promote urban tree canopy and improves care of these vital trees. The City has been a member since 2005.	Ongoing
Update and amend Title 9 Chapter 6 Public Tree Ordinance and Amend the Existing Public Tree Policy Document	Initiated in 2017, this project is a collaboration of multiple City Departments to comprehensively amend and modernize the City's Public Tree Ordinance and existing Public Tree Policy document. The result could combine the principles of both documents into a modern Public Tree Ordinance. It will define responsibilities of the public and City departments and create a unified approach on enforcing regulations associated with trees within the public street right-of-way and how to properly maintain the trees.	Being Developed
Tree Canopy Study ¹⁹	The Green Infrastructure Center (GIC) helps local government and communities to evaluate their green infrastructure assets and make plans to conserve them. This project began in 2016 and was completed in early 2019.	Completed
Purcell Park Tree Inventory	In 2017, James Madison University graduate students completed a complete tree inventory of Purcell Park.	Completed
Urban Forestry Management Program ²⁰	Initiated by city staff, this project began in 2017. A list of ongoing achievements is being documented.	Ongoing
Urban Wood Utilization Program	A program sponsored by the Virginia Department of Forestry to encourage local governments to utilize urban waste wood. The City has participated in this program since 2017.	Ongoing
Park Maintenance Management Plan	A plan that clearly defines the requirements and actions of the Parks Maintenance Division to maintain all parks, green spaces and assets to a high standard. Initiated in 2017.	Being Developed

¹⁹

https://www.harrisonburgva.gov/sites/default/files/PublicWorks/files/stormwater/1.13%20Harrisonburg_web_spreads%20%28002%29.pdf

²⁰ <https://www.harrisonburgva.gov/urban-forestry-program>

Emerald Ash Borer Treatment and Monitoring Program	A cost share program by the Virginia Department of Forestry helped treat 36 large ash trees in three different park locations. A monitoring program has been established to monitor the risk of untreated ash trees. The City began participating in this program in 2018.	Ongoing
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Strategy 3.1 - ~~Consider Developing~~Develop and Implementing an Urban Forest Management Program for Public Right-of-Ways and Public Properties

A comprehensive urban forest management program will assist in evaluating citywide public tree health, particularly in the age of the Emerald Ash Borer. The program would include tools to determine where species diversity is needed and what maintenance challenges can be foreseen in upcoming years.

Task	Responsible Party
Develop an Urban Forest Management Plan.	Public Works, Parks and Recreation
Consider creating an Urban Forester position.	Public Works, Parks and Recreation
Evaluate developing a tree inventory. Cost will depend upon staff and volunteer resources available and the scope of work.	Public Works, Parks and Recreation
Consider completing a tree risk assessment on all public trees.	Public Works, Parks and Recreation

Strategy 3.2 - Continue to Educate the Public on Tree Species and Tree Maintenance

To encourage expansion of tree canopy coverage within the City, private property owners need to be engaged. Private property owners should be encouraged to plant native trees that best suit their site. Private property owners should know the best management practices associated with tree maintenance, to maximize tree health and value.

Task	Responsible Party
Continue to offer percentage credits (opportunities for reducing fees) for tree plantings through the storm water utility program.	Public Works
Consider engaging Engage the community through social media, promoting tree plantings and site considerations.	Public Works, Parks and Recreation
Consider creating a city staff contact for tree-related questions on the city website.	Public Works, Parks and Recreation

Goal 4 - Evaluate Opportunities for Underutilized Public and Private Lands and Consider Opportunities to Rehabilitate and Create New Natural Habitats

The purpose of habitat rehabilitation is to preserve, expand, and manage networks of natural habitat corridors, green spaces, and forested areas, which preserve and enhance the City’s natural environment for future generations to enjoy.

Where Are We Now?

Initiative	Summary	Status
Parks Pollinator Enhancement Program	Since 2018, six new pollinator gardens have been installed, and other landscapes have been redesigned with perennial plants.	Ongoing

Strategy 4.1 - Continue to Enhance Pollinator Habitats

Managing turf grass throughout the landscape on public property requires significant management such as mowing. There are many areas where managing for turf grass is unnecessary and costly. These areas should be considered for conversion to planned, intentional, and maintained wildflower meadows or beds to maximize pollinator habitat. This will directly result in reduced carbon emissions, maintenance cost, and time from city staff who would otherwise mow grassy areas. It will greatly improve pollinator habitat, stormwater nutrient reduction, genetic diversity, and aesthetics of these sites.

Task	Responsible Party
Continue to pursue programs which enhance wildlife habitat and environmental sustainability.	Parks and Recreation, Public Works
Consider creating Create a pollinator habitat planting and maintenance plan.	Parks and Recreation, Public Works

Strategy 4.2 - ~~Consider Enhancing~~**Enhance** Riparian Buffers

Riparian buffers are the most important aspect for improving water quality. Riparian buffers also create and enhance pollinator habitat, tree canopy coverage, and connectivity of an urban forest.

The City should create new riparian buffers on all public property, where waterways or streams are present and should encourage private property owners of stream front property to establish riparian buffers.

Task	Responsible Party
Consider developing Develop a tree planting plan to accomplish extension and creation of riparian buffers on city properties.	Public Works
Develop and implement Consider developing and implementing a riparian buffer maintenance plan for all city properties.	Public Works
Educate and encourage Consider educating and encouraging private property owners to establish riparian buffers in vacant and underutilized	Public Works, Community

portions of property. Many of these areas are within the floodplain where development may be difficult or costly.

[Organizations](#), Private property owners

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Focus Area 3 - Regional Food Systems

A food system is generally understood to be the chain of activities connecting food production, processing, distribution, consumption, and waste management. Every day we make dozens of choices about what we eat, what we buy, how we use or consume these items, and how we dispose of them at the end of their useful life.

Food system activities take up a substantial amount of urban and regional land and represent important parts of community and regional economies. The environmental impacts of industrial farming practices and food waste as well as the energy and resources consumed by growing, harvesting, processing, and transporting our food are significant. Agriculture consumes about 40 percent of global land, while food production contributes to about 30 percent of global greenhouse gas emissions. Changes in food production practices could cut agricultural greenhouse gas emissions by 10 percent in 2050, and wide adoption of plant-based diets could further reduce agricultural emissions by up to 80 percent.²¹

On average, U.S. household food consumption emits 8.1 metric tons of CO₂ each year. The production of food accounts for 83% of emissions, while its transportation accounts for 11%.²² Two goals are included in this focus area.

Co-Benefits

A healthy, sustainable food system conserves, protects, and regenerates natural resources, landscapes, and biodiversity; meets current food and nutritional needs without compromising the ability of the system to meet the needs of future generations; thrives in the face of challenges such as unpredictable climate, increased pest resistance, and limited water and energy supplies; supports the physical and mental health of all farmers, workers, and consumers; appreciates and supports the diversity of cultures, socio-demographics and lifestyles; and considers all parts of the food system from production, processing, packaging, distribution, consumption and management of wastes.

Goal 1 - Promote Accessibility to Local, Healthy, and Sustainably Produced Food

Local food is grown close to where it is bought and consumed. Buying from local sources not only reduces fossil fuel used and greenhouse gases emitted from transportation, it also supports the local economy. Local and seasonal foods can be healthier to consume and more nutritionally dense because fruits and vegetables can be grown closer to full ripeness before harvesting. Additionally, because nutrients degrade after harvest, local food that is fresh from the field and that has not traveled for days is more nutritious.

However, sustainably produced food can have a lower impact on the environment by being produced in a socially responsible manner even though it is not always local. Sustainability aims to support buying food as local as possible, but just because it's local does not always mean it's produced sustainably. Food produced sustainably may protect biodiversity, wildlife habitats, and water resources. Additionally, sustainably produced foods respect workers and encourages members of our community to know where

²¹ "Food in the Anthropocene: the EAT-Lancet Commission on healthy diets from sustainable food systems.", published: January 16, 2019, <https://www.thelancet.com/commissions/EAT>

²² <http://css.umich.edu/factsheets/carbon-footprint-factsheet>

their food is grown and by whom and allows community members to be grounded with the land where they reside.

Where Are We Now?

Initiative	Summary	Status
Business Loan Program ²³	The Harrisonburg Department of Economic Development provides up to \$25,000 to encourage small business development and expansion. This program is available to food related businesses.	Ongoing

Strategy 1.1 - ~~Consider Supporting and Promoting~~ Support and Promote Opportunities for Community Gardens and Urban Agriculture

At one time and throughout the country, the creation of community gardens and farming was not viewed as an urban activity. However, this perception is changing as individuals and communities have realized the broad-reaching benefits of community gardens as quasi “community centers” and meeting spaces. Agricultural programming is now seen as providing opportunities for education, personal health and development, active living, community cohesion and pride, economic improvement, and increased livability of a community.

At the time of this writing, community gardens as principal uses, such as on a vacant piece of property, are not allowed in the City of Harrisonburg. In order to increase the opportunities for urban agriculture in the City of Harrisonburg, amendments to the City’s Zoning Ordinance would need to be made to allow community gardens as principal uses. Once the Zoning Ordinance is amended, community organizations and neighborhoods can create new or expand existing community garden programs on vacant parcels.

Task	Responsible Party
Consider amending the Zoning Ordinance to create a community garden use definition and regulations to allow them as a principal use.	Community Development
Conduct a vacant parcel and land use audit to identify potential locations for community garden spaces based on proximity to food equity zones and encourage private property owners to repurpose appropriate vacant lots for commercial and noncommercial urban agriculture (Note: requires property owner permission.)	Community Organizations
Where practicable and desirable to the community, address policy barriers that hinder local production of food including neighborhood restrictions on gardening, food processing, and keeping small livestock such as chickens. Restrictions include: Neighborhood restrictions from Homeowners Associations, Land use regulations from Community Development, and food processing regulations from the Virginia Department of Health and Virginia Department of Agriculture	Community Organizations

²³ <https://www.harrisonburgva.gov/business-loan-program>

Develop educational program to demonstrate and teach community gardening in an urban setting and encourage sharing and learning about culturally diverse methods of agriculture.	Community Organizations
Promote business gardens. Business gardens are allowed by the Zoning Ordinance as a home occupation, an accessory use to the principal residential use on a property. Individuals residing at the property can cultivate fruits, vegetables, herbs and flowers and sell products off-site. ²⁴ (Requires a home occupation permit from Community Development.)	Community Organizations

Strategy 1.2 – Support and Improve ~~Consider Supporting and Improving~~ Access for Neighborhoods and People with Poor Access to Fresh, Local, and Sustainably Produced Foods

To increase opportunities for low-income people to purchase less-processed and lower-carbon foods, this strategy aims to expand farmers markets, food buying clubs and cooperatives, and community supported agriculture programs that participate in the Supplemental Nutrition Assistance Program (SNAP).

Task	Responsible Party
Conduct an assessment of distances and access to grocery stores and target community engagement in neighborhoods identified in the Harrisonburg EATs study. ²⁵	Community Organizations
Consider encouraging Encourage mixed-use and traditional neighborhood development and redevelopment (in areas recommended by the Comprehensive Plan) to include small and mid-sized grocery stores (e.g. 3,000 to 20,000 square feet), seasonal farmers markets, and spaces for community members to grow their own food.	Community Organizations, Community Development
Consider improving Improve sidewalk connectivity, bike facilities, and availability of public transit from residential neighborhoods to grocery stores, farmers markets, and open spaces described above.	Public Works, HDPT
Consider expanding Expand current loan opportunities to allow organizations to establish and support mobile markets, community kitchens, and food hubs.	Community Organizations, Harrisonburg Economic Development
Promote the availability of food (fresh, value added, processed, etc.) that reflects the needs of our ethnic and cultural communities.	Community Organizations
Promote knowledge of where SNAP/WIC benefits can be used to purchase local foods, such as by creating handouts for SNAP/WIC recipients with a map showing locations where SNAP is accepted.	Community Organizations
Continue to operate the Harrisonburg Farmers Market to provide the public with access to fresh, nutritious, locally produced foods.	Harrisonburg Farmers Market Association Board

²⁴ <https://www.harrisonburgva.gov/home-occupation-permit>

²⁵ Bendfeldt, Eric S. and B. Schermerhorn. “Everyone at the Table: A community food equity assessment of Harrisonburg, VA.” Virginia Cooperative Extension. 2017. <https://vtechworks.lib.vt.edu/handle/10919/81521>

Research viability of additional locations for farmers markets (permanent locations or mobile markets) within the City. If viable, identify locations for farmers markets within the City that expands access.	Community Organizations
Continue to support and improve access to farmers markets and community support agriculture (CSAs).	Community Organizations

Goal 2 - Support Sustainable Food Production, Selection, Distribution, and Disposal Practices

A sustainable food system accounts for the impacts across the entire lifecycle of how food is produced, processed, packaged, labeled, distributed, marketed, consumed, and disposed. Additionally, a sustainable food system conserves, protects, and regenerates natural resources, landscapes, and biodiversity; meets our current food and nutrition needs without compromising the ability of the system to meet the needs of future generations; supports the physical and mental health of all farmers, workers, and eaters; and thrives in the face of challenges, such as unpredictable climate, increased pest resistance, and limited water and energy supplies.²⁶

Where Are We Now?

Initiative	Summary	Status
Food composting drop off at City Hall. ²⁷	In 2017, the City made a location available near City Hall and the Turner Pavilion (Farmers Market Pavilion) available to the Climate Action Alliance of the Valley (CAAV) for the collection of compostable materials. CAAV runs this program with the support of public donations.	Ongoing

Strategy 2.1 - ~~Consider Promoting~~Promote Sustainable Urban Agriculture and Food Production Practices

This strategy is focused on urban agriculture and food production efforts within city limits. Environmental sustainability in agriculture means good stewardship of the natural systems and resources that gardens and lands rely on. Among other things, this involves building and maintaining healthy soil, managing water wisely, minimizing air, water, and climate pollution, and promotion biodiversity.

Task	Responsible Party
See related tasks in Strategy 1.1 within this Focus Area.	
Educate urban gardeners on sustainable agricultural practices including, but not limited to, rotating crops and embracing diversity, planting cover crops during off-season times when soils might otherwise be left bare, reducing or eliminating tillage, using low-carbon agricultural equipment or	Community Organizations

²⁶ Adapted from “Principles of a Healthy, Sustainable Food System” by the Academy of Nutrition and Dietetics, American Nurses Association, American Planning Association, and American Public Health Association.

<https://www.planning.org/nationalcenters/health/foodprinciples.htm>

²⁷ <https://climateactionallianceofthevalley.org/composting/>

[techniques](#), and applying integrated pest management (IPM) to control pest pollutions while minimizing the use of chemical pesticides.

Strategy 2.2 - ~~Consider Educating~~[Educate](#) the Public About Food Choice as Part of a Climate-Friendly Lifestyle

Climate-friendly diets incorporate choices, such as but not limited to, eating meat-free meals more often, buying organic and local whenever possible, not wasting food, and buying food with no or limited packaging.

Task	Responsible Party
Collaborate to raise awareness of the energy and environmental impacts of different types of food production, processing, and transport.	Community Organizations
Promote local and sustainable food by working with local farmers to incorporate and highlight local and sustainable food choices and local events where food is provided or sold.	Community Organizations , Private Businesses
Consider developing gardens and programming at City schools that promote environmental and social connections to our food. Develop curriculum that is in collaboration with Virginia Standards of Learning. Educate students and their families about food choices and climate friendly food choices and lifestyles.	Community Organizations , Harrisonburg City Public Schools HCPS

Strategy 2.3 - ~~Consider Supporting and Promoting~~[Support and Promote](#) the Reduction, Reuse/Recovery, and Recycling of Food-Related Waste

It is estimated that consumers waste about a third of the food produced either lost in fields and trucks or wasted in restaurants, supermarkets, and home kitchens.²⁸ Not only would we be able to provide 190 million adults with 2,000 calories of energy every day if we recovered more edible food that is lost or wasted in the U.S., reducing food waste has benefits for habitat and land protection.

Additionally, food waste that decomposes in landfills releases methane, a greenhouse gas that is at least 28 times more potent than carbon dioxide. Wasted food that is composted can be used as a fertilizer on cropland and in gardens, improving soil health and productivity.

Task	Responsible Party
Reduce consumer food waste by improving shopping behaviors and storage of food.	Individuals
Recover food waste by connecting potential food donors to hunger relief organizations like food banks and food pantries.	Community Organizations
Consider working Work with area schools Food Nutrition Co-op to adopt compostable packaging component and/or consider food related packaging as a criterion when selecting food items for schools.	Harrisonburg City Public Schools HCPS

²⁸ <https://www.usda.gov/oce/foodwaste/faqs.htm>

Continue to promote food composting drop off at City Hall [and explore additional composting opportunities](#).

Public Works,
Community
[Organizations](#)

See chapter on Waste Reduction and Recycling for additional related tasks.

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Focus Area 4 - Sustainable Transportation

The City of Harrisonburg seeks to develop and maintain a safe and convenient transportation system serving all modes of travel, including driving, walking, biking, public transportation, ridesharing, and future technologies that serve the transportation needs of the community. The primary environmental benefit of ~~the~~ sustainable transportation is the reduction of pollutants, such as greenhouse gases, which are released into the atmosphere. Public infrastructure has been developed to serve primarily gasoline and diesel single occupancy vehicles and truck freight for many decades. In the ~~coming decades~~future, ~~an industry transition will occur in which the use of these vehicles will decline, and~~ electric vehicles will become more common. ~~emerge as the dominant vehicle type.~~ Transportation will still rely on the provision of public infrastructure but is expected to shift to a service provided to individuals by vendors/private entities, as opposed to individuals providing it for themselves using single occupancy vehicles of their own.

Since Harrisonburg is an urban center in an otherwise rural region, and the shift in transportation service is likely to be more pronounced in urban areas, the City's transportation network must continue to serve single occupancy vehicles for the foreseeable future, while adapting infrastructure to meet the travel modes of the future. Adapting to meet the needs of the future also includes increasing infrastructure for non-motorized modes and may include the prioritization of modes and vehicle types in various areas of the City, as it makes sense to do so for efficiency and safety. Seven goals are included in this focus area.

Co-Benefits

The Co-benefits of a sustainable transportation include cleaner air, reduced infrastructure needs/costs resulting from less congestion and less demand for parking, increased access to jobs, education, and other daily needs, increased safety and health due to cleaner air and ability to safely replace some vehicle trips with active transportation. Economic development may also be a benefit of sustainable transportation, as companies include active transportation availability as a quality of life indicator that their employees desire and expect ~~(see Roanoke, VA and many other examples).~~

Goal 1 - Develop an Alternative Fuel Fleet Program

An alternative fuel fleet program would include using electric buses as a part of Harrisonburg Department of Public Transportation's (HDPT) fleet.

Where Are We Now?

An alternative fuel fleet program has not yet been started.

Strategy 1.1 - ~~Consider Determining~~Evaluate the Viability of an Electric City Fleet

Determine the viability and use of electric buses in HDPT's fleet within the next five years.

Task	Responsible Party
Continue <u>determining evaluating</u> the viability/use of electric buses and fleet vehicles in HDPT's fleet within the next five years.	HDPT

Consider developing and implementing the infrastructure and service needs for the operation of electric vehicles.	HDPT
Consider reviewing maintenance and service contracts from localities already implementing electric buses to create a maintenance and repair policy for alternative fuel vehicles.	HDPT

Goal 2 - Implement Sustainability Practices into Municipal Fleet Management

Fleet Management strives to uphold a sustainable fleet and uses sustainability practices when servicing, repairing and replacing its vehicles and equipment. [HDPT-Fleet Management](#) also applies sustainability practices whenever possible in their day-to-day operations and procedures. Performing sustainable practices means reducing the overall environmental impact from fleet operations. This is achieved by measuring, analyzing and collecting data to save electricity, improve air quality through emission reduction, increasing fuel efficiency, and reducing fuel consumption.

Where Are We Now?

Initiative	Summary	Status
Vehicle Replacement Program	Replacement of out of service vehicles/equipment with newer, more fuel- efficient vehicles/equipment	Ongoing
Vehicle Maintenance	Modern vehicle/equipment lifts are purchased to replace old units. Used oil is recycled to heat the maintenance facility.	Ongoing
“No Idling” Policy	Timers on buses shut buses off after ten minutes of idle time.	Ongoing
Engine block heaters	The use of timed, engine block heaters during cold weather saves energy and reduces idle time, resulting in less fuel consumption.	Ongoing

Strategy 2.1 - Continue the Vehicle Maintenance and Replacement Program

Regular maintenance and inspections greatly reduce major breakdowns and increase fuel efficiency. When vehicles reach the end of their useful service life, they will be replaced with newer, more fuel-efficient vehicles.

Task	Responsible Party
Continue to implement the Flag Ship Fleet management system, which allows HDPT to efficiently analyze data collected from each vehicle and track maintenance and inspections.	HDPT
Consider replacing out of service vehicles with cleaner burning diesels, lower emission producing gas and diesel engines, and some hybrid vehicles.	HDPT

~~Strategy 2.2 – Continue the Vehicle Placement Program~~

~~Vehicles are bought for specific purposes and assigned where best utilized to perform the job the vehicle is needed for.~~

Task	Responsible Party
Continue implementing the vehicle placement program	HDPT

Strategy 2.23 - Continue Environmentally Friendly Vehicle Maintenance

Task	Responsible Party
Consider purchasing modern vehicle/equipment lifts that are self-contained units. This prevents old seals from leaking oil into the ground. New units are low-voltage to save energy, and some have rechargeable batteries.	HDPT
Continue to recycle used oil and petroleum-based fluids. Oil filters are crushed to extract the maximum amount of oil, which is then used in the clean burn heating system to heat the maintenance facility.	HDPT
<u>Consider alternative sources of heat for the maintenance facility if using recycled oil becomes less environmentally-friendly of fuel source when compared to other options.</u>	<u>HDPT</u>

Goal 3 - Increase Public Transit Ridership

Increasing public transit ridership ~~means~~ through efficient and convenient routes means reducing the number of cars driven throughout Harrisonburg.

Where Are We Now?

Initiative	Summary	Status
Route Study/Analysis	A Route Study/Analysis for James Madison University (JMU) and associated city routes that serve JMU was started in January 2019. Recommendations will be made, and alternative routes proposed.	Being Developed <u>Ongoing</u>

Strategy 3.1 - ~~Consider Developing~~Continue to Develop a Programs to Increase HDPT Ridership (Outreach)

JMU Outreach program to increase JMU ridership.

Task	Responsible Party
Consider <u>Continue</u> partnering with JMU on policies and procedures to increase ridership.	HDPT
Continue to use Social Media (Twitter, Snapchat, Facebook, giveaways).	HDPT

Consider giving presentations to incoming Freshmen, Senior Citizens, Refugees, and city Residents.	HDPT
Evaluate effectiveness of outreach methods.	HDPT
Consider <u>Continue</u> developing and implementing new methods of outreach to increase effectiveness.	HDPT

Strategy 3.2 - Continue to Improve Bus Stop Connectivity (¼ Mile Improvements)

Task	Responsible Party
Continue to work with developers during site plan review and collaborate with Public Works where possible to locate benches and shelters during projects. where right-of-way is available.	HDPT

Strategy 3.3 - Consider Developing Transit Routes with Increased Frequency

Complete a Route Study/Analysis for transit routes related to JMU, with analysis of extended service hours for City transit routes. The study will look at ways to increase ridership for studied routes. Recommendations from the study will be implemented as able depending on financial support and staffing needs being met.

~~Complete a Route Study/Analysis for James Madison University (JMU), and associated city routes that serve JMU. Kick-off was in January 2019 and the project is progressing well. Recommendations will be made, and alternative routes proposed. Expected completion date is July 2019, however, immediate/short term recommendations will be made in April/May for implementation during the 2019 Fall Semester. Includes plans to extend transit service hours for city routes.~~

Task	Responsible Party
Consider ending city routes later in the evening (9:15pm as opposed to 6:15pm).	HDPT
Consider starting city routes earlier in the morning and start service earlier on Saturdays.	HDPT

Strategy 3.4 - Consider developing a Program to Routinely Review Bus Stop Locations

It is important to closely monitor ridership usage of bus stops at minimum on a biannual basis. This can help determine if Routes are performing optimally for the greatest ridership potential. Engaging with passengers and residents is vital to determine if additional stops would increase ridership. Also, alterations of routes to remove unused stops could help improve on-time performance of routes.

Task	Responsible Party
Consider analyzing bus stop usage data and determine potential new stops	HDPT

Consider developing bi-annual bus stop poll/survey requests and administer to residents	HDPT
Consider analyzing bus routes for increased duration and decreased headways based on City conducted capacity analysis.	HDPT

Goal 4 - Traffic Signal Optimization and Timing Improvements

Signal timing optimization means efficient flow of traffic, less delay, fewer vehicle stops, safer driving, better accommodate different transportation modes and higher capacity of existing street network. The City has different strategies to achieve its goal of traffic signal timing optimization by invest in human resources, use of technology and seeking federal/state funds to keep the system updated.

Where Are We Now?

Initiative	Summary	Status
Traffic Signal Maintenance	The Public Works Department currently maintains 86 traffic signals. The system infrastructure is well established with relatively advance detection and communication technology.	Ongoing
Traffic Management Center (TMC)	The Public Works Department for the first-time opened its Traffic Management Center (TMC) in 2012, where most of traffic signals and traffic surveillance cameras connected to the traffic control room at public works. Since then, operational management significantly improved, as the system provides real time status of signals, informs users of any faults and allows remote access to signal controllers.	Complete
Traffic Signal Optimization	Through TMC timing plan updates become easier to implement, however, due to lack of enough staff to collect and analyze data some of corridor timing plans not frequently updated as City aimed for.	Ongoing

Strategy 4.1 - Continue Improving In-House Timing Plan Update Capability

Data collection and analysis is time consuming and costly as far as human power and data collection tools, but it is essential to have capability in-house because daily traffic management needs continuous monitoring and evaluation. The ability to collect and analyze high resolution data allows the City to optimize the street network and actively respond to traffic pattern changes. Investment in human resources, as well as technology will allow the City to provide the traffic management level of service expected by the community.

In the last decade significant changes have occurred in the Intelligent Transportation System (ITS) industry, in general, and in traffic signal optimization. New detection technology can collect turn movement counts and other performance measures, along with vehicle detection and reporting it to the Traffic Management Center. Such technology can reduce the need for human resources and data collection tools at locations

where it is installed. The City already has this new technology installed in multiple locations, and benefits from the efficiencies it provides. Another emerging technology is the Adaptive Traffic Control Systems (ATCS) that continuously adjusts timing plans using detection systems where traffic patterns are less predictable and major street traffic flow is a high priority. The City’s strategy at this point is to keep observing developing technology and study opportunities where they can be most effective.

Task	Responsible Party
Continue to expand new detection system with turning movement count capability	Public Works
Consider exploring ATCS systems and study locations where the system can be most effective	Public Works

Strategy 4.2 - Continue to Optimize Signal Operations

Day to day operations and minor adjustments of signal timing for some corridors is most effectively done in-house by city staff. However citywide timing plan updates on major corridors takes more staff resources than are available. Such updates are only recommended every three years, but the City has not kept pace with this schedule due to lack of staff resources. Optimizing signal operations, particularly on major corridors, reduces vehicle stopping time, and therefore, vehicle idling. Reducing idling reduces vehicle emissions.

Task	Responsible Party
Consider developing a sustainable funding source for optimization of major corridor signal timing plans to be performed by consultants.	Public Works

Goal 5 - Support Alternative and Low-Carbon Forms of Transportation and Improved Fuel Efficiency

Bicycling and walking are largely a function of land use, where a mix of uses, and relatively higher density, combined with the presence of bicycle and pedestrian infrastructure and lower speed limits support bicycling and walking. Land uses and the transportation network supporting them become increasingly suburban, the further from downtown and from JMU one travels, and the transportation network becomes more suburban along with them (low density, single use land uses, and high-volume roads, higher speed limits, and often inadequate bicycle and pedestrian infrastructure). Most new development does not follow the lacks elements of traditional neighborhood design that supports bicycling and walking.

Where Are We Now?

Initiative	Summary	Status
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Community Support	Bicycling and walking are prevalent forms of transportation downtown and on JMU's campus. There is also a strong desire in the community for children to be able to walk to school.	Ongoing
Bicycle and Pedestrian Plan	The City adopted an updated Bicycle and Pedestrian Plan in 2017 and applies for funding every year to implement the projects identified.	Ongoing
Development Regulations	Local regulations also require developers to build bicycle and pedestrian infrastructure with new developments and redevelopment.	Ongoing
Permitting Process for Shared Mobility Devices (SMD)	In February 2019, City Council adopted a permitting process for SMDs to allow commercial rentals of SMDs while providing certain safeguards. The demonstration project would last one year, with the option to extend the project. SMDs include scooters and bicycles.	Completed

Strategy 6.1 - Consider Adopting Policies and Standards that Support Alternative Modes of Transportation

Standards and policies will guide new development and infrastructure to promote the use of alternative modes of transportation.

Task	Responsible Party
Consider the development of a Complete Streets policy and incorporate changes into associated design and construction standards. Support the prioritization of alternative modes where appropriate, such as more urban and neighborhood centers.	Public Works, City Council
Consider revising off-street parking requirements of the Zoning Ordinance to include a maximum number of parking spaces, instead of a minimum. Less parking availability will give rise to thought about travel modes.	Community Development
Consider supporting mixed use and higher density development that inherently support walkability.	Community Development, Planning Commission, City Council
Consider promoting interparcel connectivity with development to build parallel routes of travel, distributing traffic and increasing connectivity, to reduce vehicle miles traveled, and create lower stress routes for biking and walking.	Community Development, Public Works

Strategy 6.2 - Continue Implementation of the Bicycle and Pedestrian Plan

The Bicycle and Pedestrian Plan retrofits existing development to add bicycle and pedestrian connectivity, adding safe and comfortable facilities to make biking and walking viable alternative modes of travel. The Plan is reviewed every five years.

Task	Responsible Party
Make bicycle and pedestrian comfort a priority in infrastructure design.	Public Works
Continue developing a citywide list of locations where lane reconfigurations would be feasible (traffic analysis included). Conduct community outreach on this list and on road diets in general. Implement with paving schedule, or otherwise.	Public Works
Continue developing a local Continue local funding source to funding to support increased implementation of the Bicycle and Pedestrian Plan.	Public Works, City Manager, City Council
Continue to seek state and federal grant funds for biking and walking infrastructure projects.	Public Works
Review the bicycle and pedestrian plan every 5 years and update the plan as needed to include additional strategies and projects.	Public Works

Strategy 6.3 - Continue to Promote Interconnection Between All Modes of Transportation

Interconnection of modes will allow people to take longer trips by alternative modes and make transit more accessible.

Task	Responsible Party
Continue to include bus stop improvements on capital street projects.	Public Works
Beginning with the highest use bus stops, continue to fill sidewalk gaps within 1/4 mile.	Public Works
Continue to determine feasibility of improving bus stops with shelters where none currently exists, beginning with the highest use bus stops.	Public Works, HDPT
Continue to review bus stops for pedestrian safety treatments.	Public Works, HDPT
Continue to provide adequate parking for nonmotorized and alternative modes of transportation, including but not limited to bicycles, electric bicycles, electric scooters.	Public Works Community Development, Private property owners

Strategy 6.4 – ~~Consider Supporting~~Support Low-Carbon Modes of Transportation and Improved Vehicle Fuel Efficiency

Improving fuel efficiency of vehicles saves community members money and reduces pollution.

Task	Responsible Party
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Support the implementation of improved federal fuel efficiency standards. City Council support could be done by resolution or other means to show support.	City Council, Community Organizations
Support the implementation of state and federal incentives for electric vehicles. City Council support could be done by resolution or other means to show support.	City Council, Community Organizations
Promote collaboration and coordination to expand the use of electric vehicles and the availability of electric charging stations throughout the region.	Community Organizations, Private Businesses

Goal 6 - Continue to Coordinate Land Use Planning and Regulations with Transportation Planning

Land uses affect the environment and depends on transportation and infrastructure in order to function. Land use planning relates to the physical environment where we live and work. Transportation connects us to all of our activities, and it connects communities. The design of transportation facilities such as roads, driveway access points, sidewalks, and bike routes has an impact on our community's character. How we use our land impacts our transportation facilities and vice versa. Land use and transportation are mutually dependent and inseparable.

The impact of technological advances that impact transportation modes and choices should also be considered. For example, how do ridesharing (i.e. Uber, Lyft), dockless mobility devices (i.e. bicycles and scooters), GPS devices, and self-driving automobiles ~~influence~~ effect development patterns, parking requirements, etc., and how can city policies and regulations encourage more environmentally friendly choices?

Where Are We Now?

Initiative	Summary	Status
Update Comprehensive Plan	The City's Planning Commission, with staff support, developed the 2018 Comprehensive Plan, which was adopted by City Council on November 13, 2018. Comprehensive Plans are reviewed once every five years during which a determination is made whether updates are desired.	Complete for 2018, Ongoing
Comprehensive Update of the Zoning and Subdivision Ordinances	This task has been initiated by the Department of Planning & Community Development. As of early-2019, an evaluation of land use ordinances and regulations is currently underway.	Ongoing

Update the Design and Construction Standards Manual (DCSM)	The DCSM provides design and construction standards for projects within the City of Harrisonburg. The DCSM is amended as needed in coordination with new or amended regulations.	Ongoing
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Strategy 6.1 - Consider Identifying Opportunities to Promote or Require Infrastructure to Support Alternative Transportation Modes.

Task	Responsible Party
Consider reviewing city ordinances and design standards to require and/or encourage property owners and developers to provide infrastructure to support alternative modes of transportation as part of development proposals.	Community Development; Public Works; HDPT
Consider establishing regulations and policies that promote ridesharing and dockless mobility devices. Promotion can include, but is not limited to, granting companies permission to operate in the city right-of-way and requiring or encouraging developers to provide ridesharing pull off areas or parking areas for dockless mobility devices.	City Attorney's Office; Community Development; Public Works
Consider developing City Ordinances or policies to require or encourage installation of electric charging station within the private sector for new development and redevelopment. Create guidelines for installation.	Community Development; Community Organizations
Participate in the planning process by attending meetings (public open houses, public meetings, etc.) and providing input on city plans and projects.	Community Members

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Focus Area 5 - Waste Reduction and Recycling

The City of Harrisonburg seeks to determine a sustainable, long-term, and fiscally responsible refuse and recycling program that consistently supports and promotes the reduction of solid waste, the reuse of usable items, and the recycling of materials. Four goals are included in this focus area.

Co-Benefits

A sound waste management program results in cleaner streets, water quality, air quality, energy conservation, reduced habitat destruction from material extraction, and reduced greenhouse gas emissions. Food waste recovery can also increase food availability to vulnerable populations, provide local livestock feed, and increase local soil fertility through composting programs. Incentivizing reduced solid waste generated means savings in the cost of trash disposal fees for property owners and reduced operational costs and tipping fees for the City. These resources are then freed up for more productive uses.

Goal 1 - Support and Promote the Reduction of Refuse in Landfills

Landfills have limited space and have significant environmental impacts. The City of Harrisonburg will work on the following strategies to support and promote the reduction of refuse in landfills, specifically the local Rockingham County Landfill.

Where Are We Now?

The City of Harrisonburg ~~'s does not currently have a~~only program to support and promote the reduction of refuse in landfills ~~is the recycling program-~~

Strategy 1.1 - Consider Establishing a Pay-As-You-Throw System

Linking waste reduction to a fee structure is a powerful tool to reduce refuse generated. A Pay-As-You-Throw (PAYT) system is a usage-pricing model. Users are charged a rate based on the amount of waste they put out for collection. Implementing a curbside collection program utilizing this system would promote awareness of the volume of waste generated and parallel other metered utilities in the City.

Task	Responsible Party
Consider the development and implementation of a PAYT system. City Council would be responsible for approving a PAYT system.	Public Works, City Council

*PAYT system will include ordinance changes linked to Strategy 1.3

Strategy 1.2 - Create a Program that Recognizes or Incentivizes Businesses that Substantially Reduces Waste

Create a program that incentivizes businesses – including restaurants, hotels, events, and offices to reduce the usage of single-use products, paper, etc. This program may link to an existing program (ex: Virginia Green Travel) or may constitute development of a new program.

Task	Responsible Party
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Identify entity to take on program development.	Private Businesses, Community Organizations
Develop and promote program.	Private Businesses, Community Organizations

Strategy 1.3 – Consider Amending Review City Solid Waste Ordinance

Ordinance changes could be made to limit the number of refuse containers allowed to be picked up. Currently, customers are able to have 5 containers or 5 bags - bags and containers cannot be over 75 lbs and must have 3-5 gallon capacity each. Changes in the amount of refuse allowable for collection will promote lessening of waste generated. Changes in the bulk and yard debris program could also be evaluated.

Task	Responsible Party
Review the Solid Waste Ordinance and consider developing, amending and adopting and implementing changes to the Solid Waste ordinance.	City Council, Public Works
If ordinance changes are made, educate the public about the changes.	Public Works

Strategy 1.4 – Consider Creating a Policy for Eco-friendly Purchases and Paperless Transactions

City operations should set an example to area businesses by limiting the purchase of single-use items. Standardization of purchasing procedures should be considered across city offices which will warrant the development of a citywide policy.

Task	Responsible Party
Consider developing, adopting and implementing an internal City policy.	City Manager's Office, Public Works, Purchasing

Goal 2 - Support and Promote the Reuse of Usable Items

Diverting material from the landfill through reuse lessens the tipping fee the City pays at the landfill and further reduces the environmental impacts of developing new products.

Where Are We Now?

Initiative	Summary	Status
Existing Reuse Programs	The City is able to consider reuse as a maximum of 2% of the 25% recycling requirement according to DEQ specifications. The City of Harrisonburg reuses milling material from pavement operations, leaves	Ongoing

	from curbside leaf pick-up, urban wood (where possible), yard debris, and glass. Many of these items are used as cover material at the Rockingham County Landfill and are not considered part of the regular waste stream entering the landfill.	
Support of Community Composting ²⁹	The City supports a local non-profit composting initiative by allowing containers to be placed on city owned property for users to drop-off their compostable material.	Ongoing

Strategy 2.1 - Continue Thrift Store Sponsorship at Recycling Convenience Center

Stage donation bins at the Recycling Convenience Center for lightly used clothing, games, electronics, furniture, and building supplies. The sponsoring thrift store would pick-up donations on an as-needed basis. All profits would remain with the thrift store.

Task	Responsible Party
Continue to develop partnerships with local businesses to locate at the Recycling Convenience Center ^{CC} , and develop an advertising program to educate ^c citizens of these disposal options.	Private ^b Business, Community ^O rganization, Public Works

Strategy 2.2 - Continue to Advertise Reuse Options

Take an active role in advertising options for reuse in the area. Identify businesses, non-profits, artist groups, etc. that take once-used or leftover materials and advertise where and when the materials can be collected.

Task	Responsible Party
Continue to develop the website to aggregate reuse resources.	Public Works

Strategy 2.3 - Consider Lobbying State to Subsidize Companies That Process Recyclable Material

Establishing a local and consistent market for recycling vendors to source recyclables is a crucial component of sustaining a recycling market. Without this avenue, the cost of shipping recyclable material becomes cost-prohibitive. It is important to encourage businesses that can use recyclables as raw material come to the area and for the state government to recognize this regional need.

Task	Responsible Party
Consider identifying feasible partnerships/siting of new businesses.	Economic Development

²⁹ <https://climateactionallianceofthevalley.org/composting/>

Partner with local government advocacy organizations (Virginia Municipal League, Virginia First Cities) to lobby the General Assembly and argue for increased subsidies, grants, etc. for new equipment and local connections.	Private B Businesses, Community e Organizations, Individuals
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Strategy 2.4 - ~~Consider Promoting~~Promote Composting Programs

Composting is a known method for removing reusable waste material from the waste stream. Many homeowners and restaurants undergo composting efforts in their backyards, through private companies, etc.

Task	Responsible Party
Continue nsider cross-promoting, enhancing, and educating the public about composting efforts.	Public Works, Community e Organizations, Private B Businesses

Goal 3 - Support and Promote Recycling ~~of Appropriate Materials~~

The City of Harrisonburg is required by the Commonwealth of Virginia to meet a 25% recycling rate and submit annual reports to the Virginia Department of Environmental Quality outlining the means to reach this recycling rate.

Where Are We Now?

Initiative	Summary	Status
Recycling Convenience Center	In March 2018, the City opened a Recycling Convenience Center at 2055 Beery Road in Harrisonburg, where citizens can drop off recyclables. These pre-sorted recyclables are considered uncontaminated or less contaminated, making them easier to market to local vendors/recycling organizations.	Ongoing
Recycling Mobile Unit	Starting October 2018, a recycling mobile unit was placed at the Farmers Market during Farmers Market hours and is attended by a staff member to answer related questions and assist in properly sorting recyclables. Starting August 2018, a recycling mobile unit was placed at city sponsored events for use by event vendors and event participants. Beginning in the Spring of 2019, a recycling mobile unit was placed a various locations throughout the City on a rotating schedule.	Ongoing

Cardboard Pick-Up	Only businesses with a significant amount of cardboard are eligible for cardboard recycling pick-up. There is a truck dedicated for this purpose. Some areas are picked up regularly, and others are picked up once Public Works has been notified.	Ongoing
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Strategy 3.1 - ~~Continue~~ Consider to Monitor Opportunities for Providing Expanded Recycling Options

The Recycling Convenience Center currently only offers recycling options when local vendors have been identified. Expanded options would allow for the public to bring more items to the Recycling Convenience Center to be properly diverted from the landfill.

Task	Responsible Party
Identify and consider partnering with existing recycling programs within city limits.	Public Works
Identify larger recycling program not within city limits and consider partnership opportunities.	Public Works

Strategy 3.2 - ~~Consider~~ Continue to Evaluate Ways to ~~for~~ Enhance ~~ing~~ and Promote ~~ing~~ Local Recycling Initiatives

The Recycling Convenience Center and the mobile center available on Saturdays when the Farmers Market is operating do not address all areas where local recycling could take place. Identifying and capturing recycling that is going into the landfill will increase the City's recycling rate and landfill tipping fees.

Task	Responsible Party
Partner with local business that use recyclable materials.	Private b Businesses, Community <u>O</u> rganizations
Consider providing mobile recycling units for special events outside of city sponsored events	Public Works
Continue to offer recycling in different neighborhoods and on city-owned property with the Mobile Unites.	Public Works
Consider developing a grant or business loan program to encourage "Low to Now Waste" business start-ups and growth.	Community <u>e</u> Organizations, Economic Development
<u>Consider adding evening hours to the Recycling Convenience Center.</u>	<u>Public Works</u>

Goal 4 - Support and Promote ~~Sanitation, Health and Safety of Staff, Residents, and Visitors~~
Healthy and Safe Solid Waste Disposal

The ability to dispose of all solid waste materials in a healthy and safe manner is a key component to a sustainable solid waste system. Various waste items are not able to be disposed in the municipal waste stream and alternative collection options help reduce illicit disposal of those materials. In addition the downtown areas, due to the building density, presents challenges related to waste storage prior to collection. This goal provides strategies that will work to expand these areas with new opportunities.

~~Downtown trash has been a concern due to the prevalence of oils, grease, and fats that leak from bags onto the public sidewalk and into the City's storm sewer system continues to be a concern. Additionally, staff collection of recyclables that are contaminated/broken/etc. hasve been an ongoing safety concern.~~

Where Are We Now?

Initiative	Summary	Status
Ordinance Violation Oversight	The City provides oversight and enforcement of ordinance violations and responds to citizen and personnel concerns.	Ongoing
Household Hazardous Waste Day	In order to limit illicit material in the trash that could come into contact with staff, Rockingham County and the City host a household hazardous waste disposal day and regular prescription medication disposal at the public safety building.	Ongoing
Prescription Medication Disposal	A prescription medication disposal box is located in the Public Safety building. This is a location where the public can drop off their unused medications for safe and environmentally friendly disposal.	Ongoing

Strategy 4.1 - Continue to Expand the Education Program

Develop an expanded program to educate property owners about safe and sanitary curbside waste disposal, to Recycling Convenience Center users about non-contamination practices, and to students about life cycle analysis, the three Rs, (Reduce, Reuse, Recycle) and plastic reduction.

Task	Responsible Party
Continue to educate the public to remove fluids from waste and recyclables.	Public Works
Continue to educate the public to remove sharp items/hazardous material from the waste stream, and separate cardboard from recyclables.	Public Works
Consider working with City Schools to integrate waste management into curriculums.	Community Organizations
Continue to educate the business community on reduction, reuse, and recycling programs and initiatives.	Community Organizations

Strategy 4.2 - ~~Consider~~ Seek Partnerships for Downtown Centralized Disposal Units

There is limited storage space at downtown businesses which makes the temporary storage of downtown trash and recycling a challenge. Therefore, businesses have difficulty holding trash until the designated pick-up times and the city picks up trash twice daily throughout the work week. There are additional concerns with residential customers placing trash out at the incorrect times. This proposed solution would allow businesses and residents to centrally collect their refuse and recyclables for regular pick-up by city staff. This would eliminate trash accumulation on the curb, reduce emissions from ~~and~~ trucks, and would improve overall downtown curb-appeal.

Task	Responsible Party
Identify central locations and consider outfitting locations with bins/hoppers/secure access/etc.	Public Works
If centralized disposal units are implemented, educate businesses, property owners, downtown residents, property management companies about the change in service and expectations moving forward.	Public Works

Strategy 4.3 - Consider Expanding the Household Hazardous Waste Collection Program

Household hazardous wastes (HHW) are defined as leftover household products that contain corrosive, toxic, ignitable, or reactive ingredients. Improper disposal of HHW can pollute the environment and pose a threat to human health. HHW collection is offered on a semi-annual basis alongside Rockingham County. An expanded program would make drop-off of hazardous waste materials more accessible to the public.

Task	Responsible Party
Consider increasing the frequency of HHW Collection Days.	Public Works, Rockingham County
Study the potential to allow for HHW storage at the Recycling Convenience Center year-round.	Public Works, Rockingham County

Strategy 4.4 – Consider Expanding the Safety Prescription Medication Disposal

Prescription medication disposal is available at limited locations throughout and surrounding the City (i.e. Harrisonburg Police Department, Rockingham County Sheriff’s Office, Sentara RMH). Expanding the drop off locations for regular pick-up by a hazardous waste vendor allows additional accessibility to customers, making it easier for customers to properly dispose of medications. Improper disposal, such as flushing medications down the toilet, introduces the medication into the environment.

Task	Responsible Party
Encourage pharmacies to host a ‘Drug Take Back’ program.	Community Organizations, Individuals

Encourage other relevant local businesses to host a 'Drug Take Back' program.

Community
Organizations,
Individuals

DRAFT

Focus Area 6 – Water Resources

Protect the watersheds of the City of Harrisonburg to secure water supplies, quality, and aquatic ecosystems. Four goals are included in this focus area.

Co-Benefits

Protection of watersheds benefits the public by providing clean and safe drinking water, and provides clean and safe opportunities for outdoor water recreation such as swimming, boating, and fishing. In addition, clean water supplies maintain the aquatic life which inhabits local waters. The wWater supply supports Harrisonburg’s present economic model as well as future development.

Goal 1 - Protect and Secure Drinking Water Sources

The City of Harrisonburg’s “raw” water system includes sources from the Dry River, the North River, Silver Lake, and the South Fork of the Shenandoah River. “Raw” water is untreated water from lakes, streams or groundwater sources. Since allevery source water contains natural chemicals and biological materials, the water from these sources must be treated for human consumption to comply with US EPA requirements for drinking water. The Dry River is the primary and preferred source of water and provides approximately 50% of annual water to the City’s water treatment plant. Dry River water is preferred because of its cleanliness and because it is delivered to the treatment plant by gravity flow with zero energy consumption. The North River is the secondary source of water and provides approximately 50% of the annual water to the water treatment plant. At the North River, energy consumption is intermediate in comparison to the City’s other sources; however, but environmental stress to aquatic life is very high during drought. The South Fork of the Shenandoah River is a future source, which will be vital during drought conditions but carries the highest energy consumption. Silver Lake is an inactive source of water. The combination of water sources allows Harrisonburg to have ample flexibility to adjust water supply to prevailing conditions.

Harrisonburg occupies 17.4 mi² within the 853 mi² (2%) of Rockingham County, Virginia, yet its water area footprint is estimated at 400 mi² of southwestern Rockingham and northern Augusta Counties. In the future, water withdrawals from the South Fork of the Shenandoah River will increase significantly the area of the watershed of concern to the city water supplies. Protection of the watershed includes consideration of anthropogenic pollution inputs upstream of water intakes that could affect the treatment expense of providing drinking water in the City.

Where Are We Now?

Initiative	Summary	Status
Source Water Protection Plan	An assessment of the different raw water supplies, inventory of potential sources of contamination, and determination of each source’s susceptibility to contamination.	Complete

Raw Water Supply Management Plan ³⁰	A city plan that forecasts water demands and outlines strategies to securing sustainable raw water supplies. The strategies consider typical operations that optimize energy conservation, drought conditions that include water conservation and “at-risk” conditions that address “what-if” planning.	Complete
Drought Preparedness and Response Plan ³¹	A regional plan that outlines voluntary and mandatory actions to be taken during various stages of drought.	Complete
Virginia Water Withdrawal Permit	Harrisonburg’s permit through the Department of Environmental Quality (VDEQ) that requires water withdrawal restrictions that protect environmental integrity.	Complete
Potable Water System Management Plan	A city plan that evaluates and engages sustainability practices for the City’s water treatment and distributions systems through evaluation of capacity, management, operations and maintenance. Inclusive is performance benchmarking for managing water loss, energy use, asset life cycle cost, regulatory compliance and customer satisfaction. Investments are encouraged to meet established goals where payback is returned within the life cycle of the deliverable asset.	In-progress
Upper Shenandoah River Basin Water Supply Plan ³²	A regional water supply plan that meets requirements of Virginia	Complete

³⁰

<https://www.harrisonburgva.gov/sites/default/files/Water/Operations/Raw%20Water%20Supply%20Management%20Plan%2006.2019.pdf>

³¹

<https://www.harrisonburgva.gov/sites/default/files/bills/files/Drought%20Preparedness%20and%20Response%20Plan%202012.pdf>

³²

<https://www.harrisonburgva.gov/sites/default/files/green/Upper%20Shenandoah%20River%20Basin%20Water%20Supply%20Plan.pdf>

Strategy 1.1 - Encourage Land Use Practices That Reduce Pollution Upstream of Water Intakes

The primary water supply for Harrisonburg, Dry River, is collected from a watershed that is predominately owned by the United States Forest Service (USFS) with very little human impact at present time. A narrow strip of land from Riven Rock Park to Switzer Dam is the only city owned land upstream of the intake and activity in this section of the watershed is controlled by the City. Protection of the remainder of the watershed will require the City to be proactive with the USFS on issues that could affect water quality. The secondary water supply, North River, is subject to agricultural and other non-point source pollution (NPS) runoff. The use of Shenandoah River water will increase the risk of NPS pollution issues at the future intake station. There is a level of oversight on pollution sources within the City of Harrisonburg through the MS4 permit program, which requires an illicit discharge detection and elimination program, as well as education about water quality.

Task	Responsible Party
Consider creating a City Watershed Management Committee. This committee would operate similarly to the existing Project Review Teams but with an expansion in scope. The committee would be led by the Department of Public Utilities.	City Manager’s Office, Public Utilities
Consider using the Source Water Protection Plan to formulate a protection strategy. Maximum response to source water assessments: city owned land, Harrisonburg City, privately owned land.	City Watershed Management Committee
Continue to use the Municipal Separate Storm Sewer System (MS4) permit program to protect water quality through education, illicit discharge screening, and stormwater management.	Public Works
Consider working with partners to create a threat communication strategy so that Public Utilities is informed of any spills or accidents that have the potential to impact the water supply.	City Watershed Management Committee, Community Partners
Continue to take an active role in the Shenandoah Valley Soil and Water Conservation District, which administers programs and funds to aid farmers in reducing NPS and serves for communication exchange between various government agencies (Virginia Department of Environmental Quality, Natural Resources Conservation Service, Virginia Department of Forestry, etc.) Currently on the SVSWCD board there are two elected directors and two appointed associate directors who are Harrisonburg city residents.	Community Partners

Strategy 1.2 - Consider Producing an Environmental Study Defining Values Provided by the Dry River Watershed

As indicated above, the Dry River provides clean, inexpensive water that has been delivered to Harrisonburg since the end of the 19th century. Its name derives from the sinks that occur downstream of the Rawley Springs area where the river encounters karst topography. Upstream the river flows over bedrock of shale and sandstone and has perennial surface flow. The stream supports unique flora and fauna in the city owned reach including the state fish: the native brook trout *Salvelinus fontinalis*. The range of the native trout here is the largest reach of contiguous water remaining in Virginia. The fact that the City owns about 8 miles of this river is impressive and something for which we should be proud. This resource benefits many people who use the city owned property for nature-based recreation such as fishing, hiking, botany, hunting, bird watching and other low impact activities that do not affect water quality. Thus, the direct value of the Dry River for water supply is supplemented by these other activities that bring revenue back to the City in the form of lodging, food, entertainment, etc. The income benefit to Harrisonburg should be established to aid in protection of the Dry River. There have occurred historic and illegal activities such as off-road motor vehicles, trash dumping, and camping that should be prevented in the future. Recreational trails and low impact vehicular parking sites should be considered. Educational outreach and opportunities for the school system should be studied.

Task	Responsible Party
Ascertain the true services value from the watersheds to the Harrisonburg and local economy and consider a master plan for city owned land in the Dry River Watershed.	City Watershed Management Committee, EPSAC , University Partners Community Organizations
Consider creating an awareness and education strategy to increase safety of the Dry River Water Supply.	City Watershed Management Committee, Community Organizations EPSAC , University Partners
Consider periodically reviewing threats, valuation and communication about the Dry River Water Supply. Address illegal activities and explore future uses in the area.	City Watershed Management Committee, Community Organizations EPSAC , University Partners

Strategy 1.3 - Continue to Maintain Minimum Instream Flows

Water diversion from a stream can reduce normal flows to the point that stress can cause mortality of aquatic life. Currently, Harrisonburg’s Virginia Water Withdrawal Permit protects in-stream aquatics through maximum in-stream withdrawal percentages at the North River Intake (NRI) and the South Fork Shenandoah Intake (SFI) and through a required bypass at the Dry River Intake (DRI).

Upstream of the city's DRI, water is currently released from Switzer Dam. This discharge benefits the city water supply by maintaining the intake volume while simultaneously providing habitat for aquatic organisms. With this water release the City avoids the considerable expense of pipeline construction and maintenance while supplying stream water.

Task	Responsible Party
Maintain in-stream flow and bypass as required by the VDEQ-City Virginia Water Withdrawal Permit for DRI, NRI, and SFI.	Public Utilities
Continue to hold contingency reserves to protect water supply during drought conditions and recognize the need to balance water supplies to avoid dewatering the downstream basin, which could cause aquatic mortality.	Public Utilities

Goal 2 - Implement the Water Use and Water Loss Management Plans

Harrisonburg's economic development is dependent upon adequate energy and water resources for future development. In the past, development has been based upon utilizing a greater and greater proportion of available natural resources. However, the population of many metropolitan areas and their surroundings have exceeded available water supplies, and while this condition has been present in the western states for decades, eastern metropolitan areas like Atlanta, Miami, and numerous other communities are now also seeing economic development limited by water resources. The State Water Resources Plan³³ identified 12 challenges for future water resources management, including: ensuring adequate water supply is available state-wide; improving monitoring of water flow, storage and availability both above and below ground; and better education and communication with the public.

Harrisonburg's Water Use and Water Loss Management components of the Raw Water Supply Management Plan and the Potable Water System Management Plan outline how HPU will handle water conservation as well as minimize water loss.

Where Are We Now?

Initiative	Summary	Status
Water Use Plans	Water and sewer demands for City buildout based upon occupancy and zoning have been forecasted with multiple updates including the last update for Fiscal Year 2017-2018.	Ongoing
Water Loss Management Plans	The Environmental Protection Agency estimates that average water	Ongoing

³³

<https://www.deq.virginia.gov/Programs/Water/WaterSupplyWaterQuantity/WaterSupplyPlanning/StateWaterResourcesPlan.aspx>

	loss in water systems is around 16%; Harrisonburg’s water loss has ranged from 11% to 16% percent since 2008. The Water Loss Management agenda outlines how HPU will minimize water loss.	
Water Conservation	Analysis of Harrisonburg water use data indicates that per capita consumption has decreased approximately one percent annually since 2008. City ordinances for more strict and shorter application of conservation mandates have been drafted and adopted.	Complete

Strategy 2.1 - Remain Proactive in Water Demand Forecasting and Capacity Planning

Harrisonburg Public Utilities works collaboratively with the Economic Development and Community Development departments, as well as executive management, to establish future water needs and expected growth rates. The results provide the framework for future planning including compliance with Virginia State Legislative Code 9 VAC 25-780 through a regional effort in the “Upper Shenandoah River Basin Water Supply Plan”.

Task	Responsible Party
Continue annual forecasting updates. Water demand forecasting is based on a scenario where all vacant properties are developed and where water uses in currently occupied properties may shift due to reasonable zoning or development changes. <u>The City Water & Sewer Forecasting Team is led by the Department of Public Utilities and includes the: City Manager, Community Development Department, Economic Development Department, IT Department (GIS), and the Public Utilities Department.-</u>	City Water & Sewer Forecasting Team
Continue updating the Regional Water Supply Plan. The Regional Water Supply Plan transitions the forecasts for future water demand across source waters under selected growth rates. The original plan was completed in 2013 and updated in 2018. The next required update is in 2023.	Public Utilities

Strategy 2.2 - Continue to Encourage Responsible Water Use Throughout the Year

Analysis of Harrisonburg water use data indicates that per capita consumption has decreased approximately one percent annually since 2008. Water conservation effects can be achieved through various ways that include water pricing strategies, regulations, modifications to user practices and education outreach. Water conservation (use reduction) will be selectively encouraged through the tasks outlined below.

Conservation strategies will require offsetting revenues due to 85-95% of business costs being fixed with no direct relationship to daily water production.

Within the bottom line include enough funding to meet long term financial model goals including all identified funding needs with specific emphasis upon the effective and efficient retirement of existing aging assets.

Within the bottom line consider water conservation incentives or high consumption deterrents to avoid seasonal environmental stresses and to avoid longer term investments into additional unsecured water sources. Consider customer class usage and conservation targets, especially emphasizing residential users.

Task	Responsible Party
Evaluate, and if warranted, develop an implementation plan to revise, the existing water and sewer purchase rate schedules (alternatives to declining block rates which provides lower unit purchase rates with higher consumptions; alternatives to the minimum charge that has no financial incentive to conserve at less than minimum volumes) to encourage a balanced multi-bottom line approach.	Public Utilities
Continually evaluate and commensurately set impact fees and connection fees for new construction to appropriately share the cost of common infrastructure with existing customers.	Public Utilities
Continue to support practices that require new development to install their needed local infrastructure with minimal financial subsidies from the City to avoid cost burden upon existing customers.	Public Utilities
Continue to coordinate with the strategic plan, the Zoning Ordinance, and Building Code to ensure future water demands are within the capacities of secured environmentally permitted water supplies.	Community Development, Public Utilities
Consider <u>Explore</u> incentives for new construction to be built to high water conservation standards. Consider encouraging water conservation to allow for the expansion of economic development within permitted limits from local, regional and state-wide water resources.	Community Development, Public Utilities
Consider <u>improve</u> monitoring and assessment methods of unpermitted withdrawals, especially during seasonal flows.	Public Utilities

Strategy 2.3 - Continue to Encourage Seasonal Water Conservation

During drought-prone months (July-November) Harrisonburg adds a seasonal surcharge on water rates and thus to water bills. This strategy will evaluate the seasonal water rate charge to see if changes are needed to better encourage water conservation during the most environmentally sensitive period of the year.

Task	Responsible Party
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Consider setting conservation targets for the seasonal water rate charge, evaluate effectiveness and make changes as necessary.	Public Utilities
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Strategy 2.4 - Continue Responsible Water Use During Drought Conditions

Harrisonburg’s water conservation ordinance was coordinated through its Virginia Water Withdrawal Permit (VWP) to engage water use constraints upon meeting the established triggers specifically adapted to local environmental conditions.

Task	Responsible Party
Continue to meet the requirements of the VWWP.	Public Utilities
Continue to educate the public about water conservation and conservation requirements during drought conditions.	Public Utilities

Strategy 2.5 - Minimize Water Loss by Implementing the Water Loss Management Plan

The Water Loss Management Plan outlines ways in which water loss will be managed through maintenance, leak detection, and investments in new infrastructure.

Task	Responsible Party
Continue to respond immediately (on and off hours) to remediate water main failure events.	Public Utilities
Continue strategic planned maintenance program for annual leak detection surveys.	Public Utilities
Continue strategic planned maintenance program for annual large meter testing, repair, and retirement.	Public Utilities
Continue strategic planned maintenance program for annual small meter retirement through the Capital Improvement Program (CIP).	Public Utilities
Consider investment of CIP into <u>Advanced Metering Infrastructure(-AMI)</u> technology for meter use monitoring and leak management.	Public Utilities
Continue investments for, and use of technology to facilitate, internal water audits for water loss identification from the water system.	Public Utilities
As the guideline for potable water system management, continue to engage asset management principles that include inventory of assets, Level of Service (LOS) standards; criticality assessment and condition assessment. Use this information to prioritize predictive, preventative, and corrective maintenance as well as asset retirement planning. Inclusive is performance benchmarking for managing water system water losses, energy use, asset life cycle cost, regulatory compliance and customer satisfaction. Investments are encouraged to meet established goals where payback is returned within the life cycle of the deliverable asset.	Public Utilities
Continue to support the asset replacement component for the “Long-term Financial Model”, specifically the pipe replacement component.	Public Utilities

Goal 3 - Protect Stream Health Through Sanitary Sewer Management

The City of Harrisonburg owns and operates a sanitary sewer system that collects sanitary sewage and transports it to the Harrisonburg Rockingham Regional Sewer Authority (HRRSA), where water treatment occurs before water is discharged into the South Fork of the Shenandoah River. In many areas, sanitary sewer lines are adjacent to, or in, Blacks Run and other waterways. Just like in many communities, inflow and infiltration, overflows, and aging infrastructure pose problems to the sanitary sewer system and to water quality.

Where Are We Now?

Initiative	Summary	Status
Sanitary Sewer Management Plan ³⁴	A city plan to guide evaluation of capacity, management, operation and maintenance of the sanitary sewer infrastructure as it increases and ages.	Complete
Level of Service Study for Interceptors	A study that will define a level of service (LOS) of sanitary sewer interceptors, where LOS is defined as the peak flow recurrence that the sanitary sewer can convey without resulting in a capacity related sanitary sewer overflow.	In-progress
Septic System Management Program	Although new septic systems are generally not allowed in the City of Harrisonburg, there are still properties in the City with septic systems. In 2018, a new program was implemented that requires septic systems to be inspected and pumped once every five years, as well as an additional program created that provides financial incentives for property owners that wish to disconnect from their septic system and to connect to the sanitary sewer system.	Complete

³⁴ <https://www.harrisonburgva.gov/sites/default/files/Water/PDFs/2018-01-31%20SSMP.pdf>

Strategy 3.1 - Meet Sanitary Sewer Level of Service

Interceptor sewer pipes are the largest diameter lines in the sewer system. They receive wastewater from trunk sewers and convey it to the wastewater treatment plant. Sewer pipes are designed to carry sanitary sewer, but occasionally storm-water and groundwater enters the system as well (called inflow and infiltration, or I&I), increasing the flow inside the pipes. When flow inside the interceptor exceeds capacity, a sanitary sewer overflow will occur. The interceptor level of service (LOS) defines the maximum hydraulic capacity of wastewater and I&I the interceptors can handle. A higher LOS means there will be less SSOs during storm events when infiltration is occurring because the interceptors have a higher hydraulic capacity; however, interceptor capacity improvements are expensive.

Task	Responsible Party
Complete Level of Service Study for Harrisonburg Sewer Interceptors. Identify investments needed to meet 10 years LOS goals. Include the study goals into the sewer Capital Improvement Program.	Public Utilities
As the guideline for sewer system management, continue to engage asset management principles that include inventory of assets, Level of Service (LOS) standards; criticality assessment and condition assessment. Use this information to prioritize predictive, preventative, and corrective maintenance as well as asset retirement planning. Inclusive is performance benchmarking for managing sewer system integrity and overflow frequency, energy use, asset life cycle cost, regulatory compliance and customer satisfaction. Investments are encouraged to meet established goals where payback is returned within the life cycle of the deliverable asset.	Public Utilities

Strategy 3.2 - Reduce Additional Loads on Sanitary Sewer

Interceptor capacity improvements are often paired with I&I abatement programs to meet a designated LOS and reduce sanitary sewer overflows (SSOs). Additional loads on the sanitary sewer system come from illicit connections such as storm pipes accidentally connected to sewer pipes.

Task	Responsible Party
Continue to implement the I&I program: use flow monitoring to prioritize areas of investigation; rank assets with suspected I&I issues; visually inspect, dye test, CCTV inspect, or smoke test for confirmation of problems; remediate issues.	Public Utilities
Consider a cooperative I&I Program: facilitate a sanitary sewer and storm-water program to help solve I&I issues on private property through a cooperative arrangement.	Public Utilities & Public Works

Goal 4 - Protect and Enhance Water Quality of Surface Water and Stormwater Runoff

The City of Harrisonburg is drained mostly by Blacks Run, which is a limestone spring origin stream and is one of many freshwater streams that are tributaries to the Chesapeake Bay. In fact, a main reason the City grew in its early days was due to a large spring in the downtown center near the courthouse. A large part of historic Harrisonburg lies astride the stream or in close proximity to the ~~10-year~~100-year floodplain. Like most urbanized streams, Blacks Run water quality has been degraded by past historic activity. In the present-day proximity of sanitary sewers in the stream channel and rain and snowmelt runoff that carry contaminants into it. As part of the Chesapeake Bay TMDL, efforts are underway to reduce nutrient loading including storm-water management. Other streams, ponds and surface waters are found in neighborhoods, on college campuses and in parks in the City that have aesthetic and other values to the City.

Where Are We Now?

Initiative	Summary	Status
Stormwater Improvement Plan ³⁵	The Stormwater Improvement Plan is a long-range visionary plan that outlines how storm-water utility fee funds will be invested in projects to filter, control, and treat polluted runoff.	Complete
Chesapeake Bay TMDL Action Plan ^{36,37}	Harrisonburg must comply with permit regulations that require reductions in sediment, phosphorous, and nitrogen by 2028 in order to clean the Chesapeake Bay.	In-progress
Blacks Run/Cooks Creek TMDL Action Plan	The Blacks Run and Cooks Creek TMDL will requires reductions of phosphorous and nitrogen above and beyond what is required by the Chesapeake Bay TMDL.	Upcoming Upcoming

Strategy 4.1 - Reduce and Improve Stormwater Runoff

As a permitted MS4 community within the Chesapeake Bay Watershed, Harrisonburg is required to reduce nutrient and sediment loading from storm-water runoff. How the City accomplishes this goal is set forth by the Storm Water Improvement Plan (SWIP). The majority of the SWIP incorporates BMPs to improve

³⁵ <https://www.harrisonburgva.gov/stormwater-improvement-plan>

³⁶ <https://www.harrisonburgva.gov/MS4-permit-program>

³⁷ <https://www.deq.virginia.gov/Programs/Water/ChesapeakeBay/ChesapeakeBayTMDL.aspx>

storm-water quality. Direct measures to improve storm-water quantity should also be incorporated to reduce flooding and erosion downstream.

Task	Responsible Party
Continue to implement SWIP and develop innovative BMPs to improve quality of stormwater runoff.	Public Works
Consider developing a Stormwater Drainage Improvement Program to reduce flooding in sensitive areas and implement more control measures to capture and slow stormwater runoff.	Public Works

Strategy 4.2 - Improve Stream Health

Stormwater runoff reduces stream health by quantity (erosion) and quality (nutrient loading and sedimentation). Due to the large amounts of impervious surfaces or gray infrastructure within the City, stormwater runoff is a big component of pollution source. An increase in Green Infrastructure is needed to offset the gray infrastructure. The City needs to increase tree canopy coverage and riparian buffers throughout the city, thus reducing stormwater runoff.

Task	Responsible Party
Consider setting a goal to increased tree canopy coverage, by a certain percentage throughout the City to reduce storm-water runoff according to the Tree Canopy – Green Infrastructure Center (GIC) study . ³⁸	Public Works, Parks and Recreation, Community Development
Consider creating and maintaining riparian buffers on all public property where waterways are present.	Public Works

³⁸

https://www.harrisonburgva.gov/sites/default/files/PublicWorks/files/stormwater/1.13%20Harrisonburg_web_spreads%20%28002%29.pdf

Staff Responses to Environmental Action Plan (EAP) Comments

The following staff responses are to public comments that were not added or addressed in the September XXX, 2019 update of the Draft Phase 1 EAP.

General Comments

Public Comment Overview	Staff Response
Recommendation to add benchmarks, metrics, and targets.	City staff agrees with this. The introduction of Phase 2 of the EAP explains that measurable benchmarks, metrics, and targets will be established during Phase 2 and 3 of the EAP. Priorities may also be established during Phase 2 and 3 to focus the City’s efforts on the most impactful and/or efficient strategies.
Request to add names of specific businesses or organizations	The names of specific private businesses have purposefully not been added to the EAP. City staff recognizes that there are private businesses and endeavors currently underway that support environmental sustainability, however, the “Where are we now?” sections of each Goal is reserved to describes actions that the City has already taken and does not describe private endeavors. Recognizing that some actions will require leadership and support by non-City entities, “private businesses” may be listed as a responsible party for certain tasks.

Buildings and Energy

Public Comment Overview	Staff Response
“Where are we now” section should reference Energy Use Intensity standards	Energy usage would first need to be calculated for individual buildings.
Request to monitor emissions of waste-oil heating system	Added language to consider alternatives to the waste-oil heating system
Request to add EV chargers to municipal lots	This would be a difficult and costly proposal. There are different types of EV chargers, although there may be combination charging machines. They chargers must be on a level spot for accessibility purposes and many of the spaces are already being used for accessible parking close to buildings. To find other level spaces you would have to move further from the building – which would require cutting up asphalt and adding more wiring. The City continues to evaluate opportunities as grants and partnerships become available.

Request for addition of renewable energy to the EAP	Strategies and tasks have been edited and added to encourage renewable and sustainable energy sources. However, no strategies or tasks have been added to the plan that recommends directing the operations of HEC. HEC was established in 1956 by City Council as an independent, nonpolitical commission. While City Council appoints HEC Commissioners, City Council does not have authority over HEC.
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Land Use and Green Space

Public Comment Overview	Staff Response
Eliminate or reduce the amount of free parking or to require parking to be located differently on a parcel such as behind buildings and not adjacent to public streets and sidewalks	Strategy 1.2 within the Land Use and Open Space focus area references the chapter on Sustainable Transportation. Strategy 6.1 within the Sustainable Transportation focus area recommends considering revising off-street parking regulations to remove parking minimums in the Zoning Ordinance. City staff and Planning Commission will be evaluating as part of another City project and may recommend removing parking minimums and/or creating parking maximums where appropriate or as appropriate for particular land uses. Additionally, Strategy 1.1 of the Land Use and Open Space focus area describes reviewing the Zoning Ordinance and the Subdivision Ordinance and comprehensively updating the ordinances and Strategy 1.2 promotes higher density development. A comprehensive review and update of the Zoning Ordinance will be worked on over the next two to three years during which these topics and others will be explored.
Review the Zoning Ordinance to reduce setbacks and to allow accessory dwelling units and backyard apartments	Strategy 1.1 describes reviewing the Zoning Ordinance and the Subdivision Ordinance and comprehensively updating the ordinances and Strategy 1.2 promotes higher density development. A comprehensive review and update of the Zoning Ordinance will be worked on over the next two to three years during which these topics and others will be explored.

Sustainable Transportation

Public Comment Overview	Staff Response
Consider electrification and alternative fuel options for all vehicle classes	City staff will consider electrification and alternative fuel options for applicable fleet and transit vehicles. With current technology, switching to electric vehicles may not be possible. For example, Harrisonburg Fire Department cannot consider switching fire apparatus to become electric vehicles as they would not be able to risk running out of electricity during a response. The diesel engines in

	fire apparatus utilize the latest regeneration technology to reduce emissions to the greatest extent possible.
Reduce parking requirements and implement road diets	The EAP uses the terminology “lane reconfiguration” instead of “road diet”. Reconfiguration reallocates space to increase safety and access for all modes.
Highlight schools as a high priority for bicycle and pedestrian connectivity	The EAP incorporates this by referencing the Bicycle and Pedestrian Plan, which outlines schools as a priority for connectivity.
A question about the goal of signal optimization and alternative transportation goals conflicting with each other	Public Works is currently implementing a project that will provide crosswalk signalization at all signalized intersections that have sidewalks on both sides of at least one leg of the intersection (essentially, all signalized intersections with pedestrian infrastructure present). To address what may seem like a conflict between the two goals, pedestrian accommodation overrides optimized signal operations for vehicles. An example that many can identify with would be Port Republic Road, near the University and Exit 245, where many signals are closely spaced. The signals need to be optimized for maximum through put, as it’s a highly congested area, and the signals are coordinated as part of optimization. However, in the recent Port Republic Road traffic study that analyzed operations between S. Main Street and Devon Lane, we found out that the 700+ pedestrian calls per day made at the intersection of Port Republic and Hillside/Bluestone Drive interferes significantly with the signal coordination and therefore optimization. However, pedestrian calls are always serviced, despite the disruption to vehicular traffic. Pedestrian calls are never dropped to alleviate vehicular congestion. Both of these goals reduce greenhouse gas emissions.

Waste Reduction and Recycling

Public Comment Overview	Staff Response
Ban the use of single use plastic bags	Virginia state code does not give the City authority to implement a ban or user fee for single use plastic bags. Goal 1 from this sector includes strategies that may assist in the reduced use of these types of bags.
Begin a program to collect compost city wide	Currently the City partners with a local group to provide composting collection services. This local group educates users on composting, collects the materials, and coordinates its disposal. The scale of the current program works well for the local group. Implementing a city wide program would be very cost prohibitive as it would require additional city staff, equipment, and storage areas, which limits the overall viability of the program. Goal 1 from this sector includes strategies that may assist in the use of this local groups composting program.

Water Resources

Public Comment Overview	Staff Response
<p>Do not use the South Fork of the Shenandoah River as a water source</p>	<p>The South Fork of the Shenandoah River is a water source that has been studied and compared against alternative sources for over 20 years by staff, consultants, regulatory agencies, environmental interest groups and City Councils. The project is over 25% completed and will be commissioned within the next 3-5 years.</p> <p>The comments provided no reasons for the recommendation, but the most probable concerns would be for quantity of water that remains in the source waters and for the quality of the water that will be consumed. The following addresses these issues:</p> <p>Quantity: Pursuit of the Shenandoah source is primarily driven with efforts to protect instream water volumes during drought at the City's current withdrawal locations at North River and Dry River. The other is to accommodate growth. With the Shenandoah River as an active raw water source, each of the City's three water sources will be protected under Virginia Water Withdrawal permit requirements for instream flow rates to very protective levels.</p> <p>Quality: As compared to upper water shed sources such as Dry River, the Shenandoah River is a lower watershed source water and thus is subject to a greater variety of contaminant exposure but at lower levels due to dilution in the higher instream water volumes. In contrast, because of the extreme fluctuation in flow rates at North River, the Shenandoah River can at times be a better quality of raw source water during periods of high instream flowrates.</p>
<p>Change water pricing to allow for cheaper use of basic amounts of water and incentive water conservation.</p>	<p>Current practice is to use AWWA Cost of Service Cost (COSS) protocol to apportion cost (through rates) to users to match the financial demand that they place upon the City's operations. Response to this comment can be made in two perspectives. First, the value of environmental sustainability is not recognized in the COSS format and might be more represented and integrated. Second, the concept of an initial cheap volume of water is possible, but it must be secondary to an initial requirement to collect fixed revenue needs through a means such as monthly minimums and alternative base rate charges. This is because 90% of the utility operating cost is fixed (is not influenced by water use) and because the water system has of aging infrastructure that must be funded for replacement (this cost is not be influenced by water sales). Consider that all customers</p>

	<p>receive water services for fire protection 7/24/365 without paying for the first increment of water. A healthy fixed revenue stream from all users is necessary to meet this need as well as to meet the criteria of lending institutions for good bond ratings.</p>
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PHASE 1 ENVIRONMENTAL ACTION PLAN
OPEN HOUSE AND PUBLIC COMMENT PERIOD
CITY OF HARRISONBURG

Open House
June 5, 2019
5pm – 7pm



City Hall Atrium
409 S. Main St.
Harrisonburg, VA 22801

COMMENT SHEET

Name (Optional): John Schoster Phone/email (Optional): [REDACTED]

I would like to be contacted to discuss the plan further (Y/N): If yes, complete information above.

1. How well do the Focus Areas and Goals represent priorities that you feel the City and community should focus on addressing? (Circle one)

Very Well Well Neutral Poor Very Poor

2. Do you have comments on specific Goals? Please list the Focus Area and Goal, for example: Water Resources, Goal 1.

YES, DON'T TAKE H₂O FROM A RIVER ^{SHENANDOAH} FOR DRINKING H₂O.

3. Do you have comments on specific Strategies? Please list the Focus Area and Strategy, for example: Water Resources, Strategy 4.2.

LAND USE : RESTRICTIONS ON CLEARING EXISTING VEGETATION (ESPECIALLY TREES), AND REQUIREMENTS FOR A LARGE PERCENTAGE OF DEVELOPED LAND IS GREEN, STORM H₂O: ~~DO~~ LIMIT GROWTH AS BOULDER CO. AND YOU WIL NOT NEED SUCH AN EXTENSIVE AND EXPENSIVE STORM H₂O SYSTEM.

4. Use the space below or the reverse side for additional comments.

EUROPEAN BIFF LANES IN MANY AREAS ARE BUFFERED FROM NORMAL TRAFFIC, AS WELL AS IT SHOULD. I STOP WIDENING ROADS, IF PEOPLE WANT TO DRIVE A CAR ITS THERE CHOICE. — CONJESTION,

Please leave this comment sheet with staff at the sign-in table, mail your comments to the addressee on the reverse side, or email your comments to Rebecca.Stimson@HarrisonburgVA.gov. Please submit your comments by June 26, 2019.

Visit www.harrisonburgva.gov/eap-open-house for more information.

Additional Comments

STOP ALLOWING OBNOXIOUS SIGNS ALONG THE HIGHWAY. MAKE THE TRANSITION OVER A DECADE LONG OR SHORTER.

THE SAME WITH OVERHEAD TOWER LINES. GET RID OF THEM, SOUTH MAIN STREET LOOKS LIKE A THIRD WORLD COUNTRY.

THESE IDEAS ARE NOT NEW AND HAVE BEEN IMPLEMENTED FOR FIFTY YEARS IN SOME PARTS OF OUR COUNTRY.

FOLD HERE FIRST

Return Address

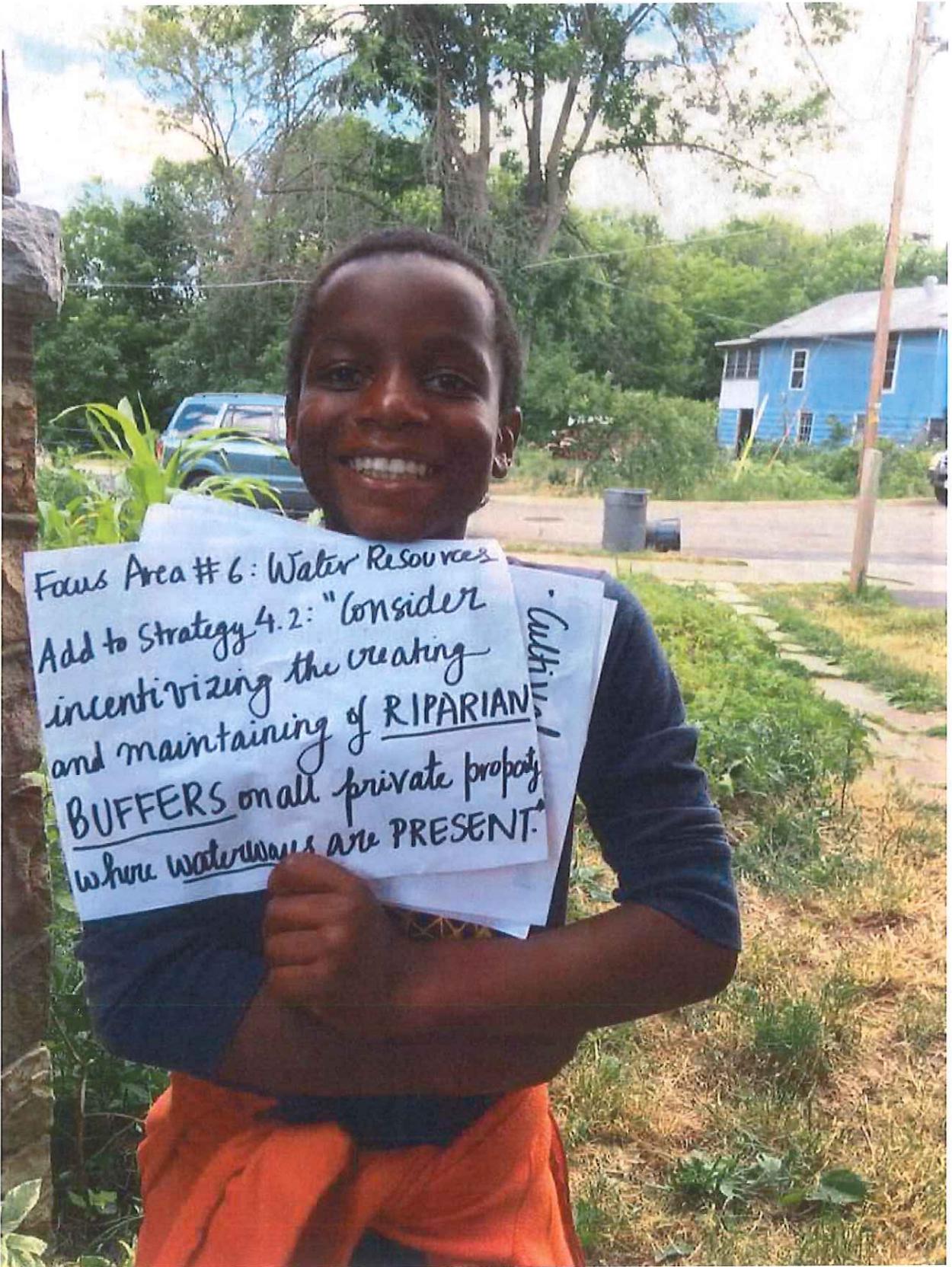
PLACE POSTAGE
HERE, POST
OFFICE WILL NOT
DELIVER WITHOUT
PROPER
POSTAGE.



City of Harrisonburg
Rebecca Stimson
Department of Public Works
320 E. Mosby Road
Harrisonburg, VA 22801

FOLD HERE LAST

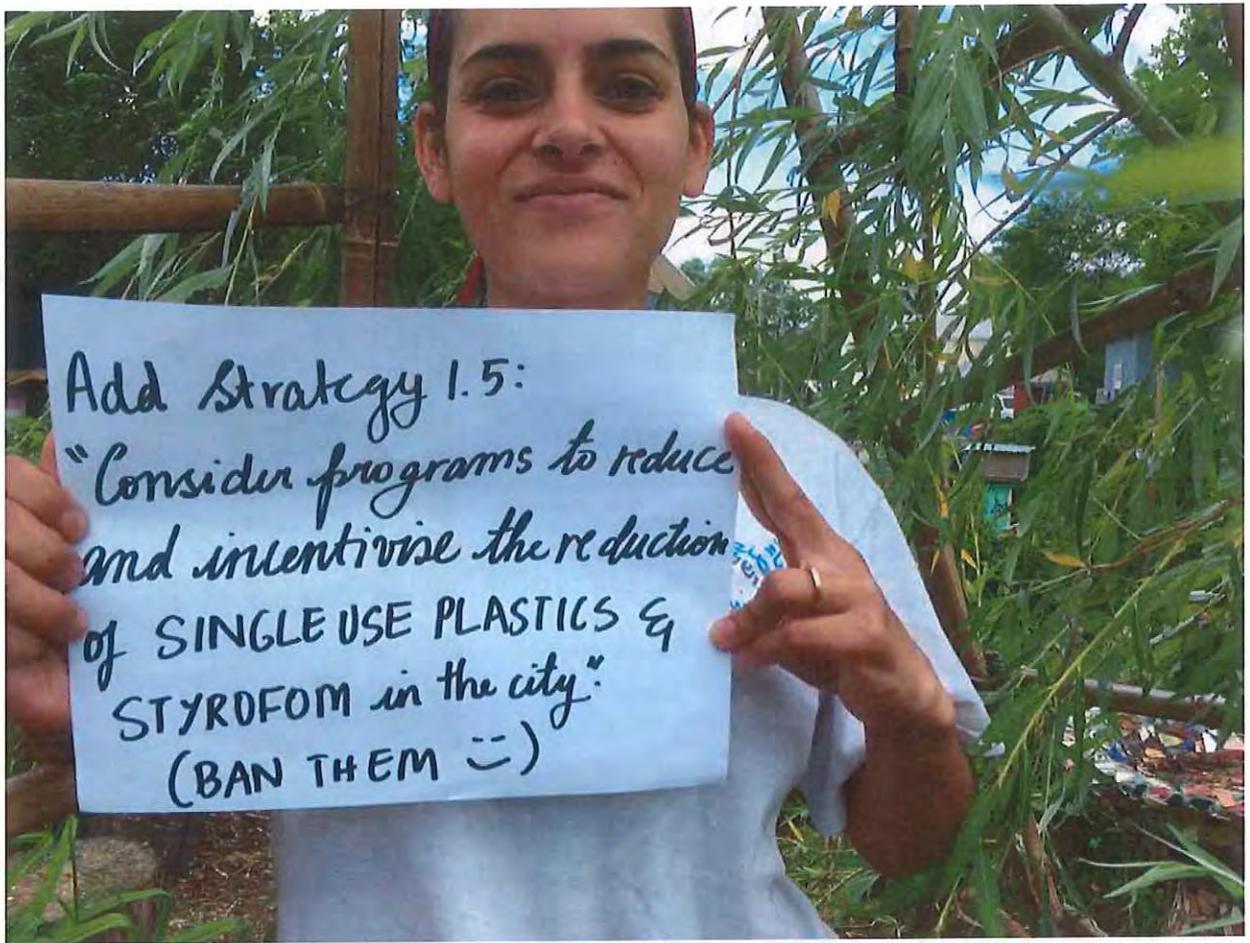
Please submit this form during the open house, email it to the address on the reverse side, or mail it to the above address.



Focus Area # 6: Water Resources
Add to Strategy 4.2: "Consider
incentivizing the creating
and maintaining of RIPARIAN
BUFFERS on all private property
where waterways are PRESENT."

Cultural





Add Strategy 1.5:
"Consider programs to reduce
and incentivise the reduction
of SINGLE USE PLASTICS &
STYROFOAM in the city."
(BAN THEM 😊)





FOCUS AREA #5: Waste & Recycling
1. Add to Strategy 1.1:
"Consider establishing
a PAY-AS-YOU-THROW
system" & credits for
RECYCLING & COMPOSTING

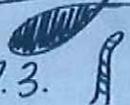


FOCUS AREA#2:
LAND USE & GREEN SPACE:

"Add Strategy 4.3:
ESTABLISH an open-to-the-public
FREE fruit orchard within a
park or other public
property."



FOCUS AREA #3: Regional
FOOD Systems

ADD Composting
to strategy 2.3. 

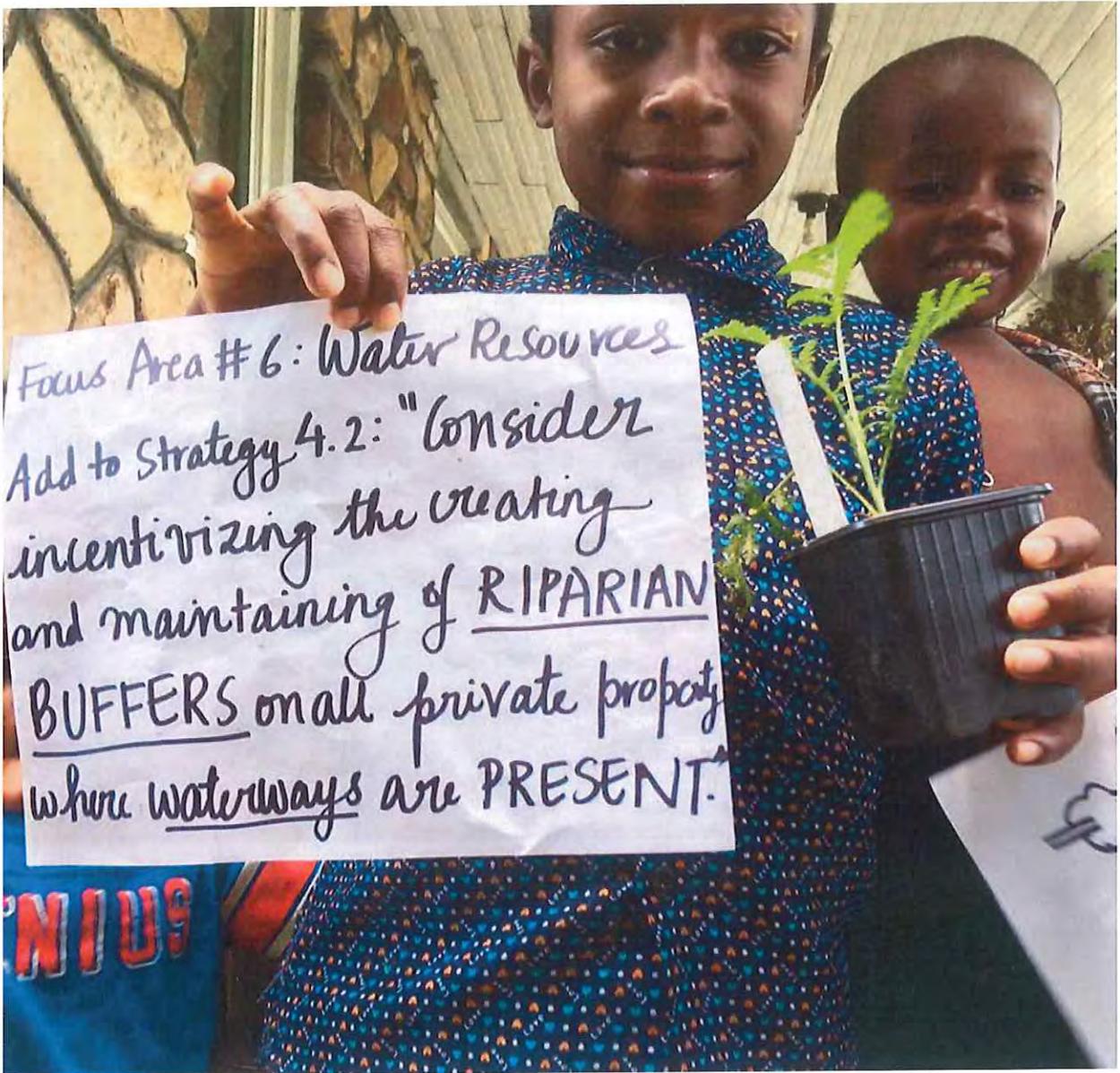


Focus Area #6: Water Resources
Add to Strategy 4.2: "Consider
increasing the creating
and maintaining of RIPARIAN
BUFFERS on private property
where waterways are PRESENT"

...with valuing an
agriculture that
renews the land
instead of
extracts from it
☿ ☿ ☿

City Partnership with
BLACKS RUN FOREST
FARM to curate the
stream encourages →

- GROWING nutritious food
& MEDICINE in a
flood plain
- Welcoming the BIODIVERSITY
of plants, birds, insects,
et...
- Clearing water through
Stream Restoration



Focus Area #6: Water Resources
Add to Strategy 4.2: "Consider
incentivizing the creating
and maintaining of RIPARIAN
BUFFERS on all private property
where waterways are PRESENT."



Focus Area #6 Water Resources
Add to Strategy 4.2: "consider
concentrating the creating
and maintaining of RIPARIAN
BUFFERS on all private property
where waterways are PRESENT"

valuing an
agriculture that
renews the land
instead of
extracts from it
🌳 🌳 🌳

City Partnership with
BLACKS RUN FOREST
EPA to curate the
stream encourages →

GROWING nutritious food
+ MEDICINE in a
flood plain
• Welcoming the BIODIVERSITY
of plants, birds, insects
et...
• Clearing water through
stream restoration

Name	Comment
Nidhi Vinod	<p data-bbox="472 233 537 254">Hello,</p> <p data-bbox="472 289 1406 348">Thank you for working on this, Environmental Action Plan is extremely important for the city to adopt.</p> <p data-bbox="472 390 857 411">Here are some of my suggestions:</p> <p data-bbox="472 449 1430 537">To have a second overarching goal should be added in order to preserve, protect, and restore environmental quality for the benefit of all residents; as the benefits of environmental initiatives should be distributed fairly and justly across all city residents.</p>
Brooke Imber	<p data-bbox="472 646 1382 667">I would love to see more edible plants around town and composting for everyone.</p> <p data-bbox="472 705 1430 890">I am glad for all the solid, good work done by city employees, Councilman Baugh and the Environmental Performance volunteers. Most of the document presents important and attainable goals. But I believe that the lack even of aspirational goals on renewable energy is a serious omission. Surely HEC will be amenable to help; other Virginia cities operating directly with electricity from Dominion have set goals and nobody fainted or went to jail.</p>
Anne Nielsen	<p data-bbox="472 968 1406 1026">Plastic shopping bags should be eliminated entirely, with an interim step of charging customers five cents each to incentivize the use of reusable bag.</p>
Carl Goetz	<p data-bbox="472 1136 1406 1194">Thank you for your hard work in putting together this first draft. There is still work to be done but I am so happy that this city is making these issues a priority!</p>
Jess Garmer	<p data-bbox="472 1251 1260 1272">Thank you for your effort in building out the Environmental Action Plan.</p> <p data-bbox="472 1310 1349 1404">I would like to see it more clearly outlined how Harrisonburg City will keep HEC aligned with our goal to be a more Environmentally Friendly City. I would also like to see words like "Consider" removed in favor of action words.</p>
Isaac Witmer	<p data-bbox="472 1444 1057 1465">This is so important! Thanks for starting the process.</p>
Alicia Maldonado-Zahra	<p data-bbox="472 1520 1308 1541">Ban plastic and styrofoam; encourage sustainable and compostable items.</p> <p data-bbox="472 1556 911 1577">Encourage composting and bike riding.</p> <p data-bbox="472 1587 1406 1646">I urge the City of Harrisonburg to develop a plan for eliminating single use plastics and styrofoam from our community. I would also love to see a city-wide composting service.</p>
Allie Emerick	

I have watched our city flourish for decades, but now is not the time to rest on our laurels. We are deep in the middle of racial/ethnic/religious conflict; the wealth of our nation is being grasped by a powerful few at the cost of many; and our mother Earth is dying. We must preserve the best of our city while acknowledging her flaws and work together to build up the natural world as we let loose the gates and bars that house our minority and impoverished citizens for every ragged offense possible...draining their meager coffers while the entitled among us march on to glory. Those offenses could be paid by serving our community as stewards of our plant and wildlife...of our waterways. Much better to build pride in creating a biodiverse community rather than languishing in a cell.

June Wells

Melissa Weaver

Thank you for doing this for our city!

Michaela

We need the climate change action plan!

make it easy for residents to do their part in limiting waste. We also need more bike paths that allow residents to travel safely through town and limit their fossil fuel consumption.

Bryce

make it easy for residents to do their part in limiting waste. We also need more bike paths that allow residents to travel safely through town and limit their fossil fuel consumption.

1. Please include language in the Environmental Action Plan to have measurable standards. This plan is meaningless if information cannot be measured to know whether the city has succeeded in reaching its goal. Perhaps a first step in this language is to explicitly set up baseline marks for each category to be established by a certain year, perhaps December 2020.
2. Include language that addresses the justice of climate action - our city needs to be proactively mindful of our poorest residents as address the climate crisis. City actions must be accessible to all income levels, and this should be stated in the Environmental Action Plan.
3. Enhance the composting component of Focus Area 3, Goal #2. Can the city initiate Green Bin pickup for home and small business composting?
4. Thank you for beginning this serious look at addressing the climate crisis. I always want the city to do more to address climate change, so I'm grateful the conversation is moving in earnest, and I understand that to get where we are has taken significant effort from citizens and city staff.

Brendan Erb

The Climate Action Alliance of the Valley (CAAV) offers the following comments on Harrisonburg's Draft Environmental Action Plan (EAP) Phase 1. We applaud the city's effort to focus on this important initiative. While the plan raises many possibilities in terms of actions, it does so in a way that in many instances is not specific or based on metrics. The draft seems to be more of a "plan to make a plan" without a clear path as to who makes decisions as to what actions might "make the final cut" and in some instances without a clear timetable. We hope that the final version will be strengthened to remove these weaknesses.

We also note that the plan does not include a recommendation or action item for the city to appoint a sustainability coordinator. Such a position would likely pay for itself by being able to generate grants and saving the city money through the various initiatives identified in the Phase I draft and in future actions. There has been an effort in the past based on a recommendation from Renew Rocktown. The prior effort did not result in the creation of a city position to drive coordinated and sustained efforts toward greater sustainability, but it led to the creation of the Environmental Performance Standards Advisory Committee (EPSAC) and, eventually, to this draft EAP. The city needs someone directly in charge of, and responsible for, implementing the final EAP and the city's sustainability efforts in general. This url from CAAV's website contains some relevant information about the prior effort, including details about a coordinator position: <https://climateactionallianceofthevalley.org/2013/03/09/how-about-a-harrisonburg-sustainability-coordinator/>.

Introduction

Paragraph 1 on p. 7 describes the EAP as a "road map for city leaders, staff, and community members to implement sustainability visions and principles" with possible foci for action plans. However, many if not most of the draft EAP's strategies begin with "Consider . . ." In the context of an "action plan," most if not all strategies should be more than merely aspirational and should preferably not be ideas that may (or may not) be considered, let alone acted upon. This leading paragraph, together with the Table of Contents, does not mark the EAP as a serious attempt at changing the status quo.

Similarly, paragraph 2 on p. 7 lists a number of aspects of sustainability but omits the important goal of greenhouse gas reduction, a surprising omission, given Goal 1. Although some goals and strategies, taken together, appear to include "policy changes" and "incentives," the details, particularly in Focus Area 1, fail to promote credible action plans.

Under "Scope of Plan," the phrase "improve the environment and sustainability" appears, again without clear definitions of either what would improve the environment or promote sustainability. Further, defining goal statements as "overarching statements describing the direction the community wants to go" and as "end states for each focus area [that] reflect the values of the community" appears reasonable until one considers what one would logically assume to be implementing strategies, only to find that the strategy is only to "consider" rather than doing something. Even though the goal statements are "qualitative [in] nature," we wish this action plan would include quantifiable goals and strategies using appropriate metrics; yet such specifics are largely absent. Worse, the "strategies and tasks may be implemented by city departments, private businesses, or community organizations." One has to assume that such strategies and tasks also may not be implemented—again, surprising within an "Action Plan." The good news is that implementation of strategies and tasks that the plan identifies does

not mean that they are the only possible implementation actions that could be taken. The bad news is that the plan's identified strategies and tasks seem optional.

Goal 1—Reduce Overall, Community-Wide Greenhouse Gas Emissions and the Intensity of Greenhouse Gases Emitted from Different Activities

Public and Private Sector

Goal 1 should be part of any environmental action plan (p. 8). However, it is the single overarching goal of the EAP. Since the plan is supposed to augment an “existing city plan . . . and proposed measures to accelerate advancements in sustainability,” it would be useful for the plan to include additional overarching goals that speak to the “critical pieces of achieving sustainability goals,” identified as “economic vitality, environmental protection, and health and well-being.” Although Goal 1 is worded strongly, using the action word “Reduce” GHG emissions, the two strategies for this goal are weakened by the hedge “consider.” If after considering possible actions, the city elects not to “complete a GHG Emissions Inventory” and/or set “targets for GHG Emission Reductions,” it would follow that the strategies of the 6 Focus Areas might be ignored.

The five goals of Focus Area 1 are good as far as they go (pp. 8-9). Goal 1 makes sense: the city cannot reduce greenhouse gas (GHG) emissions until it knows how much GHG it currently produces. Its implementing strategy 1.1, however, seems to duplicate the two strategies listed for the overarching goal. Accomplishing Focus Area 1's Goals 2, 3, and 4 in a substantive way should achieve some level of GHG reduction but in the absence of targets or objective measures, it's not clear how the city will be able to document its progress in reducing GHG emissions.

Goals 2, 3, and 4 appear to be tied to the city's energy use, whereas Goal 5 does not. Rather, it seems limited to the private sector. The public sector is defined to exclude the city's municipal electric utility (Harrisonburg Electric Commission [HEC]), even though its stakeholders clearly include the “public” and the “community”. Because it “operates independently from the City,” HEC seems to be considered a private entity. Given that the city cannot meaningfully accomplish Goals 2 through 5 without reducing energy generated from fossil fuels, implying the need for active participation of HEC, the language in the 2nd paragraph of Public and Private Sector suggesting that HEC will not participate in implementation of any of the 5 goals seems to obviate Goals 2 through 4 and consequently weaken the proposed action plan.

The third paragraph similarly appears undermine Goal 5. Rather than pointing out why the city cannot regulate the private sector without the authority to do so, the plan should acknowledge that the city can ask its elected representatives to introduce necessary enabling legislation for otherwise prohibited “incentives and suggestions.”

EAP Phases of Development

A proposed timeline for each phase would help Harrisonburg residents understand how soon the city might see significant reductions in its GHG emissions. The description of the draft characterizing Phase 1 as “lay[ing] the groundwork for future phases of EAP development and implementation of strategies towards environmental sustainability” is vague. Particularly in the absence of a timeline and by recommending consideration rather than action in most of the 14 strategies, one is left to guess what the city council's approval of Phase 1 would actually mean. For example, one cannot “set targets for GHG emissions reduction” (Strategy 1.2 on p.

11) if one does not first complete the GHG emissions inventory, but Strategy 1.1 on p. 11 says only to “consider” doing so.

Goal 1

The 1st paragraph (pp. 10-11) usefully describes GHG effects. This discussion would be more effective if it also described more fully the specific sources of GHG from human activity. Doing so would clarify why the EAP is needed and why the six focus areas and related strategies to reduce GHG are included. For example, major sources of fossil fuel-driven GHG are electricity production, transportation, and agriculture. In order to move forward on GHG emissions, Harrisonburg residents and businesses need to link these three major sources of GHG emissions and the changes production, transportation, and agriculture will need to make to reduce them.

Strategy 1.1 (p. 11) recommends considering joining the ICLEI. Not only should the city actually join ICLEI, it should identify other organizations, such as Resilient Virginia (<https://resilientvirginia.org/>) and the Institute for Local Self-Reliance or ILSR (<https://ilsr.org/>), through which it can educate itself about what other communities have done and obtain advice from those public employees who have implemented projects that might also work in Harrisonburg. There are other organizations with a wealth of experience and track records for making things happen. Rather than starting from scratch, identifying and adapting good ideas whose worth has been proven will save staff resources.

Focus Area 1—Buildings and Energy

Goal 1: The “Where We Are Now?” section would benefit by summarizing the city’s specific results to date and links to any reports. Otherwise, we can’t know our current starting point.

Goal 2: The “Where We Are Now?” section should include summaries of past actions and links to reports. Strategy 2.3 should include specifics of the cost analysis. Also, the listed tasks seem redundant. Given the language on p. 9 regarding HEC’s relationship to the city, Strategy 2.4 seems surprising, though actually determining the cost effectiveness of reducing “on-grid energy generation” is certainly needed to lower production of Harrisonburg GHG emissions. We hope the city can produce its own renewable energy, enable energy efficiency (EE) in municipal facilities, and incentivize EE among homeowners, landlords, and businesses. The city should do more than “consider” the various tasks listed. Instead, the plan should propose priorities for actually performing the tasks with clear timelines and objectives.

Further, given the financial interest both the city and HEC currently have in consuming more rather than less energy, the EAP needs to include a strategy and goals to deconstruct this interest. It is not clear, especially from discussions at recent HEC Commissioner meetings, that HEC views its mandate from the city to include reduction of GHG, increased use of renewable energy (RE) such as solar (or even support of its customers’ production of electricity with RE), or active support of greater energy efficiency measures. If the city is serious about reducing GHG in a significant way, it needs full participation of HEC. It is time to review existing policy and code defining the city’s relationship to HEC to ensure that it clearly authorizes HEC to participate fully in the strategies and goals of the EAP, particularly Focus Area 1. What was set up many years ago has worked well and HEC has carried out its mandate effectively and efficiently. But that mandate is inadequate in the 21st century, given the changes in technology that have made RE a viable alternative to fossil fuel generation and the pressing need for all communities to reduce their GHG. The city and HEC must figure out the best way to accomplish

this and make the necessary adjustments to policy and law. Doing so will provide HEC with the necessary direction to identify and make appropriate changes to its operations and, perhaps more importantly, to determine the requirements of its next contract with its energy provider. Negotiations for that contract will begin soon, if they haven't already done so. The current contract terms restrict HEC from incorporating more RE into its energy sources and does not fully or directly support the goal of reduction of GHG in the city.

Goal 3: The description and “Where We Are Now?” section should reference standards for Energy Use Intensity (EUI) or at least acknowledge the need to identify and employ such standards. This recommendation would apply to all 3 strategies.

Goal 5: Again, the “Where We Are Now?” section would benefit from summaries of past actions and links to any reports. Strategies 5.1 and 5.2 might be improved by studies of how other cities and towns have addressed such needs and identifying available grant money. For example, the city might look at Department of Energy grants such as Sol Smart and at CPACE. Missing from all 3 strategies are specific ways of promoting energy reduction renewable energy sources for existing residential buildings. The PACE program could one model. Working with HEC to develop alternative revenue sources (e.g., on-bill financing) might mitigate revenue losses from reduced energy consumption. These strategies’ “Responsible Party” needs to include HEC and define what is meant by “Community Organizations”; arguably, the city will need to partner with different public, non-profit, and private entities to accomplish different tasks for all 5 goals of this focus area. Strategy 5.3’s tasks are unclear. They should be clarified and strengthened. E.g., “publicizing the advantages of these properties” seems both disingenuous.

Here are a few links that provide ideas/actions/approaches. CAAV would be happy to provide additional links upon request.

Municipal Utility RFP: <https://reisingergooch.com/virginia-municipal-and-cooperative-utilities-issue-rfp-for-solar-storage-and-stand-alone-storage-resources/>

MN Community Solar: https://ilsr.org/minnesota-community-solar-saves-all-utility-customers-money/?utm_source=Energy+Self-Reliant+States&utm_campaign=e1bac19ccc-Energy+Self+Reliant+States+1+12+151+8+2015+COPY+01&utm_medium=email&utm_term=0_86e661ed1e-e1bac19ccc-82765733

Municipal & Other Utility Regulations: https://ilsr.org/in-op-ed-for-pioneer-press-john-farrell-explains-how-minnesotas-energy-regulators-fall-short/?utm_source=Energy+Self-Reliant+States&utm_campaign=e1bac19ccc-Energy+Self+Reliant+States+1+12+151+8+2015+COPY+01&utm_medium=email&utm_term=0_86e661ed1e-e1bac19ccc-82765733

Danville VA Municipal Utility’s Solar: <https://www.virginiamercury.com/2019/06/10/solar-is-powering-part-of-danvilles-resurgence/>

Moral Necessity of Acting: <https://www.baconsrebellion.com/wp/moral-hazard-and-sea-level-rise/>

Focus Area 2—Land Use and Green Space

We suggest that the city eliminate or reduce the amount of FREE PARKING. We need more affordable housing more than we need downtown parking lots. While we appreciate that readily available parking is good for business, free parking increases congestion by encouraging auto

traffic. Plus, revenue from parking lots brings far less than property taxes on buildings, making free parking punitive to property owners who actually improve their properties--i.e. Harrisonburg tax base would improve exponentially. Also, Harrisonburg should review ordinances on setbacks and zoning, making it possible for homeowners to build apartments in their yards to rent or house family members, thus increasing density.

FOCUS AREA 3: REGIONAL FOOD SYSTEMS

Goal 1. The language of Goal 1 could be strengthened by adding “Awareness about and Accessibility to” However, “Where are we now?” section seems inadequate. It’s difficult to believe the Business Loan Program is the only way the city currently supports local food access. Does the City really do nothing in support of the Farmers Market? Does the Health Department do nothing to support public education about nutrition that involves local food systems? If the Business Loan Program is the only thing the city has to show for this goal, at least add additional details about the state of this program, such as a) how much of the funds are allocated to local food businesses on average over the past few years; and b) how much of the funds (if any) go unaccounted for on average over the past few years. Finally, Goal 1 should adopt something like the following for measuring success: Reduce common barriers to community gardening and urban agriculture by 2025.

Goal 2. The language of Goal 2 is good. Please add the fact that Climate Action Alliance of the Valley pays for most composting program through public donations. Also consider adding the non-profit Soil Cycles collection service, if it is permissible to include activities not directly under City’s purview in this snapshot.

For all strategies, we suggest that you substitute more aggressive verbs than “consider.”

Strategy 1.1. For tasks under this strategy, can Parks and Rec offer educational programming on how to develop and manage community gardens, in addition to “community organizations”?

Strategy 1.2. The tasks are all good, but does the City have any means of encouraging businesses to accept SNAP? (If so, then add this to the strategy).

Strategy 2.1. Please add “adoption of low- carbon agricultural equipment and techniques” to the list of urban agricultural education topics.

Strategy 2.2. Please change the last task to “climate friendly food choices and lifestyles” instead of “food choices and climate friendly lifestyles.” You could something about “promote plastic-free and minimal waste food packaging among businesses and consumers.”

Strategy 2.3. On the last task, we suggest that you add “and provide additional funds to support expansion of the composting drop off and/or collection services, if funds are available.” (By 2030, we expect the city to have an opt-in compost pick public service for residential areas and businesses!)

Focus Area 4--Sustainable Transportation:

We commend Harrisonburg for including, and taking steps toward, sustainable transportation. Here are some additional suggestions.

Transportation includes our land use choices, our public transit, our municipal vehicles, and vehicles owned and operated by residents, guests, and businesses. Harrisonburg can increase ride sharing, biking, and walkable neighborhoods.

Goal 1 includes a review of electric buses for HDPT. If Harrisonburg aims to continue operating any non-bus vehicles, the city should consider electrification and alternative fuels for all vehicle classes. At a minimum, Harrisonburg should track the fuel use, fuel costs, and emissions from the city owned vehicles of school, pupil transport, police, shared sheriff, executive, refuse, street cleaning, and transit buses. All diesel equipment older than 2008 should be immediately retired due to their emissions. Other agencies and departments in the city should be involved beyond HDPT. Harrisonburg, if continuing to use diesel and petroleum imports, should consider assessing internal fees on the fuel to allow to build internal budget to move to \$.40 per gallon equivalent electric vehicles with available technology today or follow Roanoke and purchase used EV vehicles.

Goal 2 should meter the emissions from the oil-fired heating system (it's still 20 pounds per gallon) or buy additional biological waste oils rather than using once-used motor oil. Goal 3 should include reviews of additional routes, road diets, parking limitations, and lane restrictions on increased transit ridership. It might also explore whether citizens other than students will be served by the system.

Goal 6 Fuel efficiency could include city vehicles; the city should report what vehicles are in their inventory, their miles per gallon (fuelconomy.gov has all this info), and annual fuel use. Harrisonburg should present a budget amount equivalent to costs necessary to install bicycle and pedestrian facilities to city schools allowing access to sidewalks in the school areas. Harrisonburg can remove parking minimums. The city can promote bicycles and walking rather than city-owned vehicles for executive, public works, police, and school transportation. In addition to supporting the federal incentives, the city has authority to reduce the property tax for electric vehicles and for hybrid vehicles.

Goal 7 The city can install EV Chargers at government facilities rather than support them through new construction.

Focus Area 5—Waste Reduction and Recycling

A Pay-As-You Throw (PAYT) system should be implemented as soon as possible. PAYT increases recycling.

Harrisonburg has been able to maintain a plastics numbers 1 and 2 recycling stream while other municipalities have had to give them up along with other plastics. The Recycle Convenience Center and Recycling Mobile Unit drop-off programs appear to be well run and successful. Harrisonburg should investigate the cost and benefits of offering some evening hours for these programs.

Because schools are a significant gathering point, they might be popular drop-off locations and could be monitored by designated individuals or classes within each school. Visiting the landfill would be a valuable addition to the school curriculum, providing a meaningful way to learn about this resource burial and ways to divert and reduce this “waste” stream. These students, after all, will be the ones who suffer if Harrisonburg and other communities fail to significantly reduce GHG emissions.

Composting as a category should be under the recycling section rather than the reuse section.

With estimates of 20-50 percent of all municipal trash considered compostable, efforts to divert organic trash towards composting are worthwhile:

- Advertise curbside pickup services available through Black Bear Composting and Soil Cycles.
- Support backyard composting by having how-to info on the website and offering discounted bins through volume ordering, as is available through [GEOBINs](#).
- Develop and support a [master composters program](#), like that facilitated by the Institute for Local Self-Reliance, to advance local composting efforts.
- Support community composting by helping to coordinate space, communications, tools, and feedstock.
- Work with schools by identifying individuals/ classes in each school to host composting in their cafeterias as well as food-share programs for uneaten/ otherwise discarded foods.
- Plan for a "Compost Garden" in one of our public parks. The new one downtown would be especially appropriate to complement the existing drop-off bins. It might include demonstrations of backyard composting set-ups and some raised bed gardens amended with the finished compost. [Here](#) is one example.
- Add a compost drop-off option to the Recycle Convenience Center.
- Encourage use of an online platform for connecting organics waste streams with closest collectors/processors like

<https://sharewaste.com/share-waste> or <https://ilsr.org/composting/map/>

- Facilitate the construction and oversight of community compost bins at each park and/or neighborhood as described in <https://www.inquirer.com/science/climate/philadelphia-compost-food-waste-20190619.html>

Harrisonburg, like every community, needs their own commercial-scale composting facility to divert organics including yard debris, pet wastes and compostable “plastics”/ service ware from its landfill.

The City’s [Alternatives for Unwanted Items](#) webpage is helpful for residents. It could be more user-friendly. Expanded information, images, a map with all the options, could improve its use-value. “Reuse” (non-landfill disposal) options change so often that this listing can be hard to maintain without using public input. Perhaps the city can crowdsource the reuse information or try a social media platform as a method of discovering new options that could be moved to the website after confirmation. E.g., H&M stores take all fabric/clothing for recycling if unsuitable for reuse (ripped, stained, worn-out). Goodwill does this as well. A textile (not just reusable clothing/ fabrics) drop-off at the Recycle Convenience Center would improve our recycling rate. Some businesses like Bring Your Own offer Terracycle drop-off bins for designated products like dental-related packaging and used up writing implements.

Allow for a volunteer-run "thrift store" at the landfill where reusable items being thrown away can be salvaged and sold to support whatever group is willing to staff it.

Focus Area 6—Water Resources

We hope that the city protects our watershed. In the future, we will be relying more on the South Branch of the Shenandoah River for our water supply. This river's watershed would be impacted by the Atlantic Coast Pipeline if it is built on the current proposed route. Our concern for the watershed is complicated by the unknowns with pipeline construction of the unusual pipe width, high pressure of the methane being transported, and difficult steep karst terrain. To protect our watershed, we need to focus on these threats now.

We also want to increase the city's tree canopy. This action not only improves our regional water quality but is one of the most effective ways to capture carbon and reduce the devastating effects of the climate crisis.

Phase 1 Environmental Action Plan Comments

Submitted by Pete Bsumek, Chair Shenandoah Group, Sierra Club

On behalf of the Shenandoah Group of the Sierra Club I would like to thank city council, city staff responsible for working on the EAP draft, and the members of the Environmental Performance Standards Advisory Committee (EPSAC) for their commitment to developing an action plan and all their hard work in drafting this plan. We are excited to see that the city is making a commitment and implementing a forward-looking plan to address environmental sustainability and environmental justice.

What follows are our comments and suggestions for improving the plan.

First, overall plan structure and organization: We are quite pleased to see that Goal 1 (which appears to be the only overall goal in the plan) commits our city to reducing “overall, community-wide greenhouse gas emissions and the intensity of greenhouse gasses emitted from different activities” (see page 10). However, the use of the term goal here is somewhat confusing as the term goal is also used throughout the document in relation the focus areas.

Along these lines, it is not clear whether this goal functions as a guiding goal that frames the whole plan, or whether it is just another goal among many, which is related to many different focus areas.

We would suggest redefining and naming this goal as “Overall Goal” or “Main Goal” or even “Guiding Goal.” In addition, since not all the goals and strategies in each of the focus areas are necessarily and/or directly related to reducing greenhouse gasses, we also recommend the addition of a second and third “Guiding Goal.” These goals would focus on adaptation and resilience to changing environmental conditions and environmental justice and could be phrased as something like:

Guiding Goal 2: Preserve, protect, and restore environmental quality in order to ensure community adaptability and resilience to changing environmental conditions.

Guiding Goal 3: Ensure that environmental benefits and risks are fairly and justly distributed in our community and that the benefits and risks of environmental initiatives are fairly and justly distributed for all city residents.

We believe that these “guiding” or “overarching” goals would provide clear direction to city council, city staff, and community members as to the purpose of the goals and strategies articulated in the focus areas. They would also provide a clearer structure to the plan and its development in the implementation stages to follow phase 1.

Guiding goal 3 is especially important to us, as it is crucial that the burdens and costs of an environmental action plan should not unfairly disadvantage communities and neighborhoods that have historically been burdened with more of the costs and less of the benefits of

economic development and public policy. Rather, we see an EAP as an opportunity to redress some of these historic inequities.

Second, soft equivocal language: While we understand that this is just phase one of our city's plan, much of the language utilized to frame strategies is quite soft and lacks a clear commitment to "action." In other words, an action plan to address environmental issues should do more than "consider" things. *It should commit to goals and strategies. In this regard, it is essential that the action plan unequivocally make clear that the guiding goals are commitments to action and not merely "aspirational goals."* Such a statement would provide the city council, city staff, and community members with a clear understanding that the action plan is in fact an action plan that commits our city to implement policies, initiatives, and such that will further the overarching or guiding goals of the plan. It will also make clear that the soft and equivocal language currently utilized at the strategy level of the document is not meant to enable inaction or weak half-hearted commitments to those goals, but rather, simply indicates that we do not as of yet have enough information to know which strategies will be most effective.

Third, avoiding the silo effect: Because environmental sustainability is implicated in all or virtually all city policy and initiatives, it is important that the goals of the EAP are considered in relation to all future decisions. Language should be drafted and inserted into the preamble/introduction which clearly indicates that ALL new city policies, initiatives, etc. should be assessed in terms of or considered in relation to the EAP and their implications with regard to goals of EAP. In other words, we should avoid situations where other goals (say for example, development goals and initiatives) work at "cross purposes" to the EAP.

Forth, renewable energy: It is hard to imagine an EAP that effectively addresses climate change and meaningful reduction of greenhouse gasses that does not include a goal of increasing the use renewable energy.

While we understand that the draft plan articulates and rehearses a perceived relationship between the city and the Harrisonburg Electric Commission (HEC), which suggests it is inappropriate for the city to set goals for the development of renewable energy. We believe that this articulated relationship does not require that the city's EAP be mute about renewable energy. If the two entities are separate, this only strengthens the case for inclusion of renewable energy in the EAP. For example, it is more than reasonable for a customer to make clear to a wholesaler or retailer what kind of products and services they would like to purchase.

At the very least the city can make clear that it wishes to utilize clean renewable energy to power its municipal buildings and other facilities. Indeed, the draft plan points out that many local governments throughout the country and the state have done just that by making commitments to utilize a percentage of renewable energy by particular dates.

Finally, specific goals and strategies: In concert with our colleagues and allies at Renew Rocktown we would like to call your attention to the following link, which provides several suggestions for additional goals and strategies related to particular focus areas:

<https://tinyurl.com/y653ppbu>

Thank you for all your hard work and for the opportunity to submit our comments and on the Phase 1 Environmental Action Plan.

Pete Bsumek
Chair, Sierra Club—Shenandoah Group
pkbsumek@gmail.com
540-421-4105

PHASE 1 ENVIRONMENTAL ACTION PLAN
OPEN HOUSE AND PUBLIC COMMENT PERIOD
CITY OF HARRISONBURG

Open House
June 5, 2019
5pm – 7pm



City Hall Atrium
409 S. Main St.
Harrisonburg, VA 22801

COMMENT SHEET

Name (Optional): Ellen Swecker Phone/email (Optional): [REDACTED]

I would like to be contacted to discuss the plan further (Y/N): ____ If yes, complete information above.

1. How well do the Focus Areas and Goals represent priorities that you feel the City and community should focus on addressing? (Circle one)

Very Well Well Neutral Poor Very Poor

2. Do you have comments on specific Goals? Please list the Focus Area and Goal, for example: Water Resources, Goal 1.

Goal 1: Reduce Overall, Community-Wide Greenhouse Emissions should be a Focus Area. (It is confusing stating this as a goal, and then using goals under Focus Areas). Anyway this is big enough to have a larger focus and should include solar energy use as a strategy. This lack is why I put neutral on the plan. Poor seemed unfair as did well.

3. Do you have comments on specific Strategies? Please list the Focus Area and Strategy, for example: Water Resources, Strategy 4.2.

Any strategy that starts with the word "consider," as most do, does not reflect what action will be taken. Consider means "thinking about carefully." What exactly is needed to think about? The action needed should be described. Better yet is to begin with action statements such as words like "create, establish, inventory, educate, improve" and so forth. What you need to think about maybe should say, "Research relevant material to discern" .., "determine the viability of..", analyse the cost effectiveness of..." Whether you mean it or not, the word "consider" comes across as weak and ineffective. I don't think that is what the plan intends.

4. Use the space below or the reverse side for additional comments.

Please leave this comment sheet with staff at the sign in table, mail your comments to the addressee on the reverse side, or email your comments to Rebecca.Stimson@HarrisonburgVA.gov. Please submit your comments by June 26, 2019.

Visit www.harrisonburgva.gov/eap-open-house for more information.

Rebecca Stimson

From: [REDACTED]
Sent: Thursday, June 27, 2019 11:05 AM
To: Rebecca Stimson
Subject: EAP comment



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PHASE 1 ENVIRONMENTAL ACTION PLAN

OPEN HOUSE AND PUBLIC COMMENT PERIOD

CITY OF HARRISONBURG

Name (Optional): Tom Benevento Phone/email (Optional): 540-433-2363

I would like to be contacted to discuss the plan further (Y/N): If yes, complete information above.

1. How well do the Focus Areas and Goals represent priorities that you feel the City and community should focus on address-ing?
(Circle one)

Very Well Well Neutral Poor Very Poor ***Well

2. Do you have comments on specific Goals? Please list the Focus Area and Goal, for example: Water Resources, Goal 1. *** The plan needs to add a Renewable Energy Focus area that creates a goal for city council to amend city code requesting that HEC incorporates clean and renewable energy into the city grid with a goal of 25% by 2025 and 100% by 2045.

3. Do you have comments on specific Strategies? Please list the Focus Area and Strategy, for example: Water Resources, Strategy 4.2.

4. Use the space below or the reverse side for additional comments.

Please leave this comment sheet with staff at the sign-in table, mail your comments to the addressee on the reverse side, or email your comments to Rebecca.Stimson@HarrisonburgVA.gov. Please submit your comments by June 26, 2019.

Visit www.harrisonburgva.gov/eap for more information.

Open House

June 5, 2019

5pm — 7pm

COMMENT SHEET

City Hall Atrium

409 S. Main St.

Harrisonburg, VA 22801

City of Harrisonburg

Rebecca Stimson

Department of Public Works

320 E. Mosby Road

Harrisonburg, VA 22801

Additional Comments

Return Address

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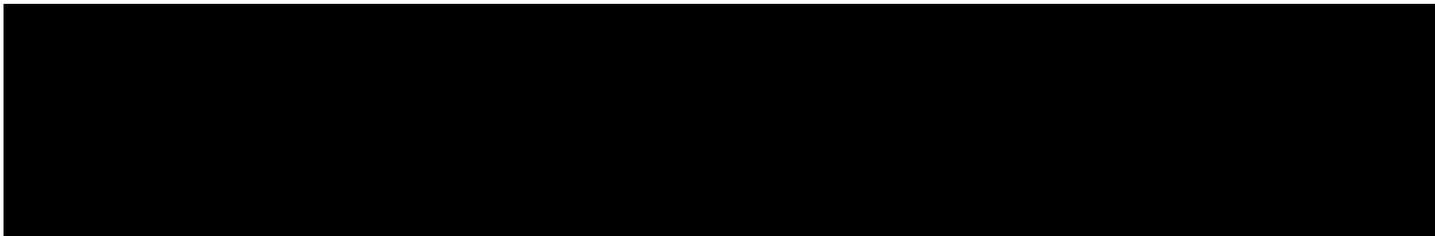
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Please submit this form during the open house, email it to the address on the reverse side,
or mail it to the above address.



Rebecca Stimson

From: Alleyn Harned [REDACTED]
Sent: Friday, June 21, 2019 12:38 PM
To: Rebecca Stimson
Subject: Some Environmental Action Plan Comments

Follow Up Flag: Follow up
Flag Status: Completed

Focus Area 1:

Harrisonburg should establish a city specific goal for the volume of renewable energy in use in the city – the fossil energy we purchase is an economic loss and locks us into contracts that defeat other goals for reducing overall community-wide greenhouse gas emissions and greenhouse gas emissions intensity. Harrisonburg should have a per year minimum percentage of renewable energy goal which should include a public path from nearly one percent today to achieve 100% at a specific timeframe. This plan should be established now in the EAP. Goal should be minimum of 25% by 2025.

Sustainable Transportation general comments:

It is wonderful that Harrisonburg is taking steps towards sustainable transportation, including setting goals. Those existing goals are appreciated and some additional suggestions.

Transportation includes our land use choices, our public transit, our municipal vehicles, and vehicles owned and operated by residents and guests and businesses as well leaning on increasing methods of shared rides and our bikeable and walkable neighborhoods.

Goal 1 begins a review of electric buses for HDPT – this is good and if Harrisonburg aims to continue operating any non-bus vehicles Harrisonburg should consider electrification and alternative fuel options for all vehicle classes. At a minimum Harrisonburg should track the fuel use, fuel costs, and emissions from the city owned vehicles of school, pupil transport, police, shared sheriff, executive, refuse, street cleaning, and public works in addition to the transit buses. All diesel equipment older than 2008 should be immediately retired due to their steep emissions. Other agencies and departments in city should be involved beyond HDPT. Harrisonburg if continuing to use diesel and petroleum imports should consider assessing internal fees on the fuel to allow to build internal budget to move to \$.40 per gallon equivalent electric vehicles with available technology today or follow Roanoke and purchase used EV vehicles.

Goal 2 should meter the emissions from the oil fired heating system (its still 20 probably pounds CO2 per gallon, and there also are likely criteria pollutants) or buy additional biological waste oils not just using once-used motor oil.

Goal 3 should include review of additional routes, road diets, parking limitations, and lane restrictions on increased transit ridership, should explore if more members of the Harrisonburg community beyond students could be served by the system. Student population is only a portion of city population and transit should proportionately engage all residents.

Goal 6 – fuel efficiency could include city vehicles – city should take note of what vehicles are in their inventory and their miles per gallon (fueleconomy.gov has all this info) and per year fuel use and publicly report this, and perhaps support city fleet fuel efficiency standards. City should consider presenting a budget amount equivalent to costs necessary to install bicycle and pedestrian facilities to each city school to the city schools to allow students to access sidewalks on the blocks containing our schools. Remove parking minimums. When possible utilize bicycles and walking as city vehicles for executive, public works, police, and school transportation. In addition to supporting the federal incentives, city has authority and should reduce the property tax for electric vehicles and for hybrid vehicles.

Goal 7 – encouraging EV Chargers can be at government facilities as well and should be supported not through new construction (that didn't work for sidewalks) but through other additional tools community standards.

Thank you for your consideration.



Rebecca Stimson

From: Jared Stoltzfus [REDACTED]
Sent: Thursday, June 6, 2019 3:28 PM
To: Rebecca Stimson
Subject: EPSAC Comments

Follow Up Flag: Follow up
Flag Status: Completed

Hi Rebecca,

I was glad to be able to attend the open house and talk with everyone there! I made these comments to the respective groups, but wanted to follow up here as well.

One thing that I wanted to be explicitly stated is that with all of these goals, there will not be any additional financial burden on low income families. Some ideas for how to achieve this will be outlined in sections below. Another overarching concept that I hope is explicitly stated is that while some of these action items may incur significant costs, the costs of inaction down the road will be significantly worse. I also agree with the general comments provided by Renew Rocktown.

Promoting solar and efficiency/conservation as stated in Goal 5 of Focus area 1 is a good concept, but I was hoping for more details in how that promotion would occur. (Condensed version: more specifics on how to encourage solar and efficiency- I have a few ideas) I would like to see a suite of electricity pricing options from HEC that would protect their financial interests, while still encouraging conservation and efficiency. The power required by a standard household should be extremely affordable, with additional use getting progressively more expensive. This would both create incentive for household reductions, and on-site production, potentially without dramatically impacting revenues. I think it should also be noted that an increase in electric cars, and continued development in Harrisonburg will result in increased power demand, despite solar production and efficiency measures. Another pricing mechanism would be time of use plans that make energy more expensive during peak hours. This would help limit HEC's peak use, while also improving payback periods for solar arrays. It seems like there would be faculty at EMU, JMU, etc that could create software models that could simulate a number of these scenarios, and there are other cities that have already undertaken such measures, so we should be learning from them. Regarding solar, and electricity in general, I also feel like the unspoken expectation that HEC be a profit center for Harrisonburg is also counter to the sustainability goals, and in effect subsidizes homeowners who don't have to pay ~\$5M in taxes to the city each year.

The other areas I have interest and expertise are in waste, and regional food systems. I'm specifically interested in the ways that organic waste, and specifically food waste, can be re-integrated into the food system, either through donation to food banks, or used as feed for chickens and pigs. Other organics not suitable for those uses can/should be composted for later re-use in city projects. The composting doesn't need to be professional, or result in high grade compost either... just grind up yard debris with food waste and cover it up! I imagine the city has ample space to do something like this, and with organics comprising 40% or more of the waste stream, we should be able to make a serious dent in what is sent to the landfill! Obviously curbside collection of household food scraps isn't a great idea, but could the city partner with small collection services, like Soil Cycles to provide the service? What about pairing small farmers on the outskirts of town with regular supplies of food scraps for their livestock? EMU cafeteria scraps alone could raise ~2,000 lbs of pork in a school year- what would happen if all the schools partnered with a farmer? A program like this just needs the city to provide some financial support (through an RFP for innovative waste solutions?)

I also had an in-depth conversation with the Water Department folks, and pitched the idea of progressive pricing to them as well. They did say that we're down to 2 tiers from 4, and that the big users are paying more than they used to. I don't know how much household use varies across the city, but a basic amount of water should be available very

cheaply, but anyone watering lawns should be paying significantly more to discourage that practice. The water dept could also offer grants to help large industrial users become more water efficient. I understand the Shenandoah River water supply connection is going to happen, but hope that it almost never needs to be used!

This is probably more than enough info, but I'd be happy to stay connected. I also think that if we aren't using the resources at the local universities to analyze these various questions it would be a missed opportunity.

Thanks for reading!

--
Jared Stoltzfus

Rebecca Stimson

From: Jeff Heie [REDACTED]
Sent: Wednesday, June 26, 2019 2:27 PM
To: Rebecca Stimson
Subject: EAP comments

Hi Rebecca

I would like to make the following comments related to the Environmental Action Plan:

1. I suggest that the EPSAC Committee invite major stakeholders in the city to a professionally facilitated meeting to encourage institutional feedback on the plan prior to presenting the plan to the City Council for their approval of the plan. These stakeholders could include: JMU, EMU, Sentara, Chamber of Commerce, poultry industry, Harrisonburg Downtown Renaissance, and others. It would seem that this type of feedback would encourage buy-in to the EAP.
2. I suggest a second overarching goal for the EAP. In addition to the first goal of reducing community-wide greenhouse gas emissions, I would add a second goal of "preserving, protecting, and restoring environmental quality for the benefit of all citizens."
3. Focus Area #5: I suggest adding Strategy 1.5 to Goal #1: "Consider programs to reduce and incentivize the reduction of single use plastics and styrofoam in the city."
4. I suggest that electricity generation be included in the EAP for the following reasons:
 - HEC is a city-owned utility
 - HEC operates under the governance of city code
 - If greenhouse gas emissions are a major concern of the EAP, then it would be irresponsible for the city to not address the GHG emissions caused by electricity generation considering that electricity generation is responsible for at least 50% of GHG emissions in most Virginia cities.
 - Given HEC's long term procurement contract with Dominion Energy, there is concern by HEC that they have no control of GHG emissions caused by electricity generation. There are several actions that could be taken by the city that do not threaten the long term contract and would be effective at addressing GHG emissions. These actions should be explored further and added to the EAP.

Thank you for recording my comments!

-Jeff Heie

Rebecca Stimson

From: charlotte shristi [REDACTED]
Sent: Wednesday, June 26, 2019 3:57 PM
To: Rebecca Stimson
Subject: comments on Environmental Action Plan

Dear Ms. Stimson,
Thank you for providing an opportunity to comment on the EAP's first draft!

I am a strong proponent of cities taking leadership in preparing for the future, especially in the current era of confusion about and inaction to address climate change on national and international levels.

Only by thinking ahead and taking bold action now, will we reduce dire social and financial consequences down the road associated with climate change. I applaud Harrisonburg's city council members and staff for their foresight.

Harrisonburg's EAP needs to be further strengthened with strong language, clear action steps and metrics for evaluating success. It should include renewable energy goals, which Harrisonburg is in a unique position to address, with a public utility (HEC). The plan should take into consideration how to equitably distribute benefits to all residents. The plan needs to include ways to greatly reduce what's going into the landfill, such as collecting and composting biodegradable material (kitchen and yard waste) and recycling.

Thank you for your hard work on this project and desire to be responsive to the community!

Sincerely,
Charlotte Shristi

Rebecca Stimson

From: Dave Pruett [REDACTED]
Sent: Thursday, June 6, 2019 8:57 AM
To: Rebecca Stimson
Subject: Comments of Draft EAP

Follow Up Flag: Follow up
Flag Status: Completed

Dear Rebecca and EPSAC Members:

I would like to thank the members of EPSAC for the monumental efforts that have gone into the EAP, a bold sustainability vision for Harrisonburg's future.

The potential benefits to our community are huge. Holding the roll-out of the draft in the atrium of City Hall was an inspired idea. It generated public interest and put names and faces on the city staff and citizens who have worked tirelessly and collaboratively to create this comprehensive draft.

ITEM 1: Focus Areas and Goals--"very well" (Very comprehensive plan, well thought out and integrated.)

ITEM 4: Additional Comments:

There are two "elephants in the room" that remain more-or-less unaddressed in the draft. I understand that there are compelling reasons for each omission. Nevertheless, it is important to acknowledge them and to try to seek workarounds of the obstacles.

1.) JMU's footprint in Harrisonburg is enormous. JMU contributes 40% of Harrisonburg's population and I'd guess more than half of its greenhouse gases. I learned only recently that JMU operates almost completely independently of the City. That's unfortunate. It would be much more efficient if Hburg and JMU could join forces rather than inventing the sustainability wheel independently, potentially working at cross purposes. How can we make that happen, if not officially, then voluntarily? I'd suggest sending a City emissary to the speaker of the faculty senate to get a conversation started.

2). The lion's share of the City's GHG emissions come, almost certainly, from power generation. We are one of few municipalities to have a public utility, HEC.

It therefore makes sense to have a representative of HEC on EPSAC and to incorporate HEC into the sustainability plan. To be even more specific, citizens of Harrisonburg need and deserve options for the purchase of energy from renewable sources, even if there is a small premium for the option. Even more specifically, Energy Share could morph into a voluntary energy subsidy that would allow lower income families to elect renewable sourcing, even if slightly more expensive.

Finally, not a comment so much as a reflection. Years ago I was involved in high-performance computing; that is, using supercomputers to solve difficult problems in physics. Supercomputer time was very expensive, and some of these computer runs required hundreds of hours of time to complete. It was therefore necessary that each computer code be optimized to run as efficiently as possible. We did this by "profiling" the computer code to find where the computational bottlenecks were. We then focused first on clearing the worst bottlenecks, and then moved onto the next, and the next, etc.

It has dawned on me that evaluating the City's carbon footprint to establish a benchmark is analogous to the computer-code "profiling" that I used to rely on. This process will reveal which emissions categories are the "worst offenders." Efforts can then be directed there first, at the lowest-hanging fruit, so to speak.

Benchmarking is so important because there are always surprises. The worst offenses are never where one anticipates them to be. In discussions yesterday, I learned from a City employee, for example, that only 5% of Roanoke's carbon footprint was contributed by the municipality. The rest came from the citizenry. Hburg will probably get a similar result.

All of this is to say that Phase II of the EAP is crucial to the overall success of the EAP. Bravo for recognizing this and putting in front and center.



PHASE 1 ENVIRONMENTAL ACTION PLAN
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CITY OF HARRISONBURG

Open House
June 5, 2019
5pm – 7pm



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COMMENT SHEET

Name (Optional): Simone Horst Phone/email (Optional): _____

I would like to be contacted to discuss the plan further (Y/N): _____ If yes, complete information above.

1. How well do the Focus Areas and Goals represent priorities that you feel the City and community should focus on addressing? (Circle one)

Very Well Well Neutral Poor Very Poor

2. Do you have comments on specific Goals? Please list the Focus Area and Goal, for example: Water Resources, Goal 1.

Focus Area 4, Goal 3--Increase Public Transport Ridership.

I appreciate the work that is going into increasing public transit ridership in the city, but I notice that it is nearly exclusively geared towards JMU. I live in the Northwest neighborhood near Red Front and work at EMU and have been disappointed to find that there is no viable bus route for me to reliably get to and from work in a direct or timely manner. I would appreciate more attention given to routes that are outside of JMU's area, though I recognize that it may not be cost effective to implement these.

3. Do you have comments on specific Strategies? Please list the Focus Area and Strategy, for example: Water Resources, Strategy 4.2.

Focus Area 5, Goal 1--Strategy 1.1

I strongly support a Pay-As-You-Throw system.

4. Use the space below or the reverse side for additional comments.

Please leave this comment sheet with staff at the sign in table, mail your comments to the addressee on the reverse side, or email your comments to Rebecca.Stimson@HarrisonburgVA.gov. Please submit your comments by **June 26, 2019**.

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COMMENT SHEET

Name (Optional): Suzanne Fiederlein Phone/email (Optional): _____

I would like to be contacted to discuss the plan further (Y/N): _____ If yes, complete information above.

1. How well do the Focus Areas and Goals represent priorities that you feel the City and community should focus on addressing? (Circle one)

Very Well Well Neutral Poor Very Poor

2. Do you have comments on specific Goals? Please list the Focus Area and Goal, for example: Water Resources, Goal 1.

I have cross-cutting comments that relate to several of the focus areas (energy/buildings, land use, transportation). Please see my comments below.

3. Do you have comments on specific Strategies? Please list the Focus Area and Strategy, for example: Water Resources, Strategy 4.2.

4. Use the space below or the reverse side for additional comments.

I applaud this initiative by the city and the community engagement in the process. The city can't meet sustainability goals without considering energy needs, the place of solar in those needs, and the role of the HEC. Also, the city and JMU need to work together more in developing plans and setting goals. JMU is the huge "elephant in the room" that has got to work more collaboratively with the city on plans and how to mitigate its impact on city traffic and energy consumption. City efforts to increase the use of public transportation and preserve green space and tree canopy is undermined by JMU's new building construction (including parking garages). How can the city and JMU work together more effectively to promote the environmental goals?

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COMMENT SHEET

Name (Optional): Adrie Voors Phone/email (Optional): [REDACTED]

I would like to be contacted to discuss the plan further (Y/N): If yes, complete information above.

1. How well do the Focus Areas and Goals represent priorities that you feel the City and community should focus on addressing? (Circle one)

Very Well Well Neutral Poor Very Poor

2. Do you have comments on specific Goals? Please list the Focus Area and Goal, for example: Water Resources, Goal 1.

3. Do you have comments on specific Strategies? Please list the Focus Area and Strategy, for example: Water Resources, Strategy 4.2.

Focus area 5:

Goal 3, strategy 3.1: offer some evening hours for recycling drop-off.

Collaborate with our schools to host drop-off bins monitored by designated classes who can incorporate waste reduction in their curriculum.

Add textile recycling to the drop-off. This includes non-reusable clothing, bedding, and other fabric based things. Goodwill advertises that they can do this.

Add recycling of organic wastes (ie composting) as an option. If this doesn't fit the city's definition of recycling, it could use its own category. There is a huge potential of landfill diversion with composting, ideally by a municipally run or contracted commercial-scale composting operation but also through everything from promoting backyard composting to community run composting spots, and promoting curbside pickup services and drop-off programs.

Most people don't understand that the increasingly popular plant-based compostable serviceware, especially cups and "plastic" utensils, need to go to a commercial-scale composting operation or they are worse than regular plastic once in a landfill due to their methane emissions. We should promote use of compostable serviceware where reusable is not an option and provide a means for it to get to a suitable composting facility.

4. Use the space below or the reverse side for additional comments.

Creating a "sustainability coordinator" position has been instrumental in pushing EAP-type agendas forward in many other communities. This position can coordinate efforts between departments and generate grant funding, ultimately saving the city money.

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COMMENT SHEET

Name (Optional): Doug Hendren Phone/email (Optional): [REDACTED]

I would like to be contacted to discuss the plan further (Y/N): Y If yes, complete information above.

1. How well do the Focus Areas and Goals represent priorities that you feel the City and community should focus on addressing? (Circle one)

Very Well Well Neutral Poor Very Poor

2. Do you have comments on specific Goals? Please list the Focus Area and Goal, for example: Water Resources, Goal 1.

Goal #1 is to reduce the City's GHG emissions, the majority of which are attributable to HEC (Roanoke's figure was quoted as 60%). HEC belongs to the City and operates under City code. It is admittedly complex, but we undermine the EAP by omitting HEC altogether. Given the different stakeholders, how might we keep a "placeholder" in this EAP draft that acknowledges issues around HEC's Dominion restrictions as well as its City relationship, but encourages seeking creative win-win opportunities that will make both HEC and Harrisonburg thought leaders in the state of Virginia?

3. Do you have comments on specific Strategies? Please list the Focus Area and Strategy, for example: Water Resources, Strategy 4.2.

First, this is an Action Plan! "Consider" is not an action word! The strategies should be stated in ordinary, short, English phrases. Let's not tie our shoelaces together with timid language! Our grandchildren will use it to ridicule us!

4. Use the space below or the reverse side for additional comments.

Deep thanks to the many City Staff involved in crafting the EAP draft. It is a privilege to be involved in this process, and I have been greatly encouraged by the all around professionalism and competence of the Staff members I have worked with.

I hope that all public comments will be available for EPSAC review.

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COMMENT SHEET

Name (Optional): Timothy Godshall Phone/email (Optional) [REDACTED]

I would like to be contacted to discuss the plan further (Y/N): If yes, complete information above.

1. How well do the Focus Areas and Goals represent priorities that you feel the City and community should focus on addressing? (Circle one)

Very Well Well Neutral Poor Very Poor

2. Do you have comments on specific Goals? Please list the Focus Area and Goal, for example: Water Resources, Goal 1.

3. Do you have comments on specific Strategies? Please list the Focus Area and Strategy, for example: Water Resources, Strategy 4.2.

I really like the focus on community gardens in Regional Food System Strategy 1.1. Also I strongly support a pay as you throw solid waste policy, strategy 1.1 under waste reduction, as well as stragy 4.3 of increasing household hazardous waste collection

4. Use the space below or the reverse side for additional comments.

I support the vision laid out in this document. I would like to see as many of these strategies employ ed as possible. I notice that many of the items are stated as things to be considered. I hope that the se considerations are acted upon. I also am disappointed to see renewable energy generation omitt ed as a focus area. Electrical production is such a major area of greenhouse gas emissions, it is ess ential that Harrisonburg focus on that as part of this plan. This can be done by influencing HEC to p

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COMMENT SHEET

Name (Optional): Ramona Sanders Phone/email (Optional): [REDACTED]

I would like to be contacted to discuss the plan further (Y/N): Y If yes, complete information above.

1. How well do the Focus Areas and Goals represent priorities that you feel the City and community should focus on addressing? (Circle one)

Very Well Well Neutral Poor Very Poor

2. Do you have comments on specific Goals? Please list the Focus Area and Goal, for example: Water Resources, Goal 1.

All goals should be measurable, to know if the City has made progress

3. Do you have comments on specific Strategies? Please list the Focus Area and Strategy, for example: Water Resources, Strategy 4.2.

Add a second over-reaching goal to the EAP "Preserve, protect, and restore environmental quality for the benefit of all residents. The benefits of environmental initiatives should be distributed fairly and justly across all city residents."

4. Use the space below or the reverse side for additional comments.

Electricity generation is a significant portion of green-house gas emissions by the City; these emissions should be addressed and included as a goal for renewable energy.

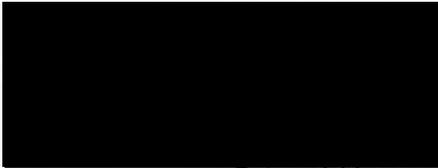
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Additional Comments

I would like for the City to consider putting solar panels on all City-use buildings and share the amount of savings. I would like for the City to continue curb side pick up of recyclables. As residents age, it get harder to take recycling to Waterman on a weekly basis, plus the man with the moveable unit finds a need to put his hands on the women. This has to stop!

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11 JUN 2019 PM 2



City of Harrisonburg
Rebecca Stimson
Department of Public Works
320 E. Mosby Road
Harrisonburg, VA 22801

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COMMENT SHEET

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1. How well do the Focus Areas and Goals represent priorities that you feel the City and community should focus on addressing? (Circle one)

Very Well

Well

Neutral

Poor

Very Poor

2. Do you have comments on specific Goals? Please list the Focus Area and Goal, for example: Water Resources, Goal 1.

Focus Area 1: Buildings and Energy -
This focus should have a goal of transitioning the electricity used in the City to electricity generated from renewable resources. This will mean working closely with HEC and HEC should have an official representative on the EAP.

3. Do you have comments on specific Strategies? Please list the Focus Area and Strategy, for example: Water Resources, Strategy 4.2.

Strategy 1.1, of Goal 1, Focus Area 1, and Strategy 2.1, 2.2, 2.3, 2.4 of Goal 2, should remove the word "consider" these just should be done. Please stop wasting my tax dollars by how our municipal buildings are built, lighted, heated, and cooled. Energy use intensity of buildings is important for life cycle costs of building. I am rather outraged

Given Harrisonburg's location as an urban center in the Shenandoah Valley, and that the City has not been incorporating it into its public building projects in the past 15 years. The time is long past to conserve our tax dollars in how we build our buildings.

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we build our buildings

Additional Comments

its proximity to the Shenandoah National Park and extensive forest land, and its relative closeness to some of the darkest night skies on the eastern seaboard make Harrisonburg the ideal location to be a regional leader in how to harmonize the needs of an urban area with protecting, preserving, and enhancing the environment for future generations. This is our civic duty and our basic responsibility for ~~future~~ the future. We need action now; we need to try things, fail, learn, and try again. To do anything less is to be a participant in obscene immorality.

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COMMENT SHEET

Name (Optional) : _____ Phone/email (Optional): _____

I would like to be contacted to discuss the plan further (Y/N): _____ If yes, complete information above.

1. How well do the Focus Areas and Goals represent priorities that you feel the City and community should focus on addressing? (Circle one)

Very Well

Well

Neutral

Poor

Very Poor

2. Do you have comments on specific Goals? Please list the Focus Area and Goal, for example: Water Resources, Goal 1.

3. Do you have comments on specific Strategies? Please list the Focus Area and Strategy, for example: Water Resources, Strategy 4.2.

Recycling management, Strategy 3.1 - consider offering recycling pick-up for communities with less access.

4. Use the space below or the reverse side for additional comments.

Definitely in favor of compost promotion, the possibility of "pay-as-you-throw", and expansion of pollinator gardens/habitats

Please leave this comment sheet with staff at the sign-in table, mail your comments to the addressee on the reverse side, or email your comments to Rebecca.Stimson@HarrisonburgVA.gov. Please submit your comments by **June 26, 2019**.

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COMMENT SHEET

Name (Optional) : _____ Phone/email (Optional): _____

I would like to be contacted to discuss the plan further (Y/N): ____ If yes, complete information above.

1. How well do the Focus Areas and Goals represent priorities that you feel the City and community should focus on addressing? (Circle one)

Very Well Well Neutral Poor Very Poor

2. Do you have comments on specific Goals? Please list the Focus Area and Goal, for example: Water Resources, Goal 1.

Sustainable Transportation, Goal 5: Harrisonburg should adopt a 'complete streets' policy in which all new and reconstructed roads are connective and safe for all modes of transportation. This addresses environmental sustainability as well as socioeconomic equity.

3. Do you have comments on specific Strategies? Please list the Focus Area and Strategy, for example: Water Resources, Strategy 4.2.

Sustainable Trans

4. Use the space below or the reverse side for additional comments.

Please leave this comment sheet with staff at the sign-in table, mail your comments to the addressee on the reverse side, or email your comments to Rebecca.Stimson@HarrisonburgVA.gov. Please submit your comments by June 26, 2019.

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(A)

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COMMENT SHEET

Name (Optional): Dudley Bonsal Phone/email (Optional): [REDACTED]

I would like to be contacted to discuss the plan further (Y/N): If yes, complete information above.

1. How well do the Focus Areas and Goals represent priorities that you feel the City and community should focus on addressing? (Circle one)

Very Well Well Neutral Poor Very Poor

2. Do you have comments on specific Goals? Please list the Focus Area and Goal, for example: Water Resources, Goal 1.

Land Use and Green Space, Goal 1 - Just as Goal 7 of Sustainable Transportation highlights the relationship between land use and transportation, this goal ~~focuses on~~ can also address transportation in regard to how parking is configured for new development and redevelopment. Too often, parking is located along the property line. It makes adjoining sidewalks much less desirable for walking.

3. Do you have comments on specific Strategies? Please list the Focus Area and Strategy, for example: Water Resources, Strategy 4.2.

I strongly support the elimination of minimum parking requirements in Harrisonburg, as mentioned in Sustainable Transportation, Strategy 6.1.

4. Use the space below or the reverse side for additional comments.

In some relation to Sustainable Transportation, Strategy 6.1, I encourage ~~more~~ consideration of ~~an~~ additional designated on-street parking, and ~~some~~ perhaps with metering in high-demand areas. On-street parking can help to offset the need for parking lots (too many in Harrisonburg, even downtown) and it can also provide a buffer for walking and other sidewalk activity.

Please leave this comment sheet with staff at the sign-in table, mail your comments to the addressee on the reverse side, or email your comments to Rebecca.Stimson@HarrisonburgVA.gov. Please submit your comments by June 26, 2019.

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Additional Comments

For ~~the~~ Focus Area 2, in the first paragraph, what is meant by "natural vegetation...and/or vegetative technologies"? What are "vegetative technologies", and how would they constitute green ^{infrastructure} ~~space~~ without natural vegetation?

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COMMENT SHEET

Name (Optional): E. Brubaker Phone/email (Optional): _____

I would like to be contacted to discuss the plan further (Y/N): _____ If yes, complete information above.

1. How well do the Focus Areas and Goals represent priorities that you feel the City and community should focus on addressing? (Circle one)

Very Well

Well

Neutral

Poor

Very Poor

2. Do you have comments on specific Goals? Please list the Focus Area and Goal, for example: Water Resources, Goal 1.

The language of the goals are excellent + speak to a diverse set of needs. However we need a goal around energy generation to renewable energy sources. Let's be a leader, increase locally produced energy, clean + renewable.

3. Do you have comments on specific Strategies? Please list the Focus Area and Strategy, for example: Water Resources, Strategy 4.2.

Strategies need measurable targets. Language around "considering" is only helpful if paired w/ specific, measurable goal. My 4 month old needs us to do more than "consider" doing right on waste, clean air, climate mitigation, etc

4. Use the space below or the reverse side for additional comments.

I am thrilled Harrisonburg is working on this plan. While we are late, we are moving. Let's match the urgency that our planet demands. Let's lead.

Please leave this comment sheet with staff at the sign-in table, mail your comments to the addressee on the reverse side, or email your comments to Rebecca.Stimson@HarrisonburgVA.gov. Please submit your comments by June 26, 2019.

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COMMENT SHEET

Name (Optional): Cathy Capeland Phone/email (Optional): [REDACTED]

I would like to be contacted to discuss the plan further (Y/N): Y If yes, complete information above.

1. How well do the Focus Areas and Goals represent priorities that you feel the City and community should focus on addressing? (Circle one)

Very Well Well Neutral Poor Very Poor

2. Do you have comments on specific Goals? Please list the Focus Area and Goal, for example: Water Resources, Goal 1.

The priority of Greenhouse Gas Emissions needs to be high, so that the information can be seen by all early and we can have a clear idea of the changes that need to happen. I think that can help motivate Council & other stakeholders.

3. Do you have comments on specific Strategies? Please list the Focus Area and Strategy, for example: Water Resources, Strategy 4.2.

Focus Area 2, Goal 4: work with experts to plan where more pollinator areas should be (so that they are adequately spaced)

4. Use the space below or the reverse side for additional comments.

Focus Area 5, Goal 2, Strategy 2.3: I'd like to write a bill to address this very issue.
I'd also like to work closely with you to design & write bills so that the EAP has more state-funded aspects to lessen the locality burden.

Please leave this comment sheet with staff at the sign-in table, mail your comments to the addressee on the reverse side, or email your comments to Rebecca.Stimson@HarrisonburgVA.gov. Please submit your comments by **June 26, 2019**.

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COMMENT SHEET

Name (Optional): Ritchie Vaughan Phone/email (Optional): [REDACTED]

I would like to be contacted to discuss the plan further (Y/N) (N) If yes, complete information above.

1. How well do the Focus Areas and Goals represent priorities that you feel the City and community should focus on addressing? (Circle one)

Very Well Well Neutral Poor Very Poor

2. Do you have comments on specific Goals? Please list the Focus Area and Goal, for example: Water Resources, Goal 1.

* A lot of these ^{strategies} ~~goals~~ just add bureaucratic cost to projects rather than directly addressing impacts on the ground (inventories, audit teams, committees, etc.)
* Really big fan of Waste - Goal 1. That's smart. Charlottesville does this with trash bin permits. And we need Waste Goal 3!

3. Do you have comments on specific Strategies? Please list the Focus Area and Strategy, for example: Water Resources, Strategy 4.2.

* I think Focus Area 3/Food is outside the city's role. I don't think this is productive relative to the other focus areas.
* Focus 4/Transportation Goal 6 will require changing development plans because biking & walking require being within a 2 mile radius of your destination... and a lot of residences/job stores are way more than 1-2 miles apart (Focus 2 Goal 1)

4. Use the space below or the reverse side for additional comments.

You should make this more focused; the city can't realistically pursue 50 eco-projects simultaneously. Please identify low hanging fruit strategy #1, #2, & #3 so that we focus on the high-impact, easier stuff 1st. That will be more impactful & efficient.

Please leave this comment sheet with staff at the sign-in table, mail your comments to the addressee on the reverse side, or email your comments to Rebecca.Stimson@HarrisonburgVA.gov. Please submit your comments by June 26, 2019.

Visit www.harrisonburgva.gov/eap-open-house for more information.

6

PHASE 1 ENVIRONMENTAL ACTION PLAN OPEN HOUSE AND PUBLIC COMMENT PERIOD CITY OF HARRISONBURG

Open House
June 5, 2019
5pm – 7pm



City Hall Atrium
409 S. Main St.
Harrisonburg, VA 22801

COMMENT SHEET

Name (Optional) : _____ Phone/email (Optional): _____

I would like to be contacted to discuss the plan further (Y/N): ____ If yes, complete information above.

1. How well do the Focus Areas and Goals represent priorities that you feel the City and community should focus on addressing? (Circle one)

Very Well

Well

Neutral

Poor

Very Poor

2. Do you have comments on specific Goals? Please list the Focus Area and Goal, for example: Water Resources, Goal 1.

Sustainable Transport, Goal 4 & Goal 5 can either complement or cancel each other. Please make sure "improved traffic" doesn't just mean cars move at the expense of other road users!

3. Do you have comments on specific Strategies? Please list the Focus Area and Strategy, for example: Water Resources, Strategy 4.2.

Waste Reduction, Strategy 1.1: Absolutely necessary in order to incentivize/implement any of this focus Area, but must be done w/out harming vulnerable groups like refugees / migrants / homeless.

4. Use the space below or the reverse side for additional comments.

Overall I like the focus areas* but hope the pre listed in no particular order as they need to be done concurrently.
*focus area 3 seems out of place?

Please leave this comment sheet with staff at the sign-in table, mail your comments to the addressee on the reverse side, or email your comments to Rebecca.Stimson@HarrisonburgVA.gov. Please submit your comments by June 26, 2019.

Visit www.harrisonburgva.gov/eap-open-house for more information.

Additional Comments

Keep up the good work and I hope
that this gets implemented efficiently.

FOLD HERE FIRST

Return Address

PLACE POSTAGE
HERE, POST
OFFICE WILL NOT
DELIVER WITHOUT
PROPER
POSTAGE.



City of Harrisonburg
Rebecca Stimson
Department of Public Works
320 E. Mosby Road
Harrisonburg, VA 22801

FOLD HERE LAST

Please submit this form during the open house, email it to the address on the reverse side,
or mail it to the above address.

NEED A CLEARER OUTLINE OF THE DOCUMENT ★

includes addresses the following

John Z comment

this is not a description of goals. This says what they are

Plan Organization

The EAP is organized into six sectors, areas in which action can be taken to improve the environment and sustainability. Each sector has goal statements, which are overarching statements describing the direction the community wants to go. Goals describe a desired end state for each sector and should reflect the values of the community. Goal statements are qualitative and nature. Each goal has a section that answers the question: Where are we now? The City has already taken steps to achieve some goals and those actions are described within the EAP. Each strategy within the goal describe possible approaches and methods for attaining the goal. Strategies may be implemented by city departments or community partners. The tasks listed for each strategy are actionable items that are steps towards meeting each strategy.

Done done
66E

Sectors

- Buildings and Energy: Improving energy efficiency and reducing energy use in buildings will reduce greenhouse gas emissions (GHG emissions). There are opportunities to promote energy generation on-site at public and private properties. There are also ways to reduce the energy consumption of the water and sewer systems that provide services to properties in Harrisonburg.
- Land Use and Green Space: The City of Harrisonburg aims to regulate and guide the use of land and open space to promote positive social and environmental outcomes and an efficient use of resources.
- Regional Food Systems: A food system is generally understood to be the chain of activities connecting food production, processing, distribution, consumption, and waste management. Every day we make dozens of choices about what we eat, what we buy, how we use or consume these items, and how we dispose of them at the end of their useful life.
- Sustainable Transportation: Sustainable transportation includes alternative fuel public transportation fleets, increasing usage of public transportation, traffic signal optimization, increasing bicycle and pedestrian options, and more.
- Waste Reduction and Recycling: The City of Harrisonburg seeks to determine a sustainable, long-term, and fiscally responsible refuse and recycling program that consistently supports and promotes the reduction of solid waste, the reuse of usable items, and the recycling of materials.
- Water: The watersheds and water systems we depend on to provide clean drinking water must be protected for public health as well as protection of aquatic ecosystems.

that all?

Goals

All the goals from all sectors will be listed here before this plan is made available for public comment.

Cost

Within each strategy there are a list of tasks, identified responsible parties, and cost. Costs are intended to illustrate the magnitude of a tasks' cost, not necessarily represent its true cost. Costs are represented as ranges:

I think costs can only be calculated in Phase II+III

\$ 0-10,000

GOAL 6 - where does 2% of Peak come from? I would like to see clear documentation of this before it is finalized



Introduction

isa
↓

The Environmental Action Plan (EAP) serves as a road map for city leaders, staff, and community members to implement sustainability visions and principles. Sustainability is defined by the UN World Commission on Environment and Development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” To-date, the City of Harrisonburg has taken steps to address the quality and care of our natural resources; however, the latest science indicates that more ambitious actions are required to mitigate the impacts of environmental degradation and the changing climate that will affect our community’s health, economy, and well-being.

The EAP builds upon existing city plans, programs and strategies, and proposes measures to accelerate advancements in sustainability, of which economic vitality, environmental protection, and health and well-being are collectively considered to be critical pieces of achieving sustainability goals. Adopting and implementing the EAP will help the City support global targets for a stable climate. The plan includes policy changes in the public sector and incentives in the private sector, as well as, recommended actions for both the public and private sectors.

More direct language

Implementing policies and incentives for our City will not only address environmental concerns but will also have many co-benefits. For example, improved energy efficiency in buildings can reduce energy costs. Improving access to multi-modal transportation can increase public health, improve air quality, reduce congestion, and increase safety. Communities that make sustainable development choices are better positioned to preserve landscapes, support robust food systems, and maintain the health and integrity of watersheds, forests, and wildlife habitats.

not only ↓
increases

↓
reduces

Environmental Performance Standards Advisory Committee

Members of the Environmental Performance Standards Advisory Committee (EPSAC) have led the effort to develop the EAP. EPSAC was established in 2017 to help the City “create a set of environmental performance and sustainability standards for public and private development and redevelopment projects”. On October 23, 2019, EPSAC presented to City Council and requested staff time be appropriated to create an EAP. City staff then worked with EPSAC on creating this document which is Phase 1 of the EAP.

Community Input

Information about the community input process will go here.

Scope of Plan

The EAP covers sustainability initiatives in both the public and private sector.

This document is Phase 1 of the EAP which describes goals, co-benefits, and strategies, and identifies tasks and responsible parties (such as a city department, private businesses, or community organizations).

These Phases are important.
Highlight them more clearly.

Phase 2 of the EAP will begin after adoption of Phase 1 by City Council. Phase 2 will include gathering data and conducting study of municipal and community activities in order to develop baselines to be later used to measure progress towards achieving goals.

During Phase 3, EPSAC and City staff will work together to update the EAP. Considering baseline data and all learned information, targets will be established with statements that define a percentage reduction or increase by a specific year. Goals and strategy statements may also be revised at this time. The updated EAP will be presented to City Council for consideration to adopt.

Public Sector

The EAP includes policy changes and regulations for the public sector. The public sector includes Harrisonburg City Government as well as Harrisonburg City Schools. The Harrisonburg Electric Commission (HEC) is a municipal utility, but operates independently from the City.

Harrisonburg Electric Commission (HEC)

Harrisonburg Electric Commission (HEC) purchases power for resale to its 21,000 customers from Dominion Energy at four separate delivery points. The Harrisonburg City Council created HEC in October 1956 as an independent, nonpolitical commission with the first Board of Commissioners being sworn in to office in January of 1957. As a part of the creation of the Commission, by City Code, a minimum of 5 percent of total revenues is to be returned to the City annually as well as a payment equal to the amount of taxes that would be owed as if they were a private utility.

In January 2011, through a contract with the Virginia Municipal Electric Association (VMEA), in which HEC is one of seven members, HEC entered a 20-year power supply contract with Dominion Energy in effect through May of 2031. The contract is a full requirements contract, which means that HEC cannot purchase power from any other entity nor can it build generation, renewable or otherwise, to offset energy purchases from Dominion. Additionally, the retail customers of HEC may not enter into contracts to purchase power from any other entity, however, rooftop solar installations by its customers are allowed behind the customer's meter under HEC's parallel connection agreement (net metering agreement). As of February 2019, there are 133 solar panel systems (113 residential and 20 commercial installations) connected under this arrangement.

Energy efficiency and alternative energy initiatives are included in the EAP. These initiatives may have impacts on HEC operations. The relationship between these initiatives and HEC is not within the scope of this plan - the plan does not outline how something like increased solar panels on school property would impact HEC operations. Additionally, the EAP does not suggest changes to what type of energy is purchased by HEC.

Private Sector

The EAP includes incentives and suggestions for making changes in the private sector. Since Virginia is a Dillon Rule state, no policy changes to regulate the private sector are outlined in this plan. For example, the EAP can outline ways to encourage and incentivize private citizens to reduce plastic consumption, but it cannot suggest the City adopt a regulation to ban plastic shopping bags in the City.

ADENDUM

It is too distracting here, and takes away from the flow of the document

Short + sweet
How about something like this, or better?

The city of Harrisonburg gets its electricity from HEC. HEC is a municipal utility, but since it operates independently from the city, the relationship between the EAP initiatives and HEC is not within the scope of the EAP.



\$\$ \$10,000-50,000

\$\$\$ \$ 50,000

In some cases, the cost only accounts for the cost of hiring a consultant and does not account for the cost of city staff time to manage the consultant or to contribute to task. In other cases, the cost might only account for the cost of materials and equipment, and not for the cost of city staff or community organization's time to create or install.

Goal 1 - Reduce Greenhouse Gas Emissions

Reduction of Greenhouse Gas (GHG) emissions is the overarching goal of this EAP.

Where Are We Now?

I'm not sure this is a goal within each sector. Not sure how this should be included.

Many of the existing initiatives described within the sector chapters contribute to reducing greenhouse gasses.

Strategy 1.1 - Complete GHG emissions inventory

The first step towards reducing GHG emissions is understanding where our emissions are coming from. There are two inventories that will be completed: the community-wide inventory which includes emissions created by the community as a whole (electricity, vehicle miles traveled, etc.) as well as the municipal inventory, which would capture emissions created by municipal operations (municipal fleet, energy used by city buildings, etc.).

Task	Responsible Party	Cost
Become a member of ICLEI. Local Governments for Sustainability (ICLEI), formerly the International Council for Local Environmental Initiatives provides tools and support for local governments to inventory greenhouse gas emissions.	City Manager's Office, City Council	\$
Complete community-wide inventory.	City Department TBD	\$
Complete municipal inventory.	Facilities Manager	\$\$
Conduct new community-wide and municipal inventories to measure progress. (It is recommended that community-wide inventories be completed once every two years and municipal inventories be completed once every three to five years.)	City Department TBD; Facilities Manager	\$\$

Strategy 1.2 - Set Targets for GHG Emission Reductions

Use the GHG emissions inventories and goals set by the Compact of Mayors and Paris Climate Agreements of 2015 to guide setting goals for GHG emissions reductions in the City. Hundreds of

22

communities across the USA have set similar targets, including the Town of Blacksburg, the Cities of Charlottesville, Roanoke, and Richmond, and Arlington County, and Fairfax County.

Task	Responsible Party	Cost
Analyze the emissions inventories and recommend to City Council targets for reductions.	EPSAC	\$
Set targets for emissions reductions. Recommendations will be presented by EPSAC and city staff during Phase 3 of EAP development and presented to City Council to consider for adoption.	City Council	\$

2

Buildings and Energy

Commercial and residential buildings account for 39 percent of carbon dioxide emissions in the United States annually, due to heating, cooling, lighting, and powering electrical equipment (United States Green Building Council). Improving energy efficiency and reducing energy use in buildings will reduce greenhouse gas emissions (GHG emissions).

Co-Benefits

Co-Benefits to improving energy efficiency and reducing energy use in buildings include: Saving money through reduced costs for heating and cooling, improved thermal comfort and indoor air quality, local jobs in the energy efficiency field, hedging against utility price increases and improved health due to reduced fossil fuel combustion.

Goal 2 - Understand the City's Energy Use

Creating an inventory of energy used by municipal operations is the first step to understanding the consumption, environmental impact, and areas that could be improved upon.

Where Are We Now?

Initiative	Summary	Status
Create and support the Facilities Management Program	Harrisonburg has a Facilities Manager who monitors energy use in municipal buildings.	Complete

Strategy 2.1 - Inventory Energy Used by Municipal Operations

The energy inventory would describe energy use of different areas of municipal operations, including, but not limited to: fleet vehicles, buildings, street lighting, and distribution of water and sanitary sewage.

Task	Responsible Party	Cost
Create a standard operating procedure for the inventory, including: what software will be used to complete the inventory, and what should be included (electric, gas, water, and sanitary sewer)	Facilities Manager	\$
Complete the inventory. Include local partners such as James Madison University or private consultants.	Facilities Manager	\$
Establish an inventory maintenance plan that includes how often the inventory should be updated and who is responsible.	Facilities Manager	\$

EMU *FALL 2* *← they are doing a lot. Their knowledge could be beneficial*

52

Share findings of energy inventory with other city departments and the public	Facilities Manager, Director of Communications	\$
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Goal 3 - Decrease Energy Use Intensity of Municipal Buildings

Energy Use Intensity, or EUI, expresses a building's energy use as a function of its size and other characteristics. It is usually expressed as energy per square foot per year and is calculated by dividing the total energy consumed by the building in one year by the total gross floor area of the building.

Where Are We Now?

Initiative	Summary	Status
Facilities Management Program	Harrisonburg has a Facilities Manager who monitors energy use in municipal buildings. The Facilities Manager coordinates maintenance and energy efficiency upgrades on municipal buildings.	Complete

Strategy 3.1 - Create a City Internal Energy Team

The Internal Energy Team (IET) may consist of current staff members and/or new positions that will be trained in a high level of proficiency in HVAC, electrical, and plumbing skills, specifically focusing on energy efficient design.

Task	Responsible Party	Cost
Establish the IET. The IET would be led by the Facilities Manager.	Facilities Manager, City Manager's Office	\$
Assess municipal buildings, facilities, and energy uses to identify maintenance needs and capital improvements. All buildings should be audited initially, and then conditioned or occupied buildings should be audited every five years.	IET	\$\$
Establish an operations and maintenance program and capital improvement schedule, prioritized based on needs and available funding.	IET	\$\$\$
Create procedures so that the IET is consulted on the design of mechanical/electrical/plumbing in new building and retrofit projects so the team's knowledge and expertise of equipment and systems maintenance can be incorporated in design decisions.	IET	\$

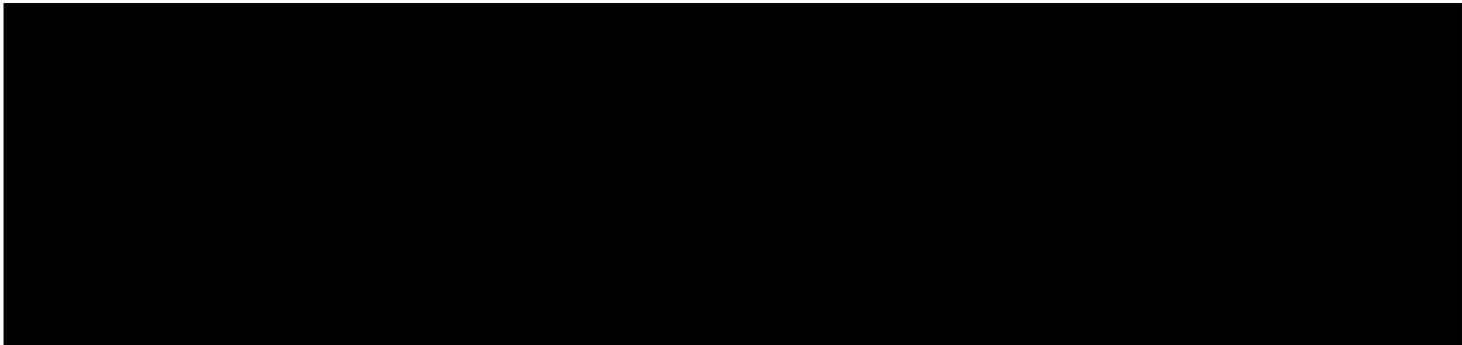
Arch?

and architectural firms

Rebecca Stimson

From: [REDACTED]
Sent: Friday, June 28, 2019 2:03 PM
To: Rebecca Stimson
Subject: Environmental Action Plan comments - updated

Follow Up Flag: Follow up
Flag Status: Completed



General:

"gases" is spelled "gases" and "gasses". consistency needed. I think the former is preferable, but either acceptable (sure I'm not the first to bring this up)

Likewise, "buses" is spelled "buses" and "busses". consistency needed.

Numbering system: For clarity, I think all Goals should have a leading number tying them to the Focus Area to which they are associated. For instance, Goal 5 on p18 would become Goal 1.5 and then Strategy 5.1 below that would become 1.5.1, etc. Likewise, all Tasks should be numbered in the same scheme, eg, the Task, "establish an Energy Audit Committee" on p19, would become Task 1.5.1.2. This will aid greatly when referring to various sections and avoid confusion.

Specific:

p9 Because HEC is such an important part of energy use & environmental impacts in the City, there should be some mechanism to review that HEC policies are in sync with the EAP where possible, perhaps including such language in the HEC mission, and inclusion of HEC on the Internal Energy

Team. Not suggesting in any way that the City manage HEC, but it is critical they form a good working partnership on this topic.

p10 Under Goal 1 there are two instances of the term Greenhouse Effect being used. This term, although universally used, is misleading and incorrect if it makes one think of a greenhouse. Without getting all sciency, I strongly believe the term should be put in quotes, ie, "Greenhouse Effect", with perhaps a footnote which includes a reference that describes the proper mechanism of how the earth is heated by GHGs for those interested

p10 fourth sentence under Goal 1 - change "greenhouse gases" to "GHGs"

p10 fifth sentence under Goal - revise to "The additional carbon dioxide and other GHGs trap radiation"

p10 seventh sentence under Goal - revise to "... the earth's temperature is on course to rise ..."

p11 add a task, perhaps under Strategy 1.2, - the City should consider divesting its investments in entities involved in the production of fossil fuels. I just saw (June 11 DNR) where Charlottesville did this.

p13 under Strategy 2.1, state that the IET should definitely include staff from HEC (as mentioned above)

p19 in the 2nd task under Strategy 5.1, state that this program should not replicate any program HEC has, but should work in partnership

p30 In the "where we are now" section under Goal 2, the word "available" is used twice (redundancy). Also I think it would be good to add the words "for organics recycling" on the end of this statement.

p32 In the 4th task under Strategy 2.3, remove the words "at City Hall". Promotion of this endeavor should not be restricted to only City Hall

p32 Add a 5th task under Strategy 2.3 to encourage restaurants and other food processing concerns in the City to recycle food waste

p36 Strategy 3.2 - the term "1/4 mile improvements" is first used. What is this? Is it in the right place since Strategy 6.3 references filling sidewalk gaps within 1/4 mile? Maybe a short definition would be helpful here.

p43 Under Goal 1 of Focus Area 5, in the "where we are now" section it is stated that there is no program. The current recycling program clearly supports the reduction of refuse in landfills. This should be stated here with reference to the "Where we are now" section under Goal 3 (p46) for details.

p43 Strategy 1.1 - glad to see PAYT in there. Would just like to see some wording like "... PAYT or other system that would incentivize residents to reduce refuse ..." so as to allow other options. Not that I know what these other options would be off the top of my head.

p43 add task (perhaps under Strategy 1.2, perhaps other) which speaks to the City upping its own game regarding recycling in their offices & other buildings, etc. The City could then promote/showcase their system as a model to other businesses & establishments.

p44 add a task to Strategy 1.3 stating something like - consider a review of the "Refuse" & "Solid Waste Management Fee" structures that residents see on the water bills to better reflect current practice and any new systems such as PAYT. Consideration should be given in this review to ensure that any particular sector is not overburdened.

p45 Second item under Goal 2's "Where we are now", the Support of Community Composting, should go with Goal 3 on p 46. Organics to compost is more recycling than it is reuse. Likewise, Strategy 2.4 should move to under Goal 3, recycling.

p46 Update "Where we are now" under Goal 3 to reflect the mobile recycling unit being stationed in different neighborhoods during the week.

p46 under Strategy 3.2, add the following tasks:

a) consider adding bins to the RCC site and to the mobile recycling unit into which residents can drop off organics (food waste) for composting. If this then goes to an industrial composting site, such as Black Bear Composting, consider educating the public on what additional items can be deposited in these bins, such as soiled paper or cardboard.

b) consider adopting some evening hours for the mobile recycling unit in the various neighborhoods to give residents more options

c) consider mulching all yard waste vs. adding to landfill as daily cover.

p47 correct spelling of "units" in third task under Strategy 3.2

p47 change "Now" to "No" in fourth task under Strategy 3.2; at least I think that is how it is supposed to read

p49 correct spelling of "sheriff" in Strategy 4.4 (2nd line)

more **General**:

Sustainability Coordinator. At my first read/scan through this document, I was thinking the IET was a committee that was, in a sense, taking the place of a Sustainability Coordinator. After talking with Adrie and reviewing again, I see that the IET is only associated with Focus Area 1. For oversight and coordination of the various Departments, it seems there needs to be either a single coordinator (call it a Sustainability Coordinator or other) or a committee for the implementation and future review of the EAP. If it is a committee it would make sense that it be headed by the City Manager's office. One advantage of a single coordinator is that he/she would have responsibility for the big picture and be better at keeping all the pieces coordinated. On the other hand it is a new position that requires funding. The committee approach would have members from all the Departments involved (including HEC). An advantage here is that the members have more intimate knowledge of the workings of their respective Department. Of course these members need to be allowed the time to do their EAP work.