

# Update on Current City of Harrisonburg Environmental Initiatives

## General Education and Outreach- Past Calendar Year

| Group               | Topic                             | Date     |
|---------------------|-----------------------------------|----------|
| U.S. DOE C2C cohort | EVSE Procurement: Lessons Learned | 11/14/23 |
|                     |                                   |          |
|                     |                                   |          |
|                     |                                   |          |

## Focus Area 1: Buildings and Energy

### Greenhouse Gas Emissions Inventory- Community & Municipal

The emissions inventory describes energy use of different areas of municipal operations, including, but not limited to: fleet vehicles, buildings, and street lighting. The emissions inventory also describes energy use of different areas and operations within the community.

The GHG Emissions Reports are available at: <https://www.harrisonburgva.gov/EAP>.

*Current Status: 2022 Inventory Complete*

*Alignment: FA1 Goal 2*

*Staff Contact: Keith Thomas*

### Solar on City Facilities

| Building               | Solar System Size (kW) | Year Installed | Percentage of the Total Building Load (%) |
|------------------------|------------------------|----------------|---|
| Bluestone Elementary   | 340                    | 2023           | 90  |
| HCPS Central Office    | 35.1                   | 2023           | 20  |
| New PW Building        | TBD                    | TBD            | TBD                                       |
| Turner Pavilion        | 49.9                   | TBD            | TBD                                       |
| <b>Total kW Solar:</b> | <b>425</b>             |                |   |

In addition, Friendly City Solar provides 1755 MW DC (1.5 MW AC) solar to the City's grid.

*Current Status: Ongoing*

*Alignment: FA1 Goal 1, 3, 4 & 6*

*Staff Contact: Keith Thomas*

### SolSmart

The City has completed requirements needed for silver designation. City staff created a solar landing page:

<https://www.harrisonburgva.gov/solar-resources>. More information about SolSmart is available at:

<https://solsmart.org/>.

Read about the SolSmart designation press release here:

[https://harrisonburgva.gov/sites/default/files/CMO/files/press\\_release/2024/01-17%20Harrisonburgs%20Hard%20Work%20Earns%20SolSmart%20Silver%20Designation.pdf](https://harrisonburgva.gov/sites/default/files/CMO/files/press_release/2024/01-17%20Harrisonburgs%20Hard%20Work%20Earns%20SolSmart%20Silver%20Designation.pdf)

*Current Status: Silver Designation*

*Alignment: Guiding Goal 2, FA1 Goal 6*

*Staff Contact: Keith Thomas, Thanh Dang*

### Solarize Campaign

The City partnered with LEAP to promote their Solarize Campaign. The 2024 campaign will kick off April 1. More information about Solarize Virginia is available at: <https://solarizeva.org/>.

| Year | Area              | Total Signups | Total Executed Contracts |
|------|-------------------|---------------|--------------------------|
| 2022 | Shenandoah Valley | 129           | 5                        |
| 2022 | Harrisonburg      | 29            | 4                        |
| 2023 | Shenandoah Valley | 113           | 8                        |
| 2023 | Harrisonburg      | 13            | 0                        |
| 2024 | Shenandoah Valley | TBD           | TBD                      |
| 2024 | Harrisonburg      | TBD           | TBD                      |

*Current Status: Ongoing*

*Alignment: Guiding Goal 2& 3, FA1 Goal 6*

*Staff Contact: Keith Thomas*

### Ready Set Solar! Campaign

The City partnered with Solar United Neighbors to promote their Ready Set Solar! Campaign. More information about the campaign is available at [solarunitedneighbors.org/readysetsolarva](https://solarunitedneighbors.org/readysetsolarva) .

| Year | Area | Total Signups | Total Executed Contracts |
|------|------|---------------|--------------------------|
| 2022 | ?    | ?             | ?                        |

*Current Status: Complete*

*Alignment: Guiding Goal 2& 3, FA1 Goal 6*

*Staff Contact: Keith Thomas*

### Building Energy Audits

#### **Buildings**

| # | Facility Name                            | Status |
|---|--|--------|
| 1 | Lucy F Simms Continuing Education Center |        |
| 2 | Community Activities Center              |        |
| 3 | Westover Pool                            |        |
| 4 | Park View Administration Building        |        |
| 5 | Park View Maintenance Shop-Grounds       |        |

|  |  |                     |
|--|--|---------------------|
| 6  | Par View Maintenance Shop- PR Facilities and PW Warming Room |                     |
| 7  | Heritage Oaks Golf- Pro Shop                                 |                     |
| 8  | Heritage Oaks Golf- Maintenance Building (shared with HCPS)  |                     |
| 9  | Fire Station #1  | Completed 2023      |
| 10   | Fire Station #2  | Completed 2023      |
| 11   | Fire Station #3  | Completed 2023      |
| 12   | Fire Station #4  | Pending renovations |
| 13   | Fire Station #5  | New Construction    |
| 14   | HPU- Water Treatment Plant                                   |                     |
| 15   | HPU- Water Operation Center                                  | Completed 2023      |
| 16   | HDPT- Administration Building                                |                     |
| 17   | HDPT- Garage   |                     |
| 18   | Hardesty-Higgins House                                       |                     |
| 19   | City Hall  | Completed 2023      |
| 20   | Public Safety/ECC  | Completed 2023      |
| 21   | Recycling Center   |                     |
| 22   | Central Stores   |                     |
| 23   | PW Admin Building  | New Construction    |
| 24   | PW Shop  |                     |
| <b>Harrisonburg City Public School Facilities*</b> |  |                     |
| 25   | HCPS Central Office  |                     |
| 26   | Harrisonburg High School                                     |                     |
| 27   | Skyline Middle School & Smithland Elementary complex         |                     |
| 28   | Thomas Harrison Middle School                                |                     |
| 29   | Bluestone Elementary   |                     |
| 30   | Keister Elementary   |                     |
| 31   | Spotswood Elementary   |                     |
| 32   | Stone Spring Elementary                                      |                     |
| 33   | Waterman Elementary  |                     |
| 34   | Elon Rhodes Early Learning Center                            |                     |

## Focus Area 2: Land Use and Green Space

### Expanding & Protecting Tree Canopy

Staff applied for and received funding from the [Urban and Community Forestry Grant Program](#) to create an urban forest management plan. Staff have worked with our consultants, Urban Canopy Works LLC, to develop and finalize the plan. An urban forestry management plan is essential to the City of Harrisonburg because it helps guide city staff to care for and manage single trees and tree populations in urban settings for the purpose of improving the urban environment. Urban forestry involves both planning and management, including the programming of care and maintenance operations of the urban forest. Urban forestry advocates the role of trees as a critical part of the urban infrastructure including stormwater mitigation. Urban foresters plant and maintain trees, support appropriate tree and forest

preservation, conduct research and promote the many benefits trees provide. The final report is planned to be presented to City Council in late November or December.

As part of I-81 improvements, trees will be planted along interchange ramps.

Citizen Tree Plantings: The City provides opportunities for citizens to plant trees through our Harrisonburg Conservation Assistance Program (HCAP) (<https://www.harrisonburgva.gov/hcap>). Staff previously worked with the program managers for the Anne Arundel County Community Tree Planting Grant Program to understand ways in which we could improve our program design based on lessons learned from the Maryland program. Advantages of our HCAP program is that citizens get the value of a certified arborist to evaluate the site and make recommendations on where to plant and what to plant. This helps ensure that the right tree for the right place principle is followed and does not place the burden on a landowner to design their own planting plan.

| <b>Public Trees Planted</b>      |            |
|----------------------------------|------------|
| Trees planted this year (YTD)    | <b>0</b>   |
| Trees planted last calendar year | <b>351</b> |

*Current Status: Ongoing*

*Alignment: FA2 Goal 1, FA2 Goal 2, FA2 Goal 3, FA2 Goal 4, FA6 Goal 4*

*Staff Contact: Jeremy Harold, Wes Runion, Keith Thomas*

### Pollinator Habitat

Between 2017 and 2023, staff have converted 2.55 acres of traditional landscaped areas and turfgrass into pollinator habitat spaces. Many of these spaces have been in road medians. View our interactive webmap: <https://arcg.is/0HuTS1>

Read this article about the City of Harrisonburg’s Pollinator Program: <https://www.nrpa.org/blog/the-buzz-in-the-burg/>

NRPA published a new resource for other professionals which features our program on page 21 and a case study on page 30. For more information visit: <https://www.nrpa.org/blog/create-more-sustainable-parks-through-pollinator-and-native-habitat/>

*Current Status: Ongoing*

*Alignment: FA2 Goal 1; FA2 Goal 4*

*Staff Contact: Jeremy Harold, Wes Runion, Keith Thomas*

### Zoning and Subdivision Ordinances Update Project

The Zoning and Subdivision Ordinances regulate how land is used and is developed. These ordinances are the primary tools in implementing the vision, goals, and objectives of the Comprehensive Plan and other city plans. In July 2020, the City contracted with Kendig Keast Collaborative to partner with city staff to update the Ordinances. However, the project was stalled between late 2021 through late 2023.

Topics that the Zoning Ordinance could address that may be of interest to the EPSAC include, but are not limited to: regulations that promote higher density, compact, and mixed use development; regulations that allow community gardens as a principal use; regulations that allow beekeeping as an accessory use; regulations effecting the location and design of solar installations; regulations that require landscaping and trees; regulations that encourage tree preservation during development; and regulations that require less off-street parking or that establish a maximum number of parking spaces. More information is available at: <https://www.harrisonburgva.gov/zoning-subdivision-ordinances-update>.

*Current Status: In December 2023, staff internally regrouped and outlined a project schedule and path forward. The project is anticipated to continue through Spring 2025 and will include opportunities for public engagement and input. Alignment: FA 2 Goal 1; FA 4 Goal 5; FA 4 Goal 6; (could also support) FA 1 Goal 6; FA 2 Goal 3; FA 3 Goal 1 Staff Contact: Thanh Dang*

### Riparian Buffer

Staff continue to plant new and care for existing trees and native vegetation within city maintained riparian buffers. In 2023, approximately 3 acres were re-planted in a section of the Northend Greenway stream restoration project where the previous tree planting failed. In addition, trees were planted along a 5.5 acre buffer for the Blacks Run South stream restoration project.

*Current status: Ongoing*

*Alignment: FA2 Goal 4*

*Staff Contact: Wes Runion, Keith Thomas*

### Continued Expansion of Sidewalks, Shared Use Paths, and Trail Facilities

Refer to: Alternative Transportation Infrastructure (Shared Use Paths, Safe Routes to School, etc.) under Focus Area 4.

## Focus Area 3: Regional Food Systems

### Updates from HCPS

*There are food gardens at all elementary and middle schools within the City.*

*What are some ways that HCPS sources food locally? **Local vendors include: Portwood Gardens (all lettuce for HCPS schools), Shenandoah Valley Produce Auction (several purchases of seasonal veggies for the first few weeks of the year), Showalter Apples (fall), Portwood Acres (broccoli, romanesco, cauliflower in the fall), Saunders Brother Orchards (Asian pears), Seven Hills (ground beef), 4P Foods (flour)***

*How are the gardens at the Elementary and Middle schools incorporated into Learning - **Teachers incorporate garden based learning at both levels.***

*Meals served at the school - **School garden produce is occasionally incorporated into and highlighted as a part of the school meal program.***

*How many schools compost? Where is the compost used? **HCPS is partnering with community members at Vine and Fig to construct compost bins at several schools. Some of the compost is used by HPW in our pollinator program.***

*What are some measures that HCPS uses to reduce material waste related to food service? **We use washable trays and silverware to the maximum extent practicable. We evaluate how we are serving foods to reduce individual packaging as practicable (for example - self-service veggie bars instead of pre-portioned veggies). We use milk machines at Bluestone Elementary.***

*What are some measures that HCPS uses to reduce food waste? **offer-vs-serve is utilized at meals so students are not required to take all items, utilizing meal counts, historical data, and batch cooking to reduce back-of-house food waste. Schools have share bins where students may place whole, unopened items. Other students may select items and some schools have an avenue for donation of unclaimed items.***

*Is there anything else that HCPS does to help “Promote Accessibility to Local, Healthy, and Sustainably Produced Food” All meals are served to all students at no cost. Therefore, all students have equal access to our meals (which contain locally sourced items).*

*Alignment: FA3 Goal 1; FA5 Goal 1  
Staff Contact: Keith Thomas, Andrea Early*

## Focus Area 4: Sustainable Transportation

### Electric Charging Infrastructure

Staff are working to complete financial policy to turn on our first public EV charger downtown.

*Current Status: Ongoing  
Alignment: FA4 Goal 5  
Staff Contact: Keith Thomas*

### Alternative Transportation Infrastructure (SUPs, Safe Routes to Schools)

Staff continue to expand infrastructure for alternative transportation methods such as biking or walking. These include building shared use paths, bike lanes, protected bike lanes, road reconfigurations, sidewalk, pedestrian crossing features, etc. The goal is to create more accessible, safe, and convenient methods of traveling throughout the city with alternative methods of transportation. The City recently installed 7 bike racks around City Hall to provide more bike parking for downtown events, the Farmers Market, voting, and public meetings.

More information: <https://www.harrisonburgva.gov/transportation-projects>

*Current status: Complete  
Alignment: FA4 Goal 5  
Staff Contact: Erin Yancey*

### Traffic Signal Optimization

Five corridors received signal optimization between 2020 and 2022 which helps to decrease the time and fuel needed to traverse through the corridor.

| Corridor   | Completion Year | CO2 savings (lbs/yr) |
|--|-----------------|----------------------|
| E. Market St corridor (Vine St to Chestnut Ridge Dr)   | 2020            | 4,609                |
| High St corridor (3rd St to Garber’s Crossing/Walmart) | 2020            | 4,748                |
| S. Main St corridor (MLK Jr Way to Mosby Rd)           | 2021            | 2,806                |
| Port Republic Rd corridor (S. Main St to Neff Ave)     | 2021            | 7,675                |
| Reservoir St corridor (MLK Jr Way to Stonewall Dr)     | 2022            | 14,897               |

*Current status: Complete  
Alignment: FA4 Goal4  
Staff Contact: Tim Mason/Erin Yancey*

### Fleet E-Bikes

PW purchased two e-bikes. These bikes are used in lieu of fleet vehicles for staff to get to meetings, site visits, and other city business around town. The following miles chart represents the total miles ridden on the bikes. While the mileage on a bike is not exactly correlated to the miles that would have been driven on the road, the miles do represent general usage and a reduction in vehicle mileage. Furthermore, fleet e-bike use represents our commitment to bike-ped infrastructure and multimodal transportation.

| Total Miles      |            |
|------------------|------------|
| Bike             | Miles      |
| Red Como*        | 272        |
| Black Globe Haul | 154        |
| <b>Total</b>     | <b>426</b> |

\*exact mileage prior to PW use is unknown. It is estimated between 30-50 miles were on the bike prior to PW purchasing the bike.

Current status: Ongoing  
 Alignment: FA4 Goal4  
 Staff Contact: Keith Thomas

## Focus Area 5: Waste Reduction and Recycling

### Recycling Year to Date

| January- December 2023 |              |
|------------------------|--------------|
| Item                   | tons         |
| Plastic #1             | 25.8         |
| Plastic #2             | 13.1         |
| Mixed Paper            | 80.7         |
| Cardboard              | 305.0        |
| Plastic Bags           | 11.5         |
| Aluminum               | 15.6         |
| Tin/Scrap              | 44.9         |
| Glass                  | 89.3         |
| <b>Total</b>           | <b>585.8</b> |

Due to this meeting being earlier in the month, there is no update from last quarter's data yet.

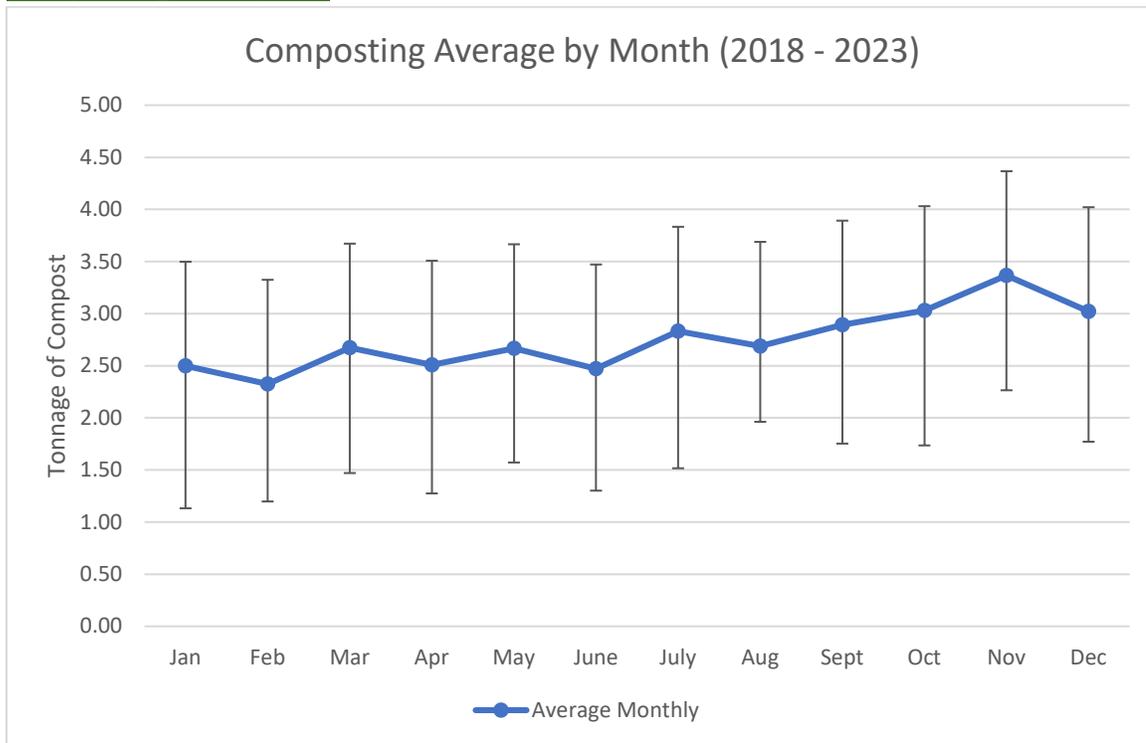
Alignment: FA 5 Goal 1; FA 5 Goal 2; FA 5 Goal 3  
 Staff Contact: Harsit Patel  
 (Note for Keith: Spreadsheet: [Located here](#))

### Urban Wood Program

The Urban Wood Program seeks to reuse trees that must be removed because of insect, pest, disease, or weather damage. The goal is to keep this material out of landfills by repurposing the material and offsetting the need to harvest new material. Between 2020 and 2022, the program has kept an estimated 46 tons of wood out of our landfill through public auction of logs and firewood. Additionally, another 5-10 tons of woody debris was used as woodchips around pollinator habitat and newly planted trees throughout the City. For their hard work and innovation, staff were awarded the Gold Medal for the Governor's Environmental Excellence Award for the Urban Forestry and Urban Wood programs. More information can be found in this press release: [04-05 Public Works Honored with Gold Medal for Urban Forestry and Wood Program.pdf \(harrisonburgva.gov\)](#).

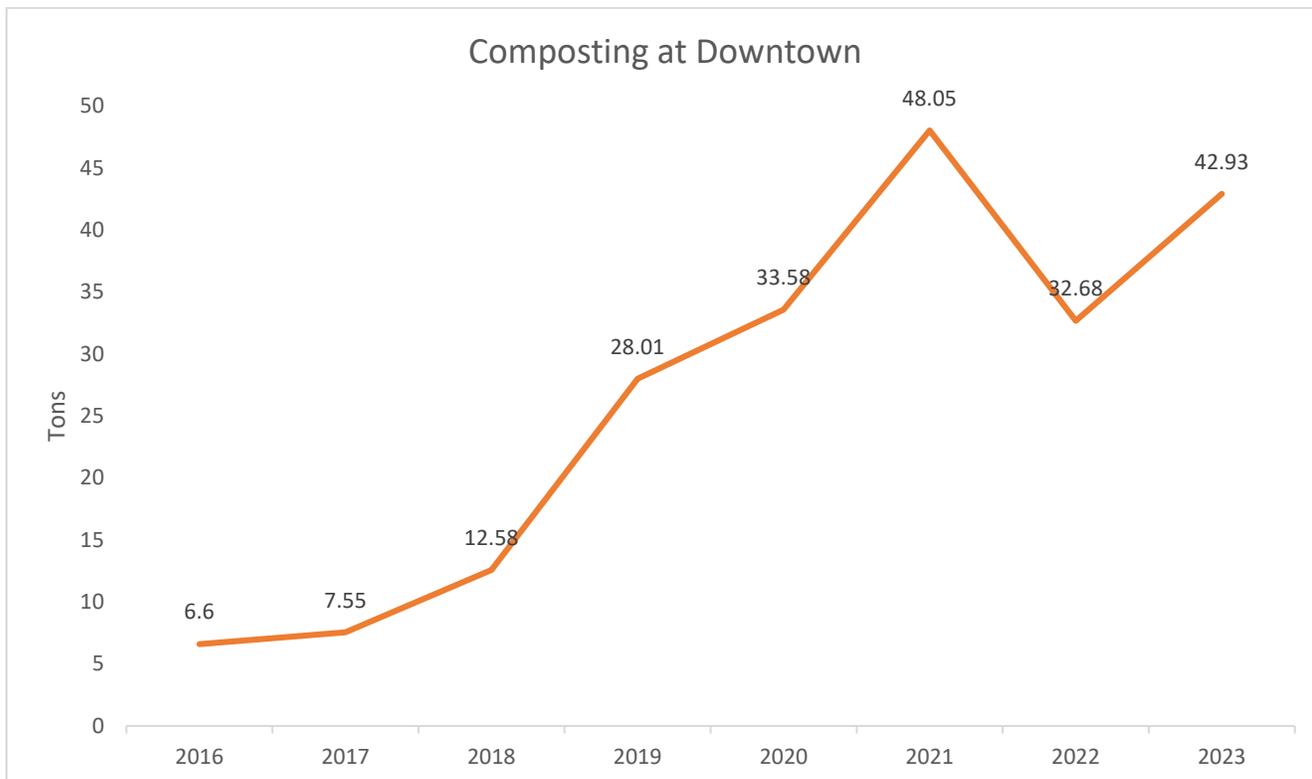
Current status: Ongoing  
 Alignment: FA 5 Goal 1; FA 5 Goal 2  
 Staff Contact: Jeremy Harold

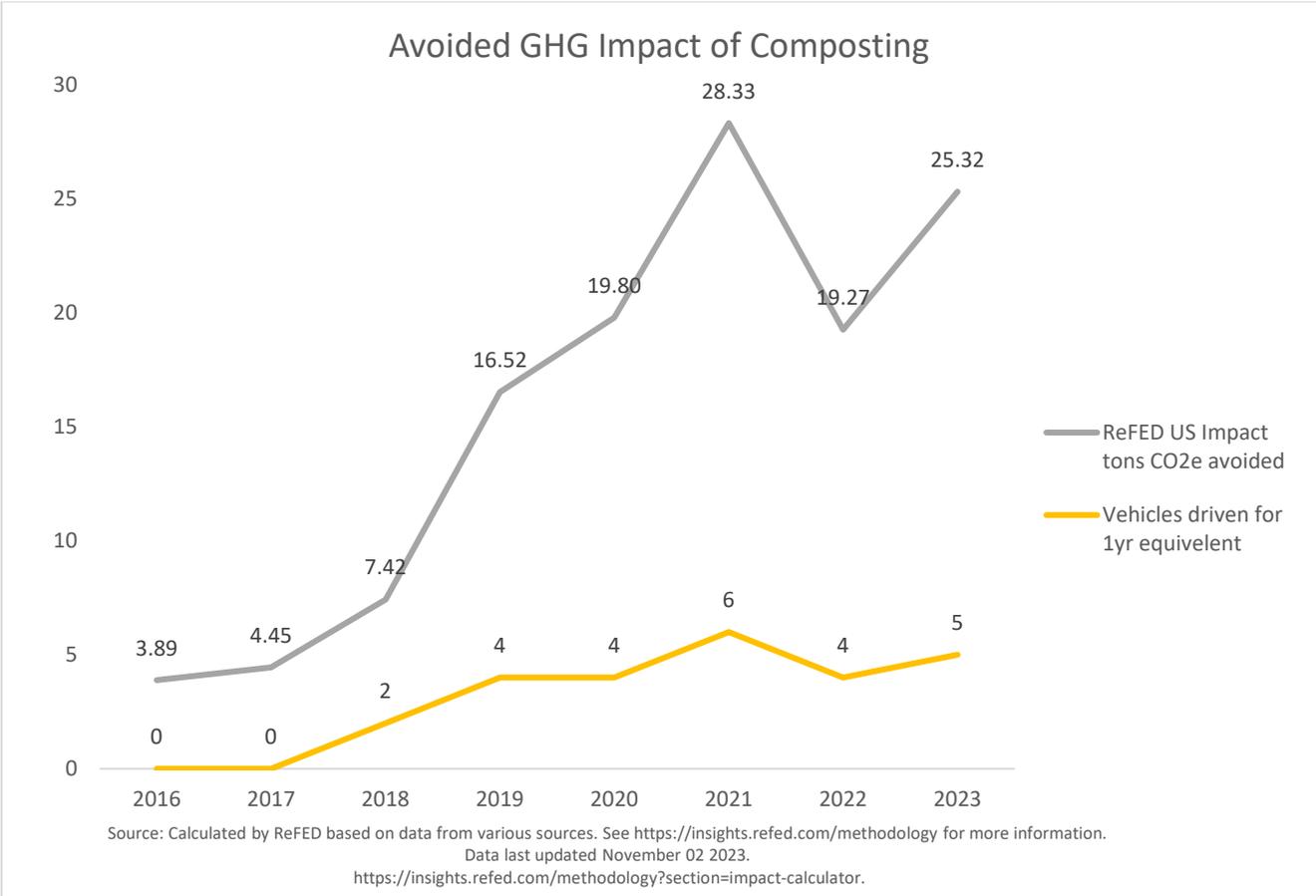
## Composting at City Hall



Due to this meeting being earlier in the month, there is no update from last quarter's data yet.

**The following annual tons and GHG charts will be calculated at the end of every calendar year.**





Staff also encourage at home composting in social media posts and flyers.

*Current status: Ongoing*  
*Alignment: FA 5 Goal 1; FA 5 Goal 2*  
*Staff Contact: Shayna Carter, Harsit Patel, Keith Thomas*  
*(Note for Keith: Spreadsheet: [Located here](#))*

Household Hazardous Waste Collection Events

Staff work with the Rockingham County Landfill to offer two household hazardous waste collection days in April and October. More information: <https://www.harrisonburgva.gov/hazardous-waste-collection>

*Alignment: FA 5 Goal 1; FA 5 Goal 2; FA 5 Goal 4*  
*Staff Contact: Harsit Patel, Keith Thomas*

**Focus Area 6: Water Resources**

Stream Restoration Work

Work started on the Mountain View Drive stream restoration project and is completed. In addition, work on the Blacks Run South stream restoration is about 70 percent completed and will continue through this year. Stream restorations are part of the suite of BMPs the City is constructing to help reduce erosion, filter pollutants, and improve water quality. Additionally, some stream restoration projects are designed to protect infrastructure.

| Stream Segment | Length Restored (lin ft) | Year Complete |
|----------------|--------------------------|---------------|
| Purcell Park   | Approx. 2000             | 2009          |

|                     |                            |                       |
|---------------------|----------------------------|-----------------------|
| Northend Greenway   | 3,137                      | January 2021          |
| Mountain View Drive | 1,650                      | February 2024         |
| Blacks Run South    | 5,500                      | Expected: August 2024 |
| <b>Total:</b>       | <b>12,287 (2.33 miles)</b> |                       |

*Current status: Ongoing*

*Alignment: FA 6 Goal 4*

*Staff Contact: Tom Hartman, Keith Thomas*

Harrisonburg Conservation Assistance Program (HCAP)

HCAP provides funding for private landowners to voluntarily install best management practices (BMPs) on their property to help treat or reduce runoff from their property.

| FY Year | Completed Projects |
|---------|--------------------|
| 2020    | 3                  |
| 2021    | 3                  |
| 2022    | 1                  |
| 2023    | 7                  |
| 2024    | 10                 |

*Current status: Ongoing*

*Alignment: FA 6 Goal 4*

*Staff Contact: Keith Thomas*

Septic to Sanitary Reimbursements

Since 2017, 29 residents have utilized our reimbursement process to connect from septic systems to sanitary sewer. Additionally, 30 residents connected to sanitary sewer between the years 2006 and 2016. It is estimated that less than 50 households still remain on septic systems within City limits. Septic systems tend to leach bacteria and nutrients into waterways which contributes to water pollution. Connecting to sanitary sewer diverts these pollutants from the ground to the sanitary sewer systems which is treated at the waste treatment plant and improves local water quality.

*Alignment: FA 6 Goal 4*

*Staff Contact: Keith Thomas*