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Arlington County

2024 Solid Waste Management Plan



ARLINGTON
VIRGINIA

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PLAN OVERSIGHT

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EXECUTIVE SUMMARY

INTRODUCTION

Arlington County developed this Solid Waste Management Plan (SWMP) in response to the Virginia Waste Management Board's requirement that designated planning units, as well as each city, county, or town in the Commonwealth of Virginia, develop a comprehensive and integrated solid waste management plan that details planned solid waste management activities over a 20-year planning window. Arlington's prior SWMP was adopted by the County Board in June 2004. There are a number of requirements of the SWMP, chief of which is to consider and address all components of the waste management hierarchy, including source reduction, reuse, recycling, resource recovery (waste-to-energy), incineration, and landfilling.

The Commonwealth of Virginia requires SWMPs to be approved by the community's governing body and meet the state mandatory recycling rate of 25 percent. Arlington County met the state's mandatory recycling rate many years ago and reported a 52.4 percent recycling rate for calendar year 2022. Despite the County's success in achieving and maintaining a recycling rate over twice as high as the current mandated rate, the County strives to continue to expand waste diversion programs to further increase the rate. The County has established an ambitious goal of achieving 90 percent waste diversion from landfill and incineration by 2038. This plan not only details the County's programs and policies to maintain the state mandated diversion rate, it includes voluntary program enhancements based on zero waste principles to serve as a roadmap for waste reduction, recycling, and overall solid waste programming activities in Arlington through June 2044.

This SWMP is divided into two major sections:

1. **Virginia Regulatory Requirements** - This section discusses the solid waste planning elements and programs required to meet the State's planning requirements. This includes discussion of the County's existing solid waste management programs, population and waste generation projections, available and planned infrastructure, and the County's plan for maintaining the required minimum recycling rate of 25 percent.
2. **Voluntary Program Enhancements** - This section discusses potential program enhancements that go beyond those required by law. These proposed enhancements are centered on the County's diversion target of 90 percent by 2038. This diversion rate is aspirational and achieving it will require significant behavioral changes on the part of the Arlington Community, as well as state and federal legislative action, which are beyond the control of the Arlington County government. Additionally, as with all government programs, these enhancements will be subject to resource constraints and the decisions of future elected officials.

PLAN DEVELOPMENT

The Virginia Waste Management Board requires that development of the SWMP include engaging stakeholders, including the public, to receive input on key elements of the plan. Development of the SWMP began in February 2022 with the convening of a community-led Solid Waste Committee (SWC). The SWC includes 17 individuals that represent the diverse interests and views of the Arlington County community. The SWC is a sub-committee of the Climate Change, Energy and Environment Commission (C2E2) chaired by a member of C2E2, it is not a formal advisory committee and does not have County Board appointed positions. SWC guided the development of the SWMP.

During the 20 months it took to develop the SWMP, the SWC met 16 times from February 2022 to September 2023. SWC members were provided detailed information on the programs and policies impacting waste management in the County.

The SWC identified a list of 15 zero waste initiatives and four policy programs that County staff and the County's contracted consultant, SCS Engineers, researched to understand the potential impacts on waste diversion, costs, and greenhouse gas emissions reductions. Ultimately, the SWC recommended that all 15 initiatives and the four policy programs be included as part of the County's SWMP for the planning period 2024 to 2044. These initiatives are discussed in detail in **Section 7 – Zero Waste Plan**.

VIRGINIA REGULATORY REQUIREMENTS

The County will continue to comprehensively and sustainably manage waste generated in the County to maintain the State of Virginia's 25 percent minimum recycling requirement. To meet that requirement, the County has identified elective actions that will continue to accomplish the County's three (3) primary goals:

- **Goal A:** Employ a comprehensive solid waste management system that considers the State of Virginia's waste management hierarchy.
- **Goal B:** Ensure that the County continues to implement a strong recycling program and that the County recycling rate, at a minimum, meets the State of Virginia's recycling goals.
- **Goal C:** Carefully evaluate the waste management needs of the County for the next 20 years and identify the actions necessary to meet those needs.

VOLUNTARY PROGRAM ENHANCEMENTS

The County has identified 15 zero waste initiatives and four policy programs that the County may pursue over the SWMP's 20-year planning window to increase waste diversion in pursuit of the established target of 90 percent waste diversion by 2038. The initiatives have been prioritized as short term, medium term, or long-term, depending on impact, ease of implementation, and time required for the development of necessary infrastructure or technology. Each initiative and policy program is considered voluntary and, therefore, implementation is subject to the availability and appropriation of resources through regular County processes.

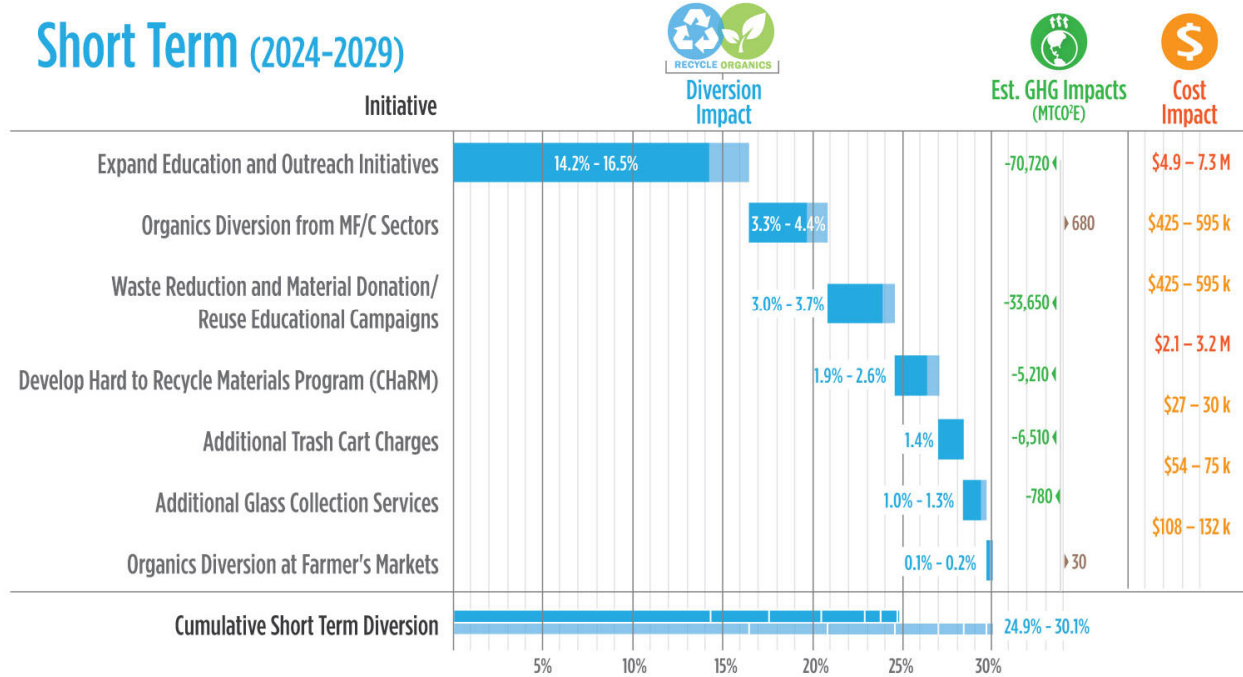
Short Term (2024 – 2029)

- **Expand Education and Outreach Initiative Capacity:** Hire two new staff positions that will create educational materials and organize marketing campaigns that focus on 1) educating residents on existing systems and 2) using those systems appropriately across all waste generating sectors (i.e. single family residential, multi-family residential, commercial etc.). The County estimates this initiative to increase the solid waste diversion rate between 14.2 to 16.5 percent.
- **Waste Reduction and Material Donation/Reuse Education Campaigns:** Educate businesses and residents on waste reduction best practices to reduce waste before materials enter the waste stream and encourage the donation and reuse of goods and materials that still have a useful life instead of disposing the materials. This initiative primarily consists of creating marketing campaigns and materials focused on source reduction and waste minimization

along with material reuse and donations. The County estimates these campaigns to increase diversion between 3.0 to 3.7 percent.

- **Organics Diversion at Farmers Markets:** Collect leftover food and/or non-sellable produce from farmer’s markets and divert the material in alignment with the wasted food scale. The County estimates this initiative to increase the solid waste diversion rate between 0.1 to 0.2 percent.
- **Organics Diversion from Multi-Family Residential and Commercial Sectors:** Explore opportunities to expand organics diversion at multi-family residential and commercial properties through participation in pilot and incentive programs. Over the 20-year planning period the County estimates this initiative to increase the solid waste diversion rate between 3.3 to 4.4 percent.
- **Additional Glass Collection Services:** Increase glass collection capacity by adding additional collection points (i.e. purple bins) in the high-density development corridors such as Rosslyn-Ballston, and Richmond Highway. The County estimates this initiative will increase the solid waste diversion rate between 1.0 to 1.3 percent.
- **Increase Charges for Multiple Trash Carts:** Increase monthly fees on the second and subsequent 64-gallon trash cart to disincentivize waste generation. Increased monthly fees are not planned for the initial trash cart or for additional recycling and organics collection carts to incentivize the usage of these disposal alternatives. The County estimates this initiative will increase the solid waste diversion rate 1.4 percent.
- **Develop a Center for Hard to Recycle Materials (CHaRM) Facility:** CHaRM facilities allow jurisdictions to divert materials not easily managed through curbside collection programs. Potential materials to target for diversion as part of this program include mattresses, carpets/rugs, and tires. Establishing a CHaRM facility that encompasses the household hazardous materials (HHM) program allows the County to increase services to residents and divert increasing quantities of materials. The County estimates this initiative will increase the solid waste diversion rate between 1.9 to 2.6 percent.

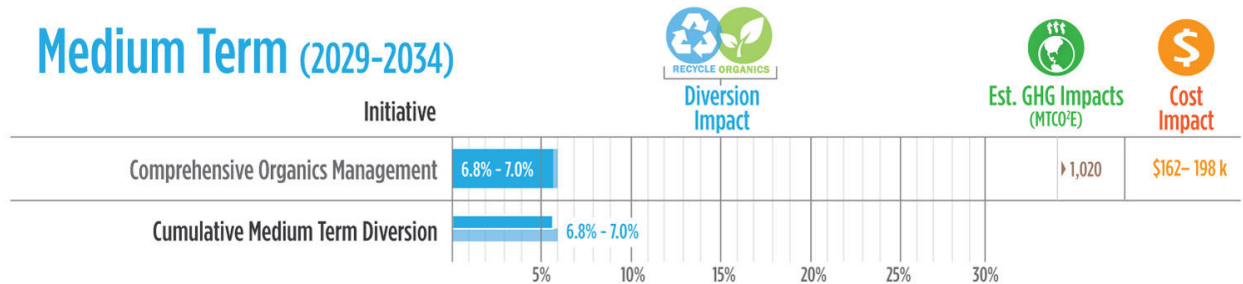
Short Term (2024-2029)



Medium Term (2029-2034)

Comprehensive Organics Management: This initiative requires the separation and diversion of organic materials generated from the multi-family residential, commercial, and institutional sectors. Comprehensive organics management represents the initiative with the second largest impact on the solid waste diversion rate, which is estimated to be between 6.8 to 7.0 percent. This initiative includes hiring a full-time compliance inspector and multi-media campaigns to promote the program. Significant expansion of organics recovery requires additional regional processing and management capacity to meet the demand of this initiative.

Medium Term (2029-2034)



Long Term (2024-2038)

The initiatives identified below may be implemented as resources and funding allow at any time during the planning period.

- **Reuse-Repair Fairs:** Encourage and host repair/reuse fairs where residents can bring items for repair to prolong the useful life of the item and prevent it from entering the waste stream. This initiative will be supported by the Education Specialist staff and will increase the County's diversion rate between 0.3 to 0.5 percent.
- **Zero Waste Special Events:** County sponsored and public events that are required to go through the County's special events permitting process will need to incorporate zero waste principles into the event's operations. Encourage the use of reusables or compostables to maximize waste reduction and increase recycling/food waste recovery. It is estimated that this initiative will increase diversion by an additional 0.1 to 0.2 percent.
- **Online Zero Waste Tracking Dashboard:** Create a zero-waste dashboard to provide County residents up-to-date tracking on how the County is performing on the zero-waste goals through various performance metrics. Providing residents' insight into performance is anticipated to have up to 0.1 percent impact on the diversion rate.
- **Equipment Sharing Program:** Expand the existing tool sharing programs offered by County Libraries to include power tools and lawn tools. This program prioritizes tools that are battery powered or electric. It is not expected to include the usage and sharing of gas-powered tools. This initiative has minimal impact on the diversion rate.
- **Environmentally Preferable Practices and Purchasing Policy:** In 2014, Arlington County developed the Environmentally Preferable Practices & Purchasing Work Plan (EP4) to serve as a dynamic administrative guide for County staff to document and encourage greener purchasing practices. Efforts will focus on re-engaging with and expanding the EP4 policy. This initiative requires the hiring of one additional staff member in the Department of Management and Finance.
- **Reusable Packaging at Food Service Establishments:** This strategy supports programs and policies that facilitate the use of washable and reusable takeout containers at food service establishments. There will be minimal impact to the diversion rate through this initiative.
- **Incorporate Zero Waste Principles in County and Arlington Public School (APS) Operations:** Explore opportunities to incorporate zero waste principles into County and APS infrastructure and operations. This may include deconstruction of County facilities to facilitate material reuse and recycling at end-of-life, installation of water bottle refilling stations, composting programs at community gardens, and systems to capture and reuse rainwater.

Long Term (2024-2038)



Initiative	Diversion Impact	Est. GHG Impacts (MTCO ₂ e)	Cost Impact
Reuse-Repair Fairs	0.3% - 0.5%	-500 ↓	\$162 - 198 k
Zero Waste Special Events	0.1% - 0.2%	-500 ↓	\$42 - 53 k
Online Zero Waste Tracking Dashboard	0.0% - 0.1%	-2,000 ↓	\$18 - 22 k
Equipment Sharing Program	0.0% - 0.0%	-300 ↓	\$72 - 88 k
EP4 Policy	0.0% - 0.0%	-3,400 ↓	\$1.7 - 3.5 M
Reusable Packaging at Food Service Establishments	0.1% - 0.2%	-200 ↓	\$0 k
Incorporate Zero Waste Principles Throughout County and APS Operations	0.1% - 0.2%		\$90 - 180 k
Cumulative Long Term Diversion	~5%		

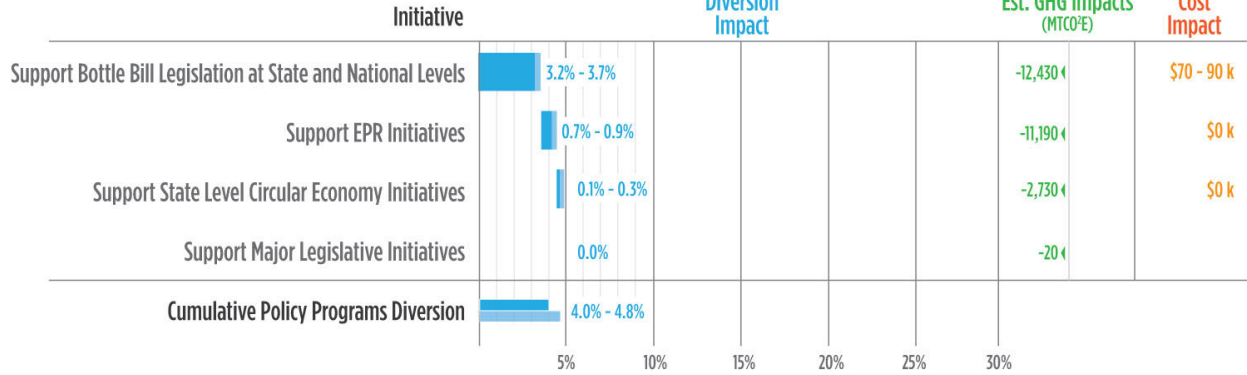
Policy Programs

The following initiatives represent areas where the County lacks direct control over implementation and requires actions at the state and/or federal levels. Advocacy of these policy initiatives will begin upon adoption of the SWMP and continue throughout the planning period or until applicable policies are enacted.

- Support Bottle Bill Legislation:** Support bottle bill legislation at the state or federal levels to increase the diversion of glass. There are no added costs associated with pursuing this initiative and it will be supported with existing staff. If bottle bill legislation is passed, the County may see an increase of 3.2 to 3.7 percent on the diversion rate.
- Support Extended Producer Responsibility Legislation:** Support extended producer responsibility (EPR) for materials that are hard to manage including batteries, paint, mattresses, carpets/rugs, tires, etc. Extended Producer Responsibility shifts the financial burden of end-of-life disposal for hard to manage materials back to the producer and away from individuals or municipalities. There are no added costs associated with pursuing this initiative. EPR legislation has the potential to increase the County’s diversion rate by 0.7 to 0.9 percent.
- State Level Circular Economy Initiatives:** Advocate for state-level circular economy initiatives. A circular economy is a model of production and consumption which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible and only disposing of a product or material when it can no longer be used. If adopted, these initiatives have the potential to increase the diversion rate by 0.1 to 0.3 percent.
- Other Major Waste Diversion Legislative Initiatives:** This serves as a catchall for emerging and potential waste diversion initiatives and technologies as they develop through the life of

this plan. There are no anticipated costs other than existing staff support. The nature of this category makes it near impossible to calculate possible impacts to the diversion rate.

Policy Programs (2024-2038)





1.0 INTRODUCTION

SUMMARY

The Arlington County Solid Waste Management Plan (SWMP) is Arlington County's planning document that summarizes the County's solid waste management activities and options. The existing SWMP was adopted in June 2004. This new plan includes a strategy for solid waste management activities in Arlington County for the next 20 years (2024-2044).

On August 1, 2001, the Commonwealth of Virginia promulgated regulations for solid waste management planning (9 VAC 20-130-10, et seq.). Section 9 VAC 20-130-110 states the following:

“Each solid waste planning unit in the Commonwealth shall develop and maintain a solid waste management plan or amend an existing solid waste management plan and submit it for approval in accordance with [9 VAC 20-130-10, et seq.] ...”

Arlington County has prepared its comprehensive solid waste management plan for submission to the Virginia Department of Environmental Quality (DEQ) in accordance with the terms of the planning regulations. The plan addresses the County's solid waste management needs for the next 20 years and describes the County's plans for continuing to meet the State's 25 percent recycling mandate.

The County's SWMP builds on previous planning efforts. It prescribes methods for developing efficient, economically feasible, and technically and environmentally sound waste management programs for the County. The SWMP is intended to serve as a management tool for Arlington County. Portions of the plan discuss joint efforts among Arlington County, neighboring jurisdictions, and private industry in public/private partnerships. In particular, the disposal method presented for both Arlington County and the City of Alexandria includes the Waste-to-Energy (WTE) Facility operated by Reworld (formerly known as Covanta Energy) and the ash monofill operated by Fairfax County. The Plan also establishes voluntary goals to obtain zero waste by 2038. The initiatives described in this Plan to achieve zero waste are considered voluntary and outside of the requirements by the State. They will be implemented based on budget and resource allocations of the Arlington County Board (Board).

GOALS

This SWMP is intended to comply with the Code of Virginia (Section 10.1-1411) and Virginia's solid waste management planning regulations (9 VAC 20-130-10, et seq.), which gave local governments statutory authority, and regulatory responsibility and accountability, to plan for the management of all types of non-hazardous solid waste.

The County has identified a set of goals for the SWMP, based on the mandatory objectives identified in 9 VAC 20-130-120, as follows:

- Employ a comprehensive solid waste management system that considers the Commonwealth's hierarchy.
- Ensure that the County implements a strong recycling program and that the County recycle at a rate that, at a minimum, meets the Commonwealth's recycling goals.
- Carefully evaluate the waste management needs of the county for the next 20 years and identify actions to be taken to meet those needs.

In addition to the goals for meeting the SWMP requirements put forth by the Virginia DEQ, including the goal of a 25 percent recycling rate, the County has established a set of voluntary goals for the initial 14-year period in order to achieve 90 percent waste diversion by 2038. The County will strive to meet these voluntary goals and objectives as resources are available and as funding is allocated by the County Board. **Appendix A** includes a list of acronyms contained in this plan.

PLAN ADOPTION

The Arlington County Board received the 2024 SWMP on [Date TBA], for consideration and discussion. On [Date TBA], the County Board of Arlington County adopted the SWMP and approved its submission to the Virginia DEQ. A copy of the resolution is provided in **Appendix B**.



2.0 POPULATION PROJECTIONS AND WASTE QUANTITIES

DESCRIPTION OF THE PLAN AREA

Arlington County is an urban county of 25.8 square miles. It is one of 24 jurisdictions that comprise the Metropolitan Washington Council of Governments as shown in **Exhibit 1**. Arlington County is separated from the District of Columbia by the Potomac River, which forms the County’s northern and eastern boundaries. The highest point in the County is 461 feet above sea level and the shore of the Potomac River is essentially at sea level. The County has no incorporated towns or cities.

Exhibit 1. Regional Map

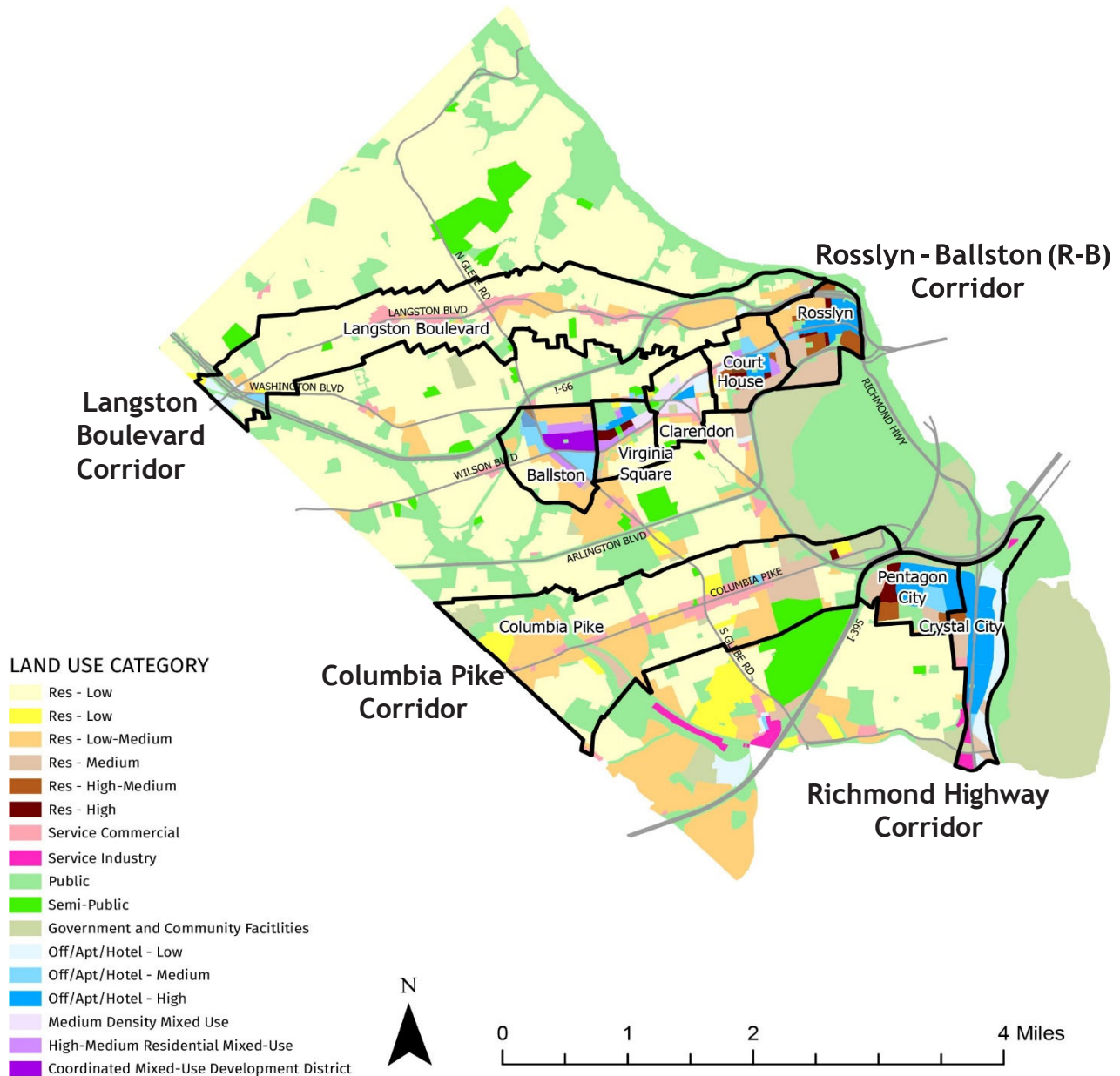


Source: Washington Council of Governments,
<https://www.mwcog.org/about-us/cog-and-our-region/local-governments/>

2.0 Population Projections and Waste Quantities

Arlington County has four major development corridors including the Rosslyn-Ballston, Columbia Pike, Richmond Highway, and Langston Boulevard. These corridors are shown on the map in **Exhibit 2**.

Exhibit 2. General Land Use Plan and Planning Corridors Map



Source: Arlington County Department of Community, Planning, Housing, and Development, Arlington County Profile 2024

Arlington County's General Land Use Plan is the primary policy guide for future development in the County. The General Land Use Plan was first adopted by the County Board in 1961 as one of the first four elements of the County's Comprehensive Plan. Amended over time, the General Land Use Plan reflects the County's smart growth principles, concentrating future development along its transit

corridors to increase the benefits of its multi-modal transportation options and existing infrastructure. The GLUP also endeavors to balance Arlington’s range of land uses with its cultural and natural resources. Through its commitment to careful and thoughtful community planning, along with its adherence to its established policies, Arlington is recognized as a world-class community

POPULATION DATA AND DEMOGRAPHICS

Arlington’s population slightly declined in 2021 due to impacts from the COVID-19 pandemic. In the past two decades, the population of Arlington County has grown rapidly. In 2010, the County had a population of 207,700, about 9.6 percent greater than 2000 levels. In 2020, the population had increased to 231,200, an increase of about 14.9 percent above 2010 levels. **Table 1** presents the County’s population in Calendar Year 2020, as well as population projections for 2025 through 2045. The population is projected to increase by 25 percent from 2020 to 2045 when the population is estimated to climb to 298,000. Continued population growth in both the single- and multi-family residential housing will continue to put additional pressure on the solid waste management systems servicing these sectors. This will be particularly notable if fully or hybrid working-from-home schedules continues.

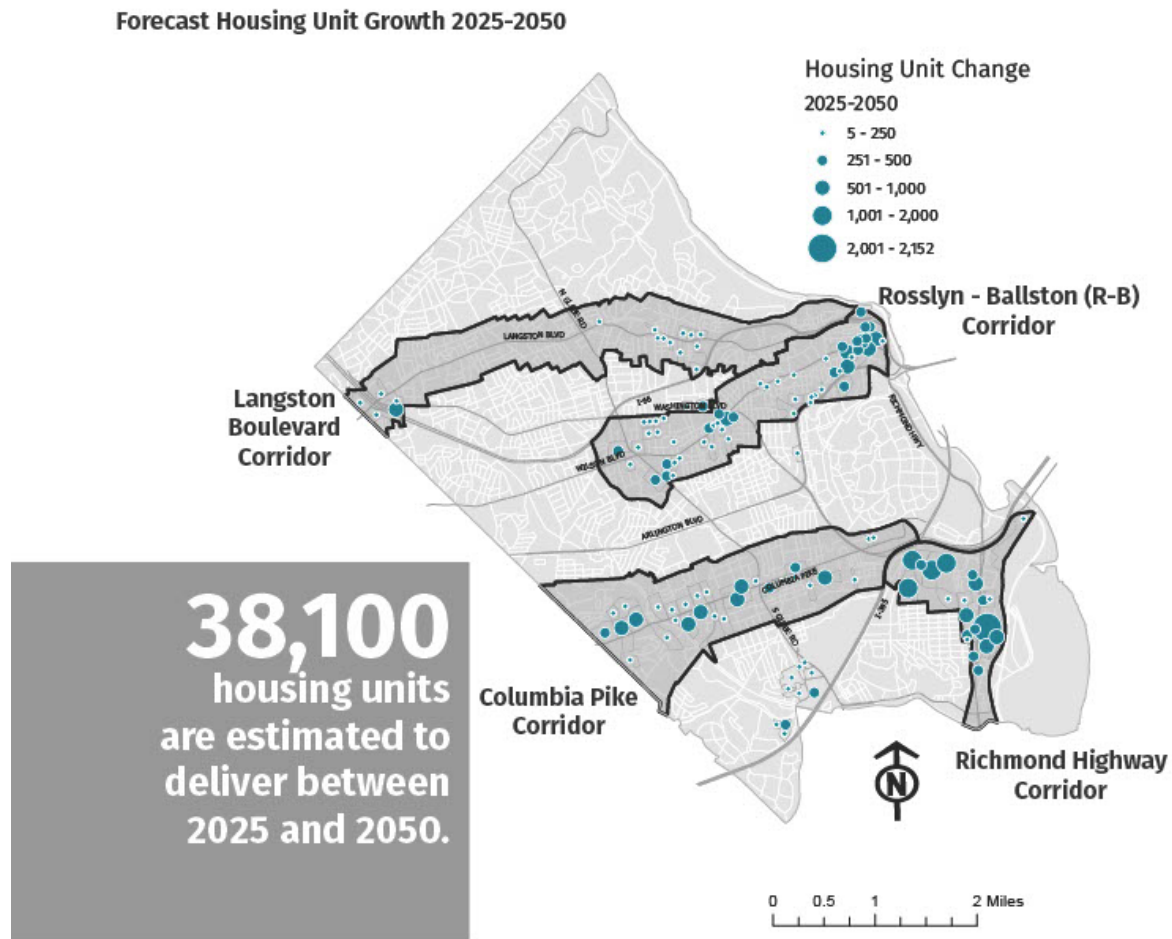
Table 1. Arlington County Population Projections 2020 through 2045

Year	2020	2025	2030	2035	2040	2045
Population	238,643	245,800	260,200	272,900	285,200	298,000

Source: Department of Community Planning, Housing, and Development, Profile 2023

The map in **Exhibit 3** shows the household density in the various areas of the County. Most of the expected growth is expected to occur in the four development corridors including Rosslyn-Ballston, Columbia Pike, Richmond Highway, and Langston Boulevard corridor.

Exhibit 3. Population Growth by Corridor



Source: Arlington County Department of Community, Planning, Housing, and Development, Arlington County Profile 2024

The number of households in Arlington County in Calendar Year 2023 was 114,300, or 2.12 residents per household. Of these dwellings, approximately 54.4 percent live in non-family households, and the remaining 45.6 percent live in family households. The number of households is projected to increase to 146,900, or 33.7 percent, from 2020 to 2045. It is expected that residential growth will be particularly concentrated in the multi-family sector creating additional pressure on solid waste services to those properties. **Table 2** shows actual household data for the year 2020, with projections through 2045.

Table 2. Arlington County Household Projections 2020 through 2045

Year	2020	2025	2030	2035	2040	2045
Number of Households	109,912	118,200	126,200	133,300	140,000	146,900

Source: Department of Community Planning, Housing, and Development, Profile 2023

2.0 Population Projections and Waste Quantities

In 2024, it is estimated there are 221,400 jobs in the County, including both wage and salary jobs and self-employed jobs. The number of jobs in the County decreased slightly in the years following the COVID-19 pandemic. However, the number of jobs in the County is expected to increase 24 percent during the planning period between to 2045. **Table 3** shows actual employment data for the year 2020 with projections through 2045.

Table 3. Arlington County Jobs Projections 2020 through 2045

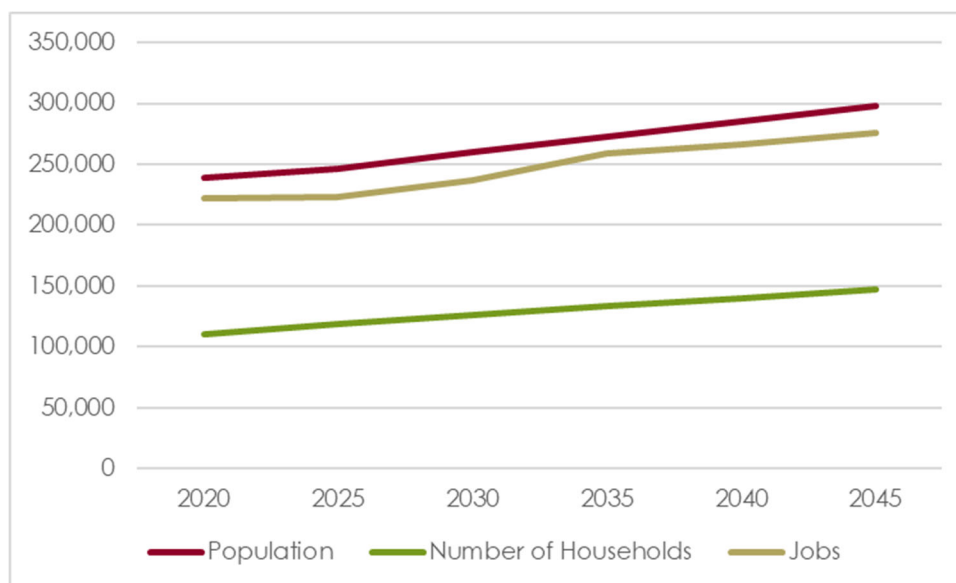
Year	2020	2025	2030	2035	2040	2045
Number of Jobs	221,600	223,200	236,700	259,200	266,400	275,300

Source: *Growth Trends: Cooperative Forecasting in Metropolitan Washington, MWCOG, July 15, 2022*

Development activity in the County during 2023 was dominated by office with over two million in gross floor area (GFA) completed. Concurrently, it is estimated that 21 percent of Arlington’s population works at home in 2023, which is a seven percent increase over the previous year.

As discussed above, individual demographic indicators for population, households, and jobs for Arlington County are expected to show strong growth during the planning period as illustrated graphically in **Figure 1**.

Figure 1. Arlington County Growth Trends



Sources: *Department of Community Planning, Housing, and Development, Profile 2023 (population and households); Growth Trends: Cooperative Forecasting in Metropolitan Washington, MWCOG, July 15, 2022 (jobs)*

WASTE DISPOSAL AND MATERIALS RECOVERED

The County annually tracks the amount of MSW recovered and disposed in both the residential and commercial/institutional generating sectors. Data from the residential sector is tracked and provided by the County’s contracted hauler. Commercial and institutional waste disposal and recovery quantities are reported to the County by private haulers. A total of 197,000 tons of MSW was generated by residential, commercial, and institutional generating sectors in 2021. This data is reported to DEQ as part of the State’s required annual reporting process. The County calculates an

annual diversion rate by taking the quantity of material recovered divided by the total amount of waste generated. **Table 4** presents the past five years of annual waste disposal and recovery tonnages along with the calculated diversion rate.

Table 4. Historical Waste Disposal and Material Recovery

Waste Generating Sector	2017	2018	2019	2020	2021
Residential	32,231	31,010	29,464	32,843	26,111
Commercial ¹	59,392	60,382	58,657	58,710	66,427
Institutional ²	9,455	10,626	11,453	7,874	11,311
Waste Disposed - MSW (tons)	101,078	102,018	99,574	99,427	103,849
Materials Recovered - MSW (tons)	52,998	58,931	84,182	85,625	93,551
TOTAL MSW Generation (tons)	154,076	160,949	183,756	185,052	197,400
Diversion Rate	34.4%	36.6%	45.8%	46.3%	47.4%

Source: Virginia DEQ Solid Waste Report (2017-2021)

¹ Commercial waste includes waste generated at commercial properties and multi-family residential properties.

² Institutional waste includes waste generated at Marymount University, Mason Square (George Mason University), and Virginal Hospital Center.

SOLID WASTE GENERATION PROJECTIONS

The County's solid waste generation rate depends on various factors, including population, number of households, employment, commercial activities, commercial space square footage, and other factors. While these factors are significant contributors to the County's waste generation, other factors such as the economy impact waste generation. During times of economic growth, consumption increases. This leads to greater quantities of products and packaging being disposed. Similarly, when the economy slows, waste generation decreases. Both population and the number of jobs in the County are expected to increase about 24 percent from 2020 to 2045. A projected per capita waste generation rate was used to estimate the total amount of solid waste generated annually at five-year increments over the planning period. The per capita waste generation rate is projected to decline over the planning period and reach 4.0 pounds per person per day in 2040 to account for the comprehensive impact of waste reduction measures implemented over the planning period. In 2045, it is estimated the County will generate 217,540 tons of waste. **Table 5** presents the waste generation forecast for the planning period.

Table 5. Waste Generation Forecast for the Planning Period¹

Waste Generation	2025	2030	2035	2040	2045
County Population	245,800	260,200	272,900	285,200	298,000
Per Capita Waste Generation (lbs/person/day)	4.6	4.2	4.1	4.0	4.0
TOTAL MSW Generation (tons)	207,000	200,295	203,290	208,590	217,540

Additional recovery quantities by material type are included in **Appendix C**.

MATERIAL COMPOSITION

Understanding the composition of the disposed solid waste stream by generating sector is essential for sound planning. Waste composition data is invaluable for projecting future needs and requirements for waste reduction, reuse, recycling, disposal and other integrated solid waste management programs and infrastructure. Since municipal solid waste (MSW) not diverted for recycling or composting in Arlington County is disposed at the WTE Facility, composition data is useful for estimating the heat content and subsequent energy value of the disposed waste stream.

The amount of waste generated and disposed varies among the different generating sectors in the County, including single family residential, multi-family residential and commercial/institutional. The single family residential generating sector receives solid waste services (i.e. curbside, drop-off, etc.) directly from the County. The multi-family residential and commercial/institutional generating sectors receive solid waste services from private entities authorized to operate in the County. The multi-family generating sector, where about 71 percent of the County's population live, dispose approximately 64,500 tons of waste annually. This comprises about 62 percent of the total amount of MSW disposed in the County. The greatest opportunities for waste prevention and diversion are in the multi-family sector. With the County's limited control over waste management in the multi-family sector, the County will need to be creative in their approach to education and outreach, organics management, and the other initiatives to significantly reduce waste disposal in this sector. **Table 6** summarizes the waste quantities disposed by generating sector (2021).

¹ Arlington County is expected to have enough disposal capacity over the planning period even if the per capita waste generation rate remains unchanged from 2025 levels.

Table 6. Summary of Waste Disposal by Generating Sector (2021)

Generating Sector	Quantity Disposed (tons)	Percent of Total Disposed
Single Family Residential	26,090	25.1%
Multi-Family Residential	64,462	62.1%
Commercial/ Institutional	13,276	12.8%
TOTAL	103,828	100%

For many years the County has completed quarterly audits of the single-family residential MSW stream. More recently, the County has expanded their audit program to characterize the disposed material stream from the multi-family residential and commercial sectors. Data from these audits is used by the County to measure the success of existing waste diversion programs and allows the County to develop public education and outreach material tailored towards specific issues or materials. Waste audits conducted in 2022 analyzed all three waste generating sectors in the County.

This comprehensive information coupled with the County's robust tracking of material quantities, including quantities collected by the private sector, provides important information on the management of materials in Arlington County. Waste materials are grouped into four (4) material categories and each specific material is assigned one of the four categories. These categories include the following:

- **Recyclable** – Materials that are accepted for recycling as part of the County's recycling program.
- **Compostable** – Organic materials that are accepted for composting as part of the County's organics management program.
- **Divertible** – Materials that can be diverted from disposal through special curbside collections or drop-off at County facilities. This category also includes materials that could potentially be diverted through expansion of existing programs or services.
- **Trash** – Materials that are not accepted as part of the County's recycling, organics management, and/or special collection or drop-off diversion programs.

Composition profiles of the disposed waste stream for the single-family residential (**Figure 2**), multi-family residential (**Figure 3**)², and commercial (**Figure 4**) generating sectors are provided in this section. Detailed material profiles for each of the generating sectors is included in **Appendix D**.

² Multi-family waste characterization data is based on analysis of one property for one season in Arlington County (2022); data may not represent the entire disposed multi-family waste stream.

Figure 2. Single-Family Residential Disposed Materials Composition

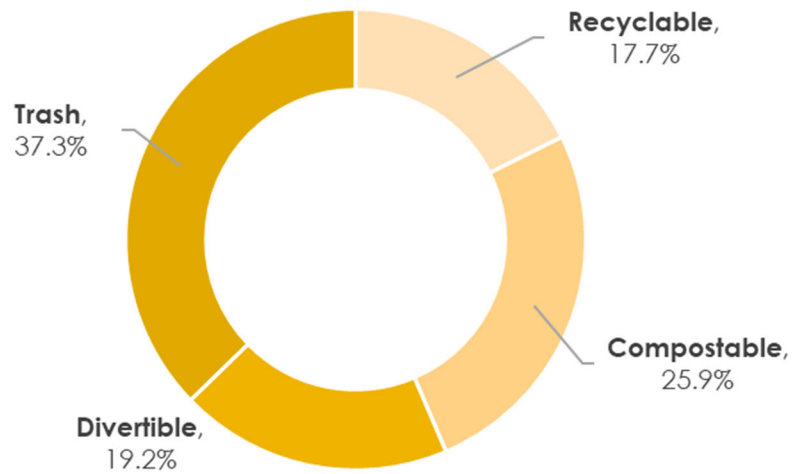


Figure 3. Multi-Family Residential Disposed Material Composition

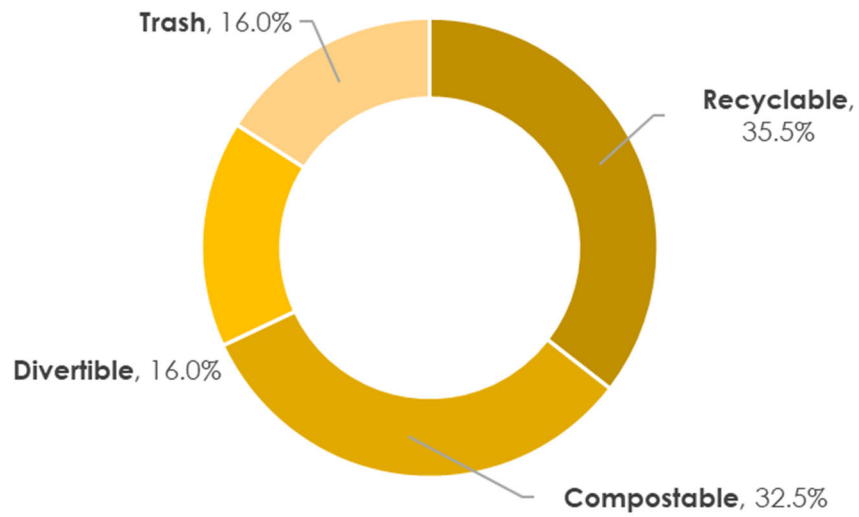
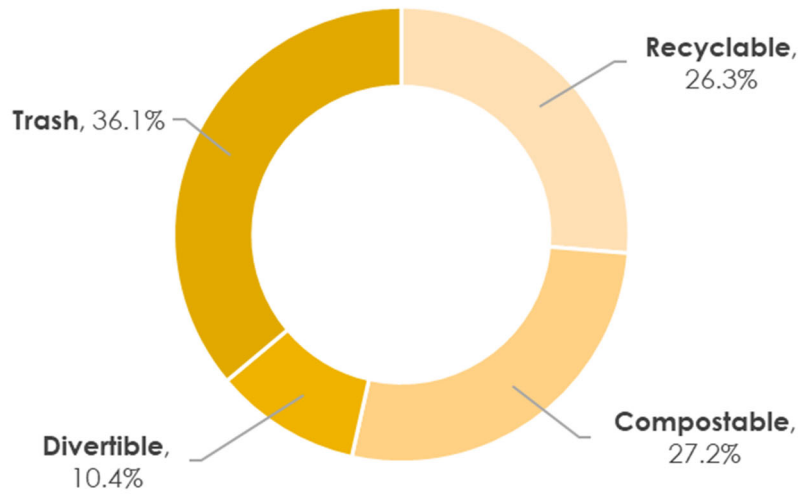


Figure 4. Commercial Disposed Materials Composition





3.0 CURRENT SYSTEM

The County provides a comprehensive solid waste system that serves the residents of the County. The County offers a number of programs and services that facilitate sustainable waste management that protects public health and the environment. Waste materials generated in the County are processed or disposed at various facilities throughout the Mid-Atlantic region. No facilities that accept Arlington County generated materials for disposal or processing are located in Arlington County. This makes the County reliant on the zoning and land use regulations in other jurisdictions to make the Arlington solid waste system work. The programs reflect the County's commitment to sustainability, cost-effectiveness, and providing a high-level of service to residents and stakeholders. This section describes the County's current waste management system.

INFRASTRUCTURE

Contracted Infrastructure

Disposal

There are no waste disposal or processing facilities located in Arlington County. The County relies on the Reworld Alexandria/ Arlington WTE Facility located in the City of Alexandria to meet the disposal needs for waste collected by the County. In the 1980s Arlington County and the City of Alexandria partnered to develop this facility locally. The facility is currently owned by Reworld and operates as a merchant facility. The County has an agreement to dispose MSW collected as part of the County's single-family residential collection program at this facility.



This 975 tons-per-day WTE Facility, plays a key role in disposal of the County's MSW since it began operations in 1988. The plant processes MSW and converts it into steam, which is then used to generate electricity for sale to Dominion Virginia Power. The WTE Facility has a capacity to process over 350,000 tons of waste annually and produces approximately 22 megawatts of energy annually 24-hours-a-day seven-days-per-week. Currently, the County pays a tip fee for every ton of waste delivered to the facility. However, the tip fee will decrease to \$0 per year in 2025 as part of the facility management agreement the County has with the City of Alexandria and Reworld.

Many updates and upgrades have been made to the advanced pollution control equipment at the WTE Facility over the years. These updates help the facility comply with the stringent pollution requirements of the national and state regulations. Most (99.9 percent) emissions from the facility include water vapor, carbon dioxide, nitrogen, and oxygen. Waste volume is decreased by 90 percent and the resultant ash is disposed in the ash monofill located at the I-95 Landfill Complex in Fairfax County. Approximately, 11,600 tons of metal are recovered annually from the ash.

Arlington County is obligated under the existing waste disposal and service agreement to dispose of MSW at the WTE Facility. For fiscal year 2023, the County and City of Alexandria may dispose between 42,000 and 62,000 tons of MSW at the WTE Facility. In calendar year 2020, the County disposed about 31,400 tons of MSW at the WTE Facility, which included MSW from single-family residential properties and County facilities (including Arlington Public Schools). The WTE Facility operations lease with Reworld has been extended through 2038. At that time WTE Facility operations returns to the City of Alexandria and Arlington County. The County considers WTE to be the preferred disposal option for waste that is not diverted for recycling or composting. WTE provides for local disposal, creation of renewable energy, significant waste volume reduction, and additional opportunities for recycling of metal from the ash. Currently, usage of the WTE Facility beyond 2038 is unknown, but the County and City of Alexandria will explore extending the service life of the facility if practical.

Diversion

The County contracts with a number of private entities to provide waste diversion services to residents in the County. The County expects continued competition to provide these services will exist over the planning period, so that these services will continue meet the County's needs for waste diversion and solid waste management. A summary of these services and facilities are provided in this section:

- **Recyclable Material Processing** - There are no material recovery facilities in Arlington County. Recyclable materials collected as part of the County collection programs, both curbside and drop-off, are direct hauled to the Merrifield Transfer Station in Fairfax County, which is approximately 10 miles from the County. Recyclable materials are consolidated at the transfer station and loaded into large 50 to 70-foot transfer trailers for transport to a material recovery facility (MRF) located about 30 miles northwest in Sterling, VA. This facility processes single-stream recyclable materials.
- **Organic Material Processing and Composting** - The County's source separated organic waste stream (yard waste and food waste) is processed at an organics processing and composting facility in Manassas. In 2021, the County transported 7,550 tons of materials to the facility for composting. The County's tip fee is \$38 per ton. Finished compost products are purchased by Arlington County for distribution to residents, which makes the County's organics management program a truly closed-loop system.
- **Electronic Waste Recycling** - The County contracts with a private entity in Chantilly for the processing and management of electronic materials collected in the County. Electronic materials are strategically and securely dismantled. Toxic substances are properly disposed and the metal, plastic, glass, and circuitry components of the electronics are recycled or managed in the United States. The facility is R2 certified, which is a Responsible Recycling standard for electronics recyclers set by the Sustainable Electronics Recycling International (SERI). These standards require facilities to meet requirements for a number of criteria, including prioritizing the recycling and recovery of materials and the management of materials domestically.

In 2021, the County collected about 110,200 pounds of electronic materials through the semi-annual ECARE event and through the County's household hazardous materials management program. The County receives a rebate of 0.4 cents per pound mixed recyclable materials obtained from the electronic materials delivered. The County also receives a larger rebate for higher-functioning County equipment that is reusable. The County pays a fee for electronic items containing cathode ray tubes (CRTs). That fee is recovered through charges residents pay to drop-off CRT container items.

- **Household Hazardous Materials** - The County contracts for the processing and management of HHM. The recycling and recovery of these materials is prioritized when possible. Some types of ignitable, toxic, and corrosive materials cannot be recycled and are instead managed via incineration or in a hazardous waste landfill. In 2021, the County collected 403,816 pounds of household hazardous materials through the semi-annual ECare event and HHM collection program. This program costs the County about \$350,000 annually for the management of materials and staff resources.
- **Scrap Metal** - Scrap metal collected through the County's scrap metal curbside collection and drop-off recycling program is transported to a contractor in Capital Heights, Maryland. In 2020, the County collected 235 tons of scrap metal through these diversion programs. The contractor provides the County with a 50 percent rebate on the market value of the metal. In 2022, the County's rebate amounted to about \$143 per ton.
- **Glass Containers** - Glass containers were phased out of the County's residential curbside single-stream recycling program in 2019. In phasing out curbside collection of glass, the County established a network of sites throughout the County for residents to drop-off glass bottles and jars. Glass collected through the program is processed by a contractor in Pennsylvania. Glass from each drop-off site is consolidated at the Trades Center where the contractor collects the material for transport to its facility in Pennsylvania. The County receives a rebate of \$15 per ton for glass collected, which includes the costs for hauling the material. In 2020, the County's glass collection program collected 1,740 tons of glass containers for recycling

Collection

The County contracts with a private hauler to provide curbside trash, recycling, and organics collection services to roughly 33,200 single-family and duplex households in the County. The County has exercised the first of two one-year renewal options, and expects to exercise the second. In 2025 when those renewal options end, the County expects changes in pricing for residential collection services that may also include changes in the services provided.

County-Owned Infrastructure

Diversion

- **Earth Products Recycling Yard** - The County's Earth Products Recycling Yard (EPY) is located at the County's Trades Center at 2700 South Taylor Street. The facility serves as a residential drop-off site for food waste, inert materials, metals, and electronics. These materials are processed at the site to produce products for use in County projects.

The County has a number of pieces of equipment in operation at this facility to process the materials collected. This equipment includes a rock crusher, tub grinder, trommel screen, dirt shaker, and in-vessel composter. Much of this equipment is diesel powered, so the County

has taken some actions to offset emissions from the facility. This includes planting 400 trees onsite and making plans to convert some diesel-powered equipment to electric.

- **Drop-Off Recycling** - Arlington County owns and operates two recycling drop-off sites at the Trades Center and Quincy Park. These sites provide residential drop-off recycling collection services for mixed recyclable materials (plastic containers, metal cans, and mixed paper), cardboard, and glass containers. The centers have specialized containers for residents to place their materials for recycling.
- **Glass Drop-Off Recycling** - In 2019, the County removed glass from the list of acceptable materials collected through the County's residential curbside collection program. To provide residents with glass recycling services, the County established a network of five sites whereby residents can drop-off glass for recycling. Two of these sites, the Trades Center and Quincy Park, are part of the County's larger recycling drop-off program (discussed above). The remaining three sites, located at the Aurora Hills Community Center, Lee Community Center, and Madison Community Center, are only for glass. The five glass drop-off sites put every resident in the County within 2.25 miles of glass recycling services.
- **Household Hazardous Materials and Electronics Recycling Drop-Off** - The County has established an HHM and electronics drop-off site at the Water Pollution Control Plant on S. Glebe Road. This facility services residents and provides them an opportunity to drop-off HHM and electronics as needed. The facility is open every Saturday or weekdays by appointment. In fiscal year 2021, the facility serviced about 8,600 residents and collected 154 tons of HHM and 41 tons of electronic waste.

SERVICES

Single Family Residential

The Arlington County Solid Waste Bureau (SWB), within the Department of Environmental Services (DES), is responsible for providing weekly curbside refuse, recycling, and organics collection to 32,211 single-family and duplex residences in the County. These collection services are provided five-days per week.

Municipal Solid Waste

Refuse collection is semi-automated utilizing 96- or 64-gallon carts that are provided to each residence by the County. In 2009, the County made the decision to no longer issue 96-gallon refuse carts and all new cart requests were provided a 64-gallon cart. Residents may also use their own containers or plastic bags to place MSW curbside for collection. There are no limits to the amount of MSW collected from each household per collection day. All single-family, duplex, and County government refuse is collected by a single private hauler under contract to the County. Individual residents may not opt out of the County's curbside collection program and they may not select their own hauler to collect MSW.

Recyclable Materials

The County Recycling Code (Article 10-31) requires that the responsible party of each dwelling that is eligible for the County curbside collection program must establish a system for the separation of recyclable materials from trash. The County provides each household serviced by the County's curbside program with a 64-gallon blue cart for the collection of single-stream recyclable materials. Residents are allowed to place additional materials for recycling in their own personal containers or in boxes next to the recycling cart. Recyclable materials placed in plastic bags are collected as trash,

not recycling. Curbside recycling collection is conducted on the same day as trash collection by the same contractor that collects trash. Materials accepted for recycling in the curbside program include:

- Corrugated cardboard and mixed paper
- Plastic containers
- Metal cans

Organics

In addition to curbside trash and recycling collection services, the County provides weekly collection of organic materials. Organic materials are collected via 64-gallon green carts that have been issued to every household receiving County curbside solid waste services. Materials collected through the organics program include yard waste, such as leaves, grass clippings, and branches, and food waste. Each household was issued a small “kitchen caddy” and a roll of compostable bags when the food waste collection program was started in September 2021. Food waste can be placed in the organics cart loose or contained in a certified compostable plastic bag.

Special Collections

The County provides additional curbside services for single-family residential households that are seasonal or for large quantities, or for materials that cannot be placed in either the trash, recycling, or organics carts. Special collections are detailed in **Table 7**.

Table 7. Special Collection Programs

Material	Program Description
Bulky Waste	Collected via contracted crews as part of the County's weekly trash collection service provided by the contractor.
Brush	Brush is collected with County equipment and staff from residents that schedule a collection (online or via the Customer Service Center) in advance.
Leaves	Leaves are collected with a vacuum truck with County equipment and staff. Leaf vacuuming typically occurs in November and December each year with collections being provided two times each season. Residents rake leaves to the curb for vacuuming. No bagged leaves are collected through this program and this program does not require advance scheduling.
Christmas Trees	The County collects Christmas trees in late December and January with County equipment and staff.
On-Call Collections	Residents can schedule in advance the curbside collection of scrap metal, white goods, car batteries, and electronics. These items are collected with County equipment and staff. A fee is charged to collect some items requiring special handling (i.e. appliances and Freon containing electronics). Currently, the fee is \$20.00 for the first item and \$10.00 for each additional item. The fee is added to the resident's quarterly utility bill.

Some items are not acceptable for disposal, including explosives, liquids (including liquid paints),

rocks, soil, sand, bricks, masonry block, concrete, hazardous wastes, unbundled lumber, contractor building materials, asphalt, ceramic tile, fire extinguishers, helium, propane, or other pressurized tanks. The County reserves the right to refuse collection of material deemed to be unsafe for staff or contractor workers to pick up or materials that may be rejected for disposal at the Reworld Alexandria/Arlington WTE Facility.

The County also provides special services for the carts issued to each household. These services include repair and replacement of carts as needed and washing services at the Trades Center. All the services provided in this section are paid for by the Household Solid Waste Rate (HSWR), which is an annual fee, paid quarterly, leveraged on each single-family residence in the County. The HSWR for fiscal year 2024 is \$406.14, which is about 12- to-16 percent less than neighboring jurisdictions for more comprehensive solid waste services.

The County's solid waste program has personnel designated for contract oversight, route monitoring, and administrative support. These personnel are in the field and working in the office to monitor operations and respond to questions or issues. The County's QAlert system and Customer Contact Center provides residents with 24/7 access to interface with the County on solid waste service issues and requests. The County continuously evaluates its collection programs for efficiency and customer service quality.

Multi-Family Residential and Commercial

The County does not provide direct collection services to the multi-family and commercial generating sectors. Multi-family and commercial property owners or managers in Arlington County are responsible for securing solid waste and recycling collection services through a private hauler. In response to the State of Virginia's statutory requirement that communities achieve a 25 percent recycling rate, the County enacted a mandatory commercial and multi-family recycling ordinance in 1994 (County Code, Chapter 10, Article IV). The ordinance requires every business and multi-family residential property in the County to have a recycling program in place. This requires a recycling collection system separate from trash collection.

SWB staff supports waste management activities at commercial and multi-family properties by providing technical support for compliance requirements, site inspections, and administrative support. Site inspections occur at all properties on a regular basis including an annual or three-year inspection timeframe. Each commercial and multi-family property in the County pays an annual fee that supports compliance with the County's regulation. The fee applied to each entity is based on the size and type of facility. The County anticipates increasing staff resources to support waste management in the commercial and multi-family sectors in order to achieve zero waste.

County Facilities and Schools

The County has an extensive network of facilities that support and facilitate County operations and improve the community. This includes 41 school facilities that are part of Arlington Public Schools and about 63 other County facilities. The County contracts with a private waste hauler for providing collection services for trash and recycling to each of these facilities. Solid Waste Bureau (SWB) staff manage the contract. County facilities and schools are considered part of the County's commercial generating sector and are subject to the trash and recycling requirements for those properties as provided in the County Code. Each of these properties is inspected for compliance with these requirements like any other private business or apartment building.

Private Haulers

Private haulers provide essential and complementary solid waste services to the commercial and multi-family sectors in the County. Haulers servicing the County range in size from large corporate companies with hundreds of trucks to small family-owned businesses that have only a couple operating vehicles. To collect trash in the County, a hauler must be permitted. The permit process includes providing specific information on the services provided, disposal facilities utilized, and customers served in the County. It also requires the hauler to submit an annual \$150 permitting fee per vehicle used to collect waste in the County. As part of maintaining a hauler permit, the County requires each hauler to submit an annual report that includes material tonnages collected, including trash, recyclable materials, and organics. This information is needed to fulfill the County’s requirement for solid waste reporting to DEQ at part of Virginia Code, Section 10.1-1411.

In 2023, the County had 45 haulers licensed to collect trash in the County. Haulers may collect materials from one or two facilities or may service hundreds of properties in Arlington County. **Table 8** lists the haulers licensed in the County as of 2023.

Table 8. Licensed Haulers Servicing Arlington County (2023)

American Disposal Services	Capitol Services of VA, Inc.	Glenayr Apartments	Origin Baltimore Recycling	Six Nations Inc.
Arlington National Cemetery	Chapel Valley Landscape Co	Industrial Disposal Services	Patriot Disposal	Trash Away
Asplundh Tree Expert Company	Compost Crew	JLT Trucking, Inc.	redboxplus of Northern VA	United Rentals
Atlantic BioFuels	Concrete Protection & Restoration, Inc.	Joe's Trash Service	Republic Services of VA, LLC	Darling Ingredients
Ararity LLC	Dittmar Co	kmG Hauling Inc.	Restaurant Technologies	Washington & Lee Apartments
Barcroft Management Co	DMV Hauling Service, LLC	Lancaster Landscapes	RM Brokerage LLC DBA Ace Recycling	WB Waste Solutions LLC
Bartlett Tree Experts	Environmental Alternatives, Inc.	Lorco of Maryland	Safeguard Shredding	Waste Management - Manassas
Barton House Apartments - Sancus LLC	Function Enterprises, Inc.	Natural Upcycling	Selective Demolition, LLC	Waste Management - Sterling
Brandon Rushing Lawn & Garden Care	Georgetown Paper Stock of Rockville, Inc.	Olivo Trash Service, Inc.	Selective Hauling, LLC	Zero Waste Solutions

ENFORCEMENT

The SWB is responsible for enforcement of Chapter 10 (Trash, Recycling and Care of Premises) Articles I and IV of the Arlington County Code. The SWB will evaluate participation and progress towards the zero waste goals as the planning period progresses. If enforcement mechanisms are needed, then the SWB will evaluate and pursue additional enforcement strategies as allowed by state law. Strategies may include actions such as warnings, penalties or fines, flagging carts, and non-collection until issue is remedied.

ADDITIONAL MATERIALS

There are many types of materials generated in Arlington County that the County does not control or manage. These are materials that are not accepted as part of the County's existing program or service schedule nor does the County have facilities and equipment to process them. Management of these materials occurs by the private hauler. In these instances, the generator of the material often has a contract with a private entity for collection, hauling, and processing. This section includes descriptions of these materials and current management options. These materials are not managed by the County unless they are present in small quantities in the single-family residential waste stream. The SWB may evaluate opportunities to engage County agencies and the community for collaboration with key stakeholders managing these materials to confirm best practices of material management are utilized.

Clothing and Textiles

The County does not have a program specific to the management of clothing and textiles. The County relies on the private sector to provide opportunities for residents to recycle or reuse this material. Companies such as Goodwill Industries and Planet Aid have set-up collection containers on private properties, including grocery stores, shopping malls, and apartment buildings, for collecting clothing and textiles. Other entities such as Purple Heart and the Salvation Army request clothing donations through the mail. It is understood that materials collected from clothing collection containers are exported for reuse and recycling, although a small amount remains in the United States and are sold for reuse. Private companies report to the County the quantity of materials collected through their programs. In fiscal year 2021, these entities reported a total of 167 tons of textiles were recycled.

Plastic Bags and Film

The County does not have a program for the recovery and recycling of plastic film and bags. The County relies on the private sector to provide plastic film recovery services to residents in the County. Many grocery store chains, including Safeway, Giant, Mom's Organic Market, and others, provide plastic bag and film collection containers at their stores. This material is collected by those businesses and is not tracked by the County.

Construction and Demolition (C&D) Waste

Construction and demolition (C&D) wastes are generated from the construction and renovation of homes and buildings. This material also includes wastes resulting from other development activities, including land clearing and demolition of old buildings. Because the County is essentially built out, most construction of new space requires demolition of older structures.

The management of C&D waste generally occurs by the private sector, and recycling and disposal takes place outside the County. The Reworld Alexandria/Arlington WTE Facility prohibits the disposal of C&D waste. Although commercial haulers report tonnages to the County, neither the County nor the private waste companies keep data on the C&D composition. The County's Green Building Program provides incentives for C&D recycling.

Residents and businesses with C&D waste must contract with a private hauler for the removal and disposal of the materials. Residents may dispose of small amounts of select C&D materials, including bricks, masonry block, concrete, asphalt, sand, soil and sod, at the County's Earth Products Recycling Yard drop-off facility located at the Arlington Trades Center at 2700 S. Taylor Street.

C&D waste collected by a private hauler is brought to an appropriate facility for disposal outside the County. The inert materials collected through the County residential drop-off program are processed and reused in County construction projects.

The County requires that developers commit to recycling as much of their C&D waste as possible. In addition, the County has adopted the U.S. Green Building Council's green building rating system called Leadership in Energy and Environmental Design (LEED™), which is a voluntary, consensus-based national standard (based on a point rating system) for developing high-performance buildings. The LEED™ rating system allots points within six specific categories for environmentally beneficial building materials and design, in categories such as site location, water efficiency, energy and the atmosphere, materials and resources, and indoor environmental quality. All site plan applications (for buildings such as high-rises, office buildings, and town homes) in Arlington County are required to include a completed LEED™ scorecard.

Arlington County is committed to constructing public projects using the LEED™ green building rating system. Additionally, on a state-level the County anticipates promoting a minimum diversion requirement for construction and demolition projects and will explore options for adopting a policy on the county level. Such an effort may require contractors to recycle or divert from disposal a minimum percentage of total materials generated from construction and/or demolition projects.

Industrial Waste

According to the Virginia DEQ, industrial waste is any solid waste generated by manufacturing or industrial processes that is not regulated hazardous waste. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: electric power generation; agricultural chemicals; food and related products/byproducts; inorganic chemicals; iron and steel manufacturing; leather; nonferrous metals; organic chemicals; plastics and resins; pulp and paper; rubber; stone, glass, clay and concrete; textiles; transportation equipment; and water treatment.

The composition of industrial waste is generally industry-specific and depends on the industrial process. In Arlington County, industrial waste is generated mostly by light industry; there is no heavy industry in the County. Industrial waste produced inside the County includes waste coming from warehouses, distribution facilities, light assembly, and concrete from the Virginia Concrete Company, Inc. Industrial waste tonnages are not reported separately to the County. As a result, industrial waste tonnage generated is not known.

Within the County's current solid waste system, industrial waste is disposed as commercial MSW. A portion of the County's commercial waste is brought to the WTE Facility for disposal and combustion, while some of the waste is disposed of at facilities outside the County. At this time, the exact distribution of waste that is disposed of inside and outside the County is not known.

Regulated Medical Waste

Regulated medical waste (RMW) is generated by hospitals, clinics, medical facilities, doctor and dentist offices, and funeral homes operating in the County. This material includes blood and body fluids or items contaminated with these fluids, discarded vaccines, organs, tissues, body parts, and sharps (i.e., needles and syringes). Animal carcasses, body parts, bedding, and related wastes that have been intentionally infected with organisms likely to be pathogenic to healthy humans for purposes of research, production of biological materials, or any other reason, are regulated by the Virginia DEQ and are also classified as RMW. RMW tonnages are not reported to the County. As a result, RMW tonnage generated is not known.

The County does not have a separate program for diversion or special handling of medical waste generated at residences. This waste is assumed to be disposed through the residential curbside solid waste program. The RMW generated by dental offices, medical clinics, emergency medical services, and related facilities in the County is managed by private contractors and transported out of the County for processing and disposal.

Incinerator/Combustion Ash

Incinerator/combustion ash mainly includes inert materials following the combustion of MSW at the WTE Facility. The facility processes roughly 350,000 tons of waste annually from across the region. Incineration results in volume reduction of approximately 80 percent, producing about 70,000 tons of ash. Approximately 11,200 tons of metal is recovered from the ash annually for recycling. Ash from facility operations is tested monthly and the tests have shown it to be non-hazardous. Reworld contracts with Fairfax County for the collection and transport of ash from the WTE Facility to the I-95 Ash Monofill. Reworld, on behalf of Arlington County and the City of Alexandria, has studied options for the possible beneficial reuse of WTE Facility ash. To date markets limitations have prevented reuse.

Sewage Sludge

Sewage sludge includes solid, semisolid, and liquid residues removed during the treatment of municipal wastewater and domestic sewage. The County Water Pollution Control Plant (WPCP) treats sludge so that it can be land applied. Once treated, sludge is referred to as biosolids.

Biosolids generated from the treatment processes at the WPCP are transported off-site for land application. The County contracts with a private hauler for the transport and disposal of biosolids. The contracted hauler maintains the required permits for transport and disposal of biosolids and must submit regular reports to DEQ. Biosolids are land applied in the state of Virginia at approved agriculture and forestry sites. If logistics or inclement weather prevent the land application of biosolids, the material is temporarily stored or disposed at a permitted landfill. In 2023, more than 33,000 tons of biosolids were generated in the County.

The WPCP has undergone significant upgrades to the liquid treatment processes beginning in the mid-2000s that have provided for aggressive removal of nutrients and greatly reduced the potential for negative environmental impacts to the Chesapeake Bay. While previous WPCP upgrades have focused on liquid treatment, the County is now investing in new plant upgrades for the solids generated during the water reclamation process. Construction is anticipated to begin in 2026 and will result in a higher-quality biosolids product as well as generate Renewable Natural Gas, reducing the County's reliance on fossil fuels.

Tires

The generation of waste tires in the County is mainly from retail tire dealers and auto service shops that typically contract with a private entity for collection, processing, and recycling. The County does not operate a tire recycling program but allows residents to place tires curbside for collection as part of the bulky waste collection program. The County collects waste tire amounts from businesses in the County. For fiscal year 2020, about 950 tons of tires were recycled through private collection and processing programs. Tires generated from County owned and maintained vehicles are collected and recycled by a contractor. The County Equipment Division has a contract with a vendor to retread reusable tires casings.

White Goods

White goods are large appliances, such as stoves, washers, hot water heaters, and refrigerators. These materials are comprised primarily of ferrous metal (iron and steel) and contain smaller quantities of other metals (aluminum, copper, etc.). Recent trends show an increased use of plastic in white goods. White goods are generated by both the residential and commercial sectors in Arlington County. The County contracts with American Disposal Services to provide certified staff that extract refrigerants from the white goods to prevent the release of chlorofluorocarbons (CFCs) in the atmosphere.

White goods are collected from single-family residences curbside by requesting a special collection. Commercial and multi-family property owners/managers use private haulers to collect and process white goods from their properties. Additionally, private companies that sell appliances oftentimes remove old appliances for a fee when replacing them with new ones.

PUBLIC EDUCATION AND OUTREACH

Arlington County has a comprehensive public education and outreach program to continually inform residents of available solid waste programs and services, provide guidance on the proper use of each program and service, and educate residents about the environmental benefits of solid waste management. The County's public education and outreach program includes a number of different media to reach different demographic groups within the County. Key components of the County's public education and outreach program are summarized in this section:

- **County Website** - The County's website serves as a clearinghouse for all information on the County's solid waste management program and services provided. It includes detailed information on each program or service operated by the County and provides residents with instructions on how to use each program or service properly. The website also includes educational print and video resources to engage audiences in different ways. It provides interactive activities that allow residents to request material collections or cart repairs and includes a "where does it go" search for users to get quick information on how a specific material should be managed. The website is available 24/7 and is the primary way information is distributed to the community.
- **Social Media** – The County makes full-use of the suite of social media platforms available for distributing information and communicating with residents about programs and services. The SWB has Facebook, Instagram, and other social media accounts that are used provide targeted and tailored messages to residents.
- **Cart Hangers** - The County distributes quarterly cart hangers to all residents that receive the County's curbside solid waste management services. These cart hangers are an important educational tool that provides residents with timely information on program and service new items or schedule changes. For example, the spring cart hanger typically includes information on yard waste management tips whereas the hanger distributed in the fall provides information on the leaf collection program.
- **Customer Service Center and Staff** - The Customer Service Call Center provides County residents the ability to obtain information on SWB services 24/7 via phone. Customer services representatives staff the SWB Customer Service Call Center, which handles customer service requests for the SWB.
- **Rock N' Recycle** – This annual event is hosted by SWB staff where the entire Arlington community is invited to the Earth Products Recycling Yard to learn about solid waste

management in the County and see the equipment used to process the materials collected. This event is kid-friendly and kids are allowed to sit-in and touch the trucks used to collect solid waste in the County. SWB staff uses this event to educate attendees on the County’s solid waste program and how to use it properly. Typically, several hundred people attend this event, which is held annually.

- **Additional Outreach** – Staff within the SWB complete a number of other education and outreach efforts. These include staffing a table/booth at the Arlington County Fair, making presentations to students and civic/community groups in the County, producing TV and radio spots to discuss solid waste programs and services, and hosting America Recycles Day events.

The County will continue to operate these educational and outreach programs over the planning period.

PUBLIC/PRIVATE PARTNERSHIPS

Although the County is responsible for managing solid waste in a way that protects public health and the environment, the County relies on many private entities to facilitate that mission. The County anticipates that public/private partnerships to manage waste materials will continue to be an important part of the County’s solid waste system. Existing partners will continue to provide the material disposal, processing capacity, and services needed to manage solid waste generated in the County over the 20-year planning period. These partnerships are discussed in the infrastructure and services sections of this plan. A summary of these partnerships is included in **Table 9**.

Table 9. Current County Partnerships

Vendor	Service
American Disposal Services	<ul style="list-style-type: none"> • Residential curbside collection of trash, recyclable materials, and organics • Owner/operator of transfer facility in Manassas where recyclable materials are consolidated • Removal of Freon from white goods
CAP Glass	Glass hauling and processing
Reworld	Operator of the Reworld Alexandria/Arlington WTE Facility
Freestate Farms/Prince William County	Owner and operator of the Ball Ford Road Composting Facility where organic materials are processed and composted
Joseph A. Smith and Sons	Scrap metal processing
MXI Environmental Services	HHM processing
Securis	Electronics processing
WM Recycle America	Recyclable material processing and marketing
Zero Waste Solutions	Collection and hauling of waste and recyclable materials from County facilities (including Arlington Public Schools)

LITTER CONTROL PROGRAM

The County takes great pride in the cleanliness of the community. To facilitate a clean community, the County has developed a litter control program to enhance the appearance of the community and to protect the environment. The County's litter control program includes a number of components and activities that are summarized in this section.

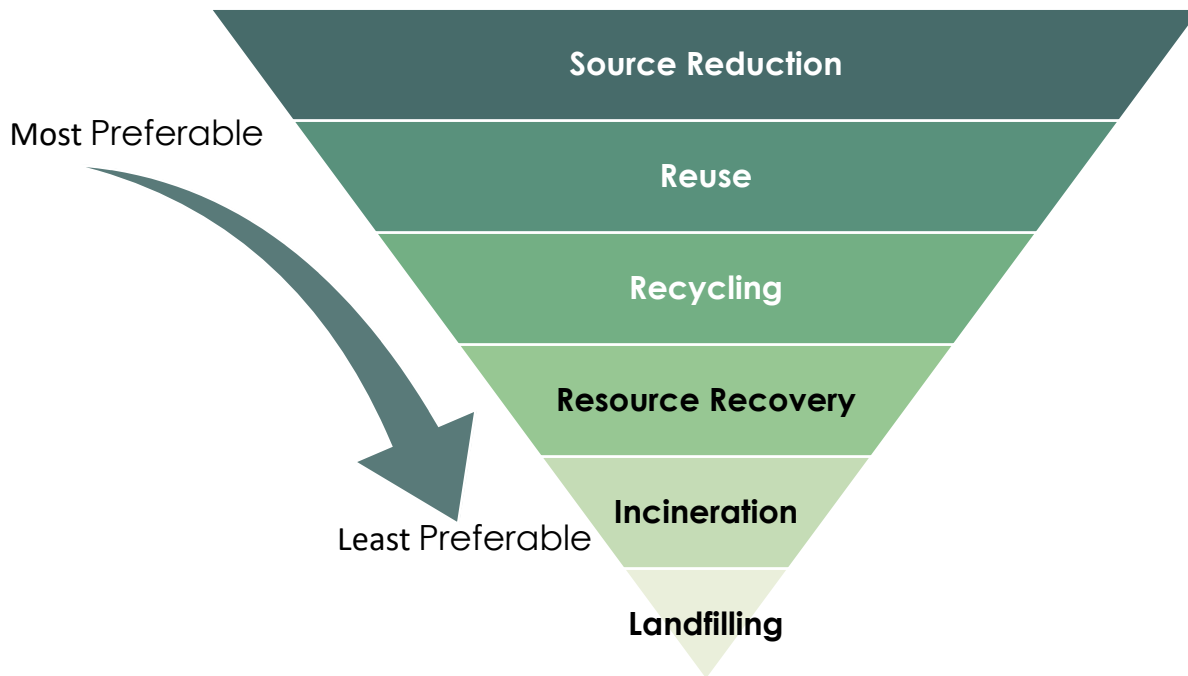
- **Adopt-A-Street** – This initiative allows individuals, families, or entities to adopt a street or block to keep clean. Participants in the Adopt-A-Street program agree to periodically remove litter and notify the County of unsafe or hazardous conditions.
- **Street Sweeping** – The County's street sweeping program focuses on removing pollutants and litter from streets before they wash into streams, such as the Potomac River and Chesapeake Bay. The County's street sweeping program includes both commercial and residential areas.
- **EcoAction Arlington** – Arlington County partners with and funds a local non-profit organization, EcoAction Arlington, which provides a number of environmental programs that includes litter cleanup events throughout the County.
- **Arlington County Department of Parks and Recreation** – The Department of Parks and Recreation recently released a strategic plan for 2021-2025 with a goal of creating and maintaining safe, sustainable, and accessible places of recreation.



4.0 WASTE MANAGEMENT HIERARCHY

The Code of Virginia and the Virginia Solid Waste Management Regulations require local governments to develop a comprehensive and integrated SWMP. An integrated SWMP is one that addresses the six management strategies included in the solid waste management hierarchy developed by U.S. Environmental Protection Agency (U.S. EPA) and modified and adopted by the Commonwealth of Virginia (9 VAC 20-130-30), as shown in **Exhibit 4**.

Exhibit 4. Solid Waste Management Hierarchy



Arlington County's SWMP provides a strategy that encompasses all elements of the hierarchy in the major waste management operations of generation, collection, processing, transportation and disposal. The goal is to prioritize waste management strategies that reduce and recover materials for beneficial use and minimize the amount of materials disposed through landfilling and incineration. The plan demonstrates how Arlington County has met the mandatory State of Virginia recycling requirement of 25 percent of MSW annually.

SOURCE REDUCTION

Source reduction are actions that reduce or eliminate the generation of waste at the source. Source reduction initiatives may include process and/or manufacturing modifications, material/product substitutions), product redesign and durability, community reuse/repair events, and purchasing in bulk. One example of source reduction is a manufacturer reducing the amount of packaging used to ship and display a product. Arlington residents can contribute to source reduction in their daily lives by adopting practices such as reducing single-use plastic consumption, opting for more durable reusable products. Additionally, conscious shopping choices, like buying secondhand, in bulk, or choosing products with minimal packaging, can significantly reduce waste. Commercial entities may also contribute to waste reduction by minimizing the use of single-use items and opting for reusable alternatives. Choosing suppliers that prioritize sustainable packaging and adopting efficient inventory management systems can help reduce unnecessary waste. Moreover, fostering a culture of environmental responsibility within the organization can contribute to a more sustainable and waste-conscious business approach. U.S. EPA provides a number of resources to help residents and businesses prioritize source reduction.

Many source reduction decisions by residents and businesses are beyond the scope of solid waste services provided by municipal programs. Despite this challenge, the County has opportunities to promote source reduction and lead by example. The County can provide information and educational resources to residents and businesses owners on how to incorporate source reduction into their daily lives and operations. The fundamental goal of these educational initiatives is to change behavior and get individuals to think about their purchases and how they conduct business.

REUSE

Reuse is the process of taking a product or material that could be considered waste and reusing it, without processing or changing its form, for the same or another end use. For example, building materials that are removed during a building renovation or demolition, are separated and can be installed in another building. Some communities have also established “swap shops” whereby residents can drop-off leftover paint, chemicals, and other products that can be picked-up by another resident having a use for the item. Additionally, community service entities, usually not-for-profit, collect used clothing, household items, electronics, books, and other materials for resale. Example entities involved in reuse in Arlington County include The Salvation Army, Goodwill Industries, and Purple Heart Yard sales and sales through consignment stores are other examples of reuse of materials and products. Arlington County does not currently identify or track reuse activities of private citizens or not-for-profit organizations that operate in the County.

RECYCLING

Recycling is often considered the most visible and prominent environmentally sustainable way to manage solid waste. Recycling occurs when residents and business owners/operators separate waste materials from solid waste and transported to a processing facility. Once processed into clean streams of material (i.e. paper, metal, plastic, etc.), it is sent to a manufacturing facility for use as a raw material in the production of a new product, which may or may not be similar to the original product.

Materials commonly recycled in Arlington County include corrugated cardboard, mixed paper, aluminum and steel containers, rigid plastic containers, and glass containers. Recycling reduces the need to extract and process virgin materials such as iron ore and as a result avoids the resulting environmental impacts.

4.0 Waste Management Hierarchy

As described in this plan, the County achieved a recycling rate of 52.4 percent for calendar year 2022, which is more than double the Virginia DEQ mandated recycling rate of 25 percent. The recycling rate includes the County's base rate of 47.4 percent diversion with an additional five percent diversion designated by DEQ for the County's source reduction and waste prevention programs. Chapter 10 of the Arlington County Code, titled Trash, Recycling, and Care of Premises, provides the recycling requirements for single-family residential, multi-family residential, and commercial properties in the County.³

Arlington County Mandatory Recycling Requirements¹

Single-Family Residential:

- Recyclable materials placed at the collection point must be separated from trash and yard trimmings
- Yard trimmings placed at the collection point must be separated from trash and recyclable materials
- Scrap metal and electronics placed at the collection point must be separated from trash, recyclable materials, and yard trimmings

Multi-Family Residential and Commercial Properties:

- Establish a recyclables collection system for the weekly collection of source-separated recyclable materials
- Provide a sufficient number of appropriately sized recycling containers that are distinguishable from trash containers
- Establish onsite-site collection service for recyclable materials that is no less than one-half of the weekly trash service level
- Submit and maintain a recycling plan to the County detailing the components of the recycling system; updated annually or when the program changes
- Provide educational materials to tenants/occupants or new employees of properties within fourteen (14) of move-in or hiring and at least annually thereafter

RESOURCE RECOVERY (WASTE-TO-ENERGY)

Waste-to-Energy (WTE) is the recovery of energy from the controlled combustion of solid waste. There are approximately 75 WTE facilities operating in the United States, most of which are located in densely populated areas. The energy released in the combustion process is captured and converted into steam. The steam is then used directly for heating or in a turbine to generate electricity. Processing MSW in a WTE facility generally reduces the volume of material by about 80 percent by weight. Modern WTE facilities are tightly controlled systems that use advanced pollution control equipment to minimize their impact on the environment. Electricity generated from a WTE facility is typically placed on the local electric grid to power nearby homes and businesses. The combustion process produces ash that is typically landfilled in a Subtitle D landfill in a special cell designed to manage ash.

Arlington County and the City of Alexandria partnered to develop the Alexandria/Arlington WTE Facility located on Eisenhower Avenue in Alexandria. The facility is jointly owned by the County and

³ Arlington County Code, Chapter 10, Trash, Recycling and Care of Premises, Articles I and IV

4.0 Waste Management Hierarchy

City. The facility is operated through a long term agreement with Reworld. The facility processes MSW generated from both Arlington County and the City of Alexandria 24-hours a day/seven days-a-week. Approximately 350,000 tons of MSW are processed in the facility annually. This waste generates about 22 megawatts of power annually, which is enough energy to meet the needs of 15,000 households. In addition to creating energy, over 11,000 tons of metal are recovered and recycled each year. Generated electricity is sold to Dominion Power via a long term contract. The WTE Facility has updated environmental controls to facilitate meeting stricter U.S. EPA standards. Ash produced from facility operations is disposed at the I-95 landfill in Fairfax County.

INCINERATION

Similar to resource recovery/WTE, incineration is the controlled combustion of MSW. However, unlike WTE, incineration does not recover the energy value of the waste stream. There are no MSW incinerators operating in Arlington County. Some private businesses do own and operate incinerators (i.e. Virginia Hospital Center) to processes special wastes generated at their facilities.

LANDFILL

The Resource Conservation and Recovery Act (RCRA) includes the federal requirements for landfill management of solid waste in the United States. Subtitle D of RCRA specifically includes the requirements for MSW landfills. Additionally, all MSW landfills operating in Virginia must be permitted by the Virginia DEQ.

A sanitary landfill is a highly-engineered facility where MSW is disposed. In many parts of the U.S., landfill disposal is the primary method for waste disposal. Landfills are designed to reduce the environmental and public health impacts of MSW disposal. They have advanced environmental controls, including liners and leachate capture systems, capping to minimize water penetration, and gas capture and treatment systems to reduce emissions.

Arlington County does not own or operate an MSW landfill. Waste generated within the County is not disposed in a landfill. However, ash generated from the disposal of Arlington's waste in the WTE facility is disposed in the I-95 Landfill that is owned and operated by Fairfax County.



5.0 PLANNING CONSIDERATIONS

There will be considerable changes to the solid waste landscape during the planning period. Investments are needed for continued use of the County’s disposal facility, waste diversion programs, and organic processing. This section describes some planning considerations the County will need to evaluate for waste disposal, transfer, processing, and diversion over the 20-year planning period.

DISPOSAL

The Reworld Alexandria/Arlington WTE Facility has served as the primary method for the County to dispose of MSW that is not diverted for recycling or composting since 1988. The County Board in adopting the Zero Waste Resolution on November 19, 2015, reinforced support for WTE. The resolution included the following:

“...the County acknowledges that a certain amount of residual waste is inevitable, and thus will continue to give preference to waste-to-energy technology as the primary means of disposal rather than landfilling, consistent with the U.S. Environmental Protection Agency’s waste management hierarchy”⁴⁴

The WTE facility is operated by Reworld and the current operations agreement does not expire until 2038. In October 2025, the County’s fee to dispose of waste at the WTE Facility will drop to \$0 per the Waste Disposal and Service Agreement (WDSA) with the City of Alexandria and Reworld. This rate will continue through the duration of the agreement which expires in 2038.

Once the WDSA ends in 2038, Reworld is to return the WTE Facility to the City of Alexandria and Arlington County in good order and condition. Arlington County expects the WTE Facility to continue to serve as the primary disposal option for wastes that are not or cannot be recycled and composted. The County expects that the existing WTE Facility will need retrofitting with new and/or updated equipment to extend the service life of the facility for another 50 years. This will require a full replacement of the equipment at the facility. This option is beneficial in that it provides a local option for solid waste management and would allow the system to continue to operate as it has since 1988.

The alternative to not extending the life of the WTE Facility is for the County to identify and contract for the disposal of solid waste at another facility. This may be another WTE facility or landfill. Exporting waste to a facility outside the County will require additional infrastructure to support the

⁴⁴ Arlington County Board, Zero Waste Resolution, November 19, 2015, <https://www.arlingtonva.us/Government/Departments/County-Board/Board-Actions/Resolutions/Zero-Waste-Resolution-2015>.

5.0 Planning Considerations

transportation of materials over a longer distance. This will increase costs for the County and potentially shift waste disposal to a landfill, which is further down the U.S. EPA waste hierarchy.

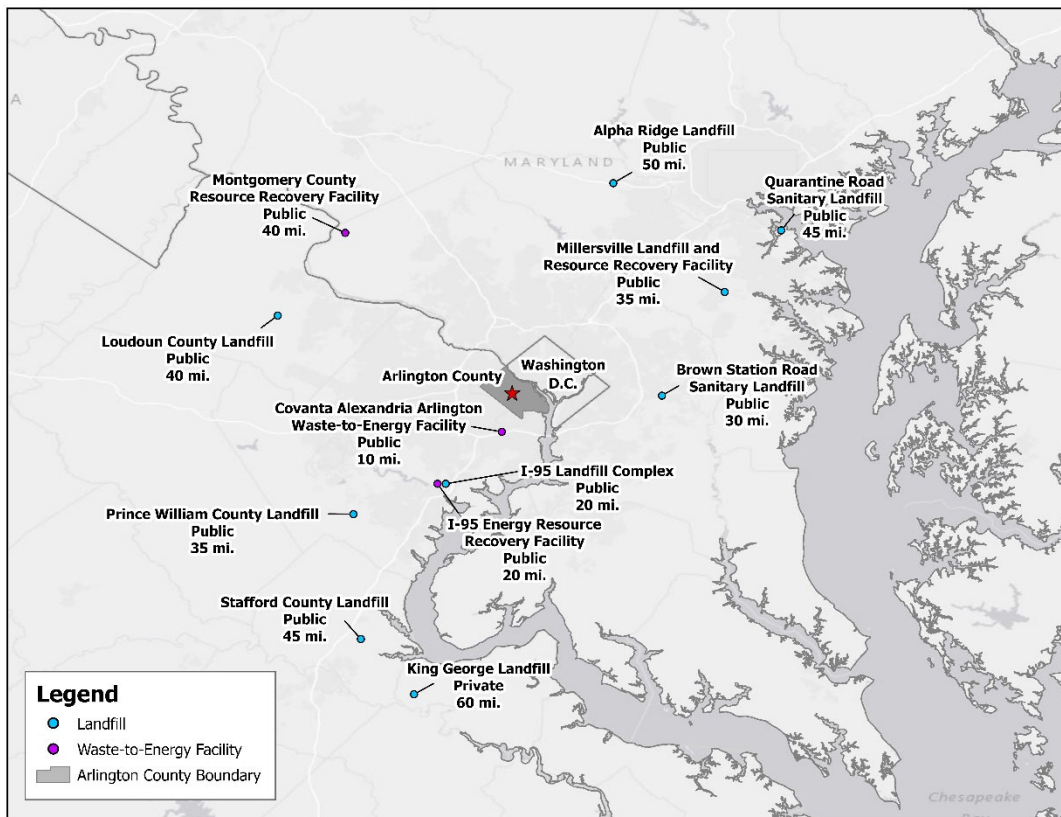
Upgrading the WTE Facility to extend its service life beyond 2038 will require a significant allocation of resources. In order to understand the costs and resources required to extend the service life of the facility, the County, in conjunction with the City of Alexandria, are considering a study that identifies and evaluates funding sources and options for retrofitting the facility.

Should the WTE Facility close, there are several public and private disposal facilities in the Metropolitan Washington area that have the potential to serve the County's disposal needs. The closest option is the I-95 Energy Resource Recovery Facility (I-95 Facility) in Lorton that is owned and operated by Reworld. Much like the Reworld Alexandria/Arlington WTE Facility, the I-95 Facility is expected to reach the end of its service life about the same time (2038). Operation of that facility is dependent on maintenance and investments schedules and outside pressures to close the facility.

The I-95 Facility is also operating at about 93 percent of their permitted disposal capacity. Should an agreement be worked out to dispose of the County's waste at this facility, it would require displacing waste currently disposed at the site. Both the I-95 and Alexandria/Arlington WTE facilities are considered merchant facilities that are driven to make a profit. They make a profit by accepting as much waste as they can to fill their permitted disposal capacity. Usage of each facility is market driven, and facility owners/operators accept waste from sources outside local jurisdictions to confirm each facility is operating at capacity. Should the Reworld Alexandria/Arlington WTE Facility be unable to provide for the long term disposal needs of the County's MSW, there may be an opportunity to displace some disposal capacity at the I-95 Facility.

Solid waste disposal facilities in the region vary in the amount of permitted capacity available for use. Limitations exist on usage of these facilities. These limitations include operations at full capacity, distance to Arlington County, and local regulations that do not allow the import of waste materials. **Exhibit 5** provides the location of select WTE facilities and landfills.

Exhibit 5. Regional Waste Disposal Facilities



TRANSFER

Should the County be required to utilize disposal capacity outside the immediate area, the County will need to evaluate establishing a system to transfer waste to the facility. Transfer stations are central facilities to many solid waste programs to improve the economics and environmental impacts of waste management. The County will be challenged to find and acquire land that may be suitable for a transfer station. One option is to convert the existing Reworld Alexandria/Arlington WTE Facility into a transfer station upon its closure. This option has some benefits, including:

- **Existing Infrastructure** – Some infrastructure at the WTE Facility, namely scale and scalehouse, is required for a transfer station.
- **Collection Routes** – Utilizing the WTE Facility as a transfer station would not require modification of existing collection routes as waste is transported to the same location.
- **Land Use** – The WTE Facility land is already zoned and permitted for waste management activities.
- **Traffic Flow** – The facility and property is already designed to accommodate large solid waste vehicles, so traffic patterns and lane widths have the clearance to handle heavy-duty trucks.

5.0 Planning Considerations

Despite these benefits, the viability of using the site as a transfer station is unknown due to changes in the surrounding area from industrial to a residential and mixed-use area. There may be little community support for a transfer facility at the site. Additionally, environmental justice and equitable concerns may necessitate the site not be used to manage solid waste.

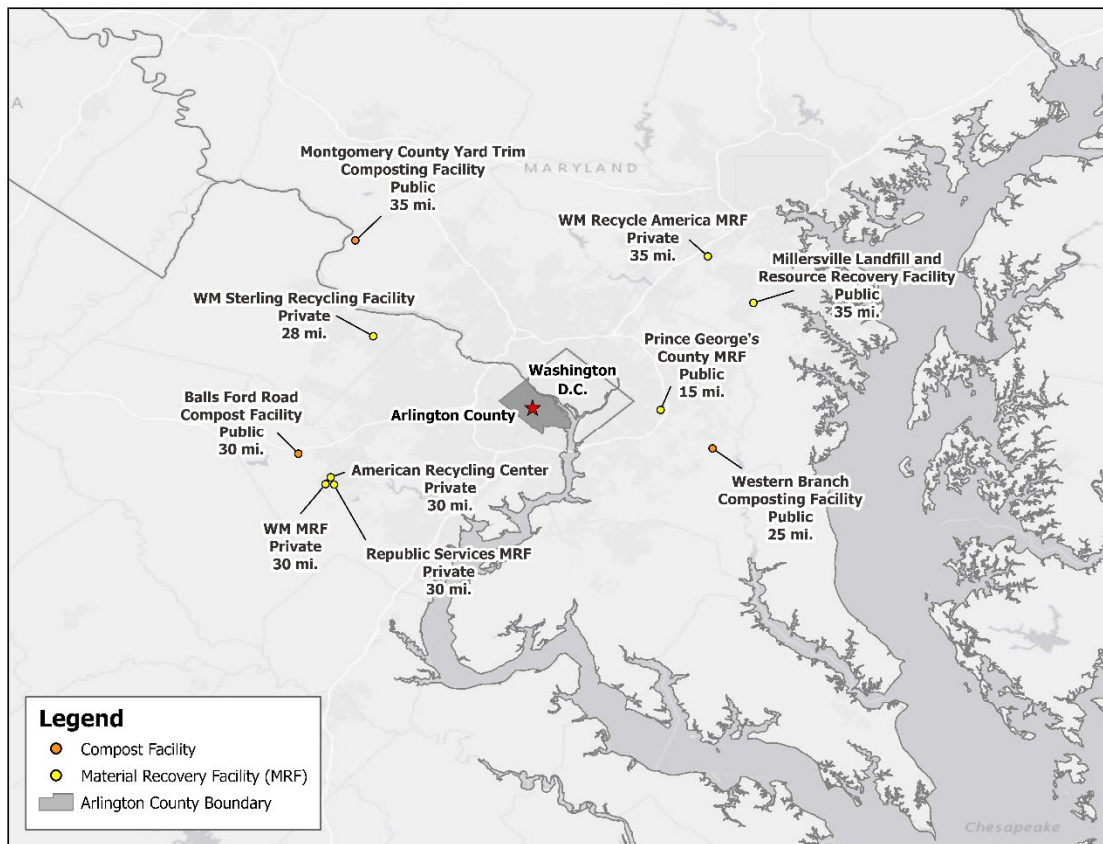
DIVERSION

Recycling

In addition to the WM Recycle America MRF, there are four MRF's located in Northern Virginia. Three of these facilities are located in the Manassas area of Prince William County. The fourth is located in Loudon County in Sterling. All these facilities are privately owned, which limits the County's control over what materials can be recycled and how the materials are collected. This gives the private sector complete control over material processing and the sale of commodities.

Each of these facilities processes materials collected from single-stream collection programs, which aligns with the type of collection program the County operates. The only MRF in the region that does not process single-stream materials is the Montgomery County (Maryland) Materials Recovery Facility. This facility is set-up to process dual-stream materials. The facility has two separate processing operations. One processes paper materials and the other processes comingled materials, including plastic, metal, and glass containers. **Exhibit 6** displays a map of the MRFs in the region along with the approximate distance from Arlington County.

Exhibit 6. Regional Material Recovery and Organics Management Facilities



5.0 Planning Considerations

In expanding the County's diversion infrastructure as described in this plan, the County will explore establishing additional recycling operations at a centralized facility. This anticipated facility is expected to provide multiple waste diversion services for residents. Its purpose is to provide a one-stop location for residents to drop-off materials for recycling. The scope of operations and the materials accepted at the facility have yet to be determined. However, potential services include the following:

- Household hazardous materials
- Recyclable materials
- Glass collection
- Food waste
- CHaRM facility
- Reuse/repair fairs

County staff will monitor the availability of land and consider locations that are determined to adequately and equitably serve residents in the short term. In the medium-to-long term over the planning period the County will construct and operate this anticipated new recycling and reuse facility.

Organics

With the establishment of the residential curbside food waste collection program in 2021, the County is taking bold steps to reduce the amount of food waste sent for disposal. Over the 20-year planning period, the County will continue the existing organics management program that is available to all single-family households in the County. County activities will focus on increasing participation to expand the quantities of organics, particularly food waste, collected as part of the program. Additionally, the County is prioritizing organic material diversion from the multi-family and commercial generating sectors. In expanding organics diversion, the County will prioritize initiatives that align with the U.S. EPA's Wasted Food Scale. This scale prioritizes reducing food waste, which will be an important component of the County's waste reduction campaign.

Food Rescue

After source reduction, the EPA Waste Food Scale gives the next highest priority to diverting food to feed hungry people. The County supports food rescue efforts by the private sector and non-profit organizations, such as Northern Virginia Food Rescue and Food Rescue US-DC, to feed hungry people. The County's strategic initiatives to reduce waste and increase organics diversion aligns with these entities efforts to enhance food rescue operations in Arlington County. Efforts identified and described in the *Arlington County Food Security Strategic Plan*⁵ developed by the County's Department of Human Services will be considered in the SWB's activities to reduce



⁵ Arlington County Food Security Strategic Plan, Arlington County Department of Human Services, accessed from <https://www.arlingtonva.us/files/sharedassets/public/departments/documents/dhs/food-security/arlington-food-security-strategic-plan-report-final.pdf>

food waste. The County will also support efforts to recover food for consumption and use in animal operations when rescued food is unfit for human consumption.

Composting

Composting wasted food produces valuable soil amendment that can be used to build soil health, increase soil water retention, and reduce soil erosion. Composting is the process of breaking down organic materials such as wasted food and yard trimmings in an oxygen-rich environment. Producing and using compost recycles organic matter and nutrients that are important for long-term soil health and ecosystem resilience.⁶

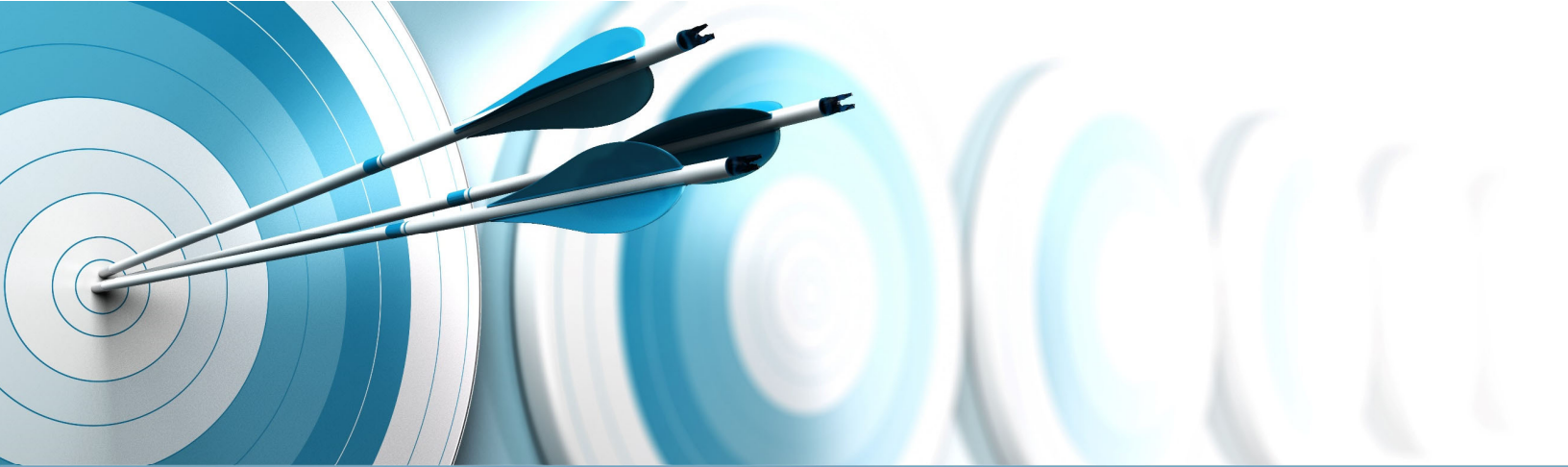
Anaerobic Digestion

The U.S. EPA Wasted Food Scale prioritizes diversion of food waste for industrial uses, such as processing in a digester to recovery energy. Anaerobic Digestion (AD) is a biochemical process that breaks down organic waste in the absence of oxygen and produces biogas and digestate. Biogas produced is approximately 50 to 60 percent methane, and can be used to generate energy, either as a direct replacement for natural gas, in a combined heat and power system, in internal combustion engines, or converted to compressed natural gas (CNG) or liquefied natural gas (LNG).

Digestate is defined as the remaining undigested solid and liquid fractions of the input feedstock material after the AD process. Digestate can be land applied or composted to produce a high-quality soil amendment. AD is typically undertaken using one of two distinct technologies: wet or dry digestion. Determining which technology is best depends on the quality, composition, and/or pre-treatment of the feedstock. Dry AD technologies typically process feedstocks with total solids content greater than or equal to 15 percent. Wet AD systems process feedstock with total solids content of less than 15 percent.

The County anticipates significantly increasing the amount of organic materials diverted over the 20-year planning period. The organics diversion initiatives described in this plan are estimated to divert an additional 23,500 to 25,000 tons of organic materials annually. To achieve that level of organics diversion, particularly from the multi-family and commercial generating sectors, additional processing capacity will be needed. AD is a viable option for processing large quantities of organic materials, particularly food waste. These systems may be compatible with waste water treatment facilities.

⁶ <https://www.epa.gov/sustainable-management-food/wasted-food-scale>



6.0 PLAN TO MEET STATE REQUIREMENTS

COUNTY GOALS AND ACTION STEPS

One of the key requirements of the solid waste planning regulations promulgated by Virginia DEQ in 2001 is that every planning unit, including cities, counties, and towns in Virginia meets a minimum recycling rate of 25 percent. Arlington County currently meets this requirement and anticipates that it will continue to do so over the next 20 years with its existing programs. The County has developed a set of goals in order to continue meeting the state’s minimum recycling rate requirements. These are discussed in this section.

Arlington County Goals to Achieve State Diversion Requirements

- **Goal A:** Employ a comprehensive solid waste management system that considers the State of Virginia’s waste management hierarchy.
- **Goal B:** Ensure that the County continues to implement a strong recycling program and that the County recycling rate, at a minimum, meets the State of Virginia’s recycling goals.
- **Goal C:** Carefully evaluate the waste management needs of the County for the next 20 years and identify the actions necessary to meet those needs.

Goal A: Employ a comprehensive solid waste management system that considers the State of Virginia’s waste management hierarchy.

Action Steps

1. Encourage residents, businesses, institutions, and other entities to implement and/or expand waste reduction activities that prevent waste generation.
2. Encourage material reuse by all waste generating sectors.
3. Provide curbside recycling, organics, and other special waste collection and diversion programs for residents in single-family households; continue facilitating compliance with the County’s recycling requirements for multi-family and commercial properties (including County-owned or occupied sites)

4. Continue to jointly operate the Reworld Alexandria/Arlington WTE Facility with the City of Alexandria to provide for local reliable disposal of municipal solid waste (MSW) and the conversion of MSW into electricity; evaluate long term disposal options in anticipation of the WTE Facility reverting to City of Alexandria and Arlington County ownership in 2038.
5. Secure disposal at a permitted sanitary landfill for those materials that cannot be recycled or processed at the Reworld Alexandria/Arlington WTE Facility.
6. Periodically review the County's waste management system to confirm it addresses the State of Virginia's solid waste hierarchy.

Goal B: Ensure that the County continues to implement a strong recycling program and that the County recycling rate, at a minimum, meets the State of Virginia's recycling goals.

Action Steps

1. Provide regular collection of recyclable materials from the County's 32,211 single-family residential households.
2. Require multi-family property owners and/or operators to submit an annual recycling plan that documents their waste reduction and recycling programs.
3. Require commercial and institutional property and/or operators to submit a recycling plan that documents their waste reduction and recycling system.
4. Continue the inspection program which verifies compliance with the requirements of the County Code for recycling

Goal C: Carefully evaluate the waste management needs of the County for the next 20 years and identify the actions necessary to meet those needs.

Action Steps

1. Actively participate in the development of a regional solution for the disposal, recycling, and processing of C&D wastes.
2. Continue ongoing evaluation of the County's current contractual relationship with Reworld and the City of Alexandria to access if it is meeting the County's needs. Evaluate long term disposal options in anticipation of the WTE Facility being returned to City of Alexandria and Arlington County ownership.
3. Monitor collection capacities of commercial refuse and recycling haulers.
4. Monitor disposal capacities of regional facilities
5. Monitor processing capacities of regional transfer stations and materials recovery facilities.
6. Participate in regional coalitions and groups to advocate for sustainable solid waste management policies at the state and federal levels.



7.0 ZERO WASTE PLAN

Arlington County currently meets the requirements of the solid waste planning regulations promulgated by the Virginia DEQ and plans to continue doing so over the next 20 years. On November 19, 2015, the County Board adopted a Zero Waste Resolution that establishes a goal of increasing waste diversion to at least 90 percent by 2038 for County facilities and the County as a whole. The Board's resolution is included in **Appendix E**. The County identified and set a number of voluntary program enhancements for solid waste management over the next 20 years. These initiatives include additional and enhanced programs, services, and policies aimed at diverting additional material from disposal. In identifying and scoping the initiatives, the County considered the waste diversion, greenhouse gas, and cost impacts as well as the U.S. EPA solid waste hierarchy in prioritizing them and the timeframe of their implementation. These voluntary activities are subject to available funding and resource allocation, and additional study to further assess their implementation.

Additionally, pursuit of the waste diversion goal and actions taken to implement the voluntary program enhancements should be done with the County's commitment to equity in mind as well as honoring the other diversity, equity, and inclusion efforts underway by the County. The County defines equity as all populations having access to community conditions and opportunities needed to reach their full potential and to experience optimal well-being.⁷

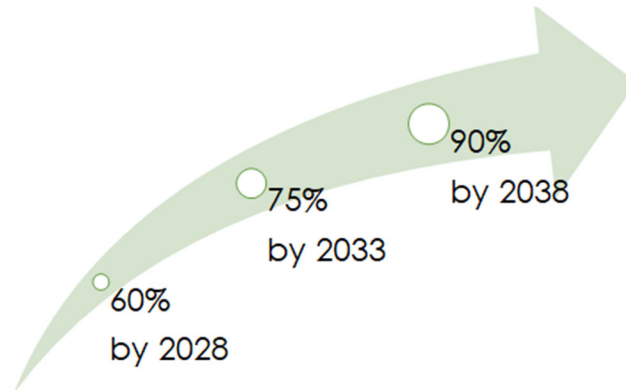
Achieving zero waste requires a significant shift in product manufacturing and consumption patterns. Zero waste is a fundamental change in the way the Arlington community goes about its daily business. While the County has little control over product manufacturing or types of products and packaging sold in the County, it can influence behavior change through expanded education and outreach. The goal is for all sectors in the community to consider the waste impacts of all their purchases and activities, and to choose products that minimize waste. This perspective impacts all spheres of life in the County. Many of these changes are small and may not have a significant impact on the County's overall diversion rate. Nonetheless, they are important because they are part of the shift towards a zero waste community.

ZERO WASTE MILESTONES

Diverting 90 percent of waste from landfills and incineration is an aspirational goal. To make meaningful progress toward this ambitious goal, it takes careful planning by the County along with participation throughout the community. The County established interim diversion milestones to track the County's future progress. These milestones are depicted below in **Exhibit 7**.

⁷ Arlington County Board, Equity Resolution, September 21, 2019, <https://arlingtonva.s3.amazonaws.com/wp-content/uploads/sites/21/2020/02/Equity-Resolution-FINAL-09-21-19.pdf>

Exhibit 7. Arlington County's Milestone Recycling Goals



ZERO WASTE IMPACTS

The zero waste initiatives discussed in this plan were evaluated to understand the potential impacts to waste diversion, greenhouse gas emissions, and costs to the County. Waste diversion impacts are estimated using the recent (2021/2022) data from the County's audit program by sector. Disposed waste compositions were applied to the annual amount of waste disposed by each sector to estimate material quantities. Additionally, a capture rate was applied to the material streams based on county staff and consultant's professional experience to estimate a diversion range.

Greenhouse gas emission reduction estimates were quantified using the U.S. EPA Waste Reduction Model (WARM)⁸. Emission reductions (or increases) were calculated and compared to baseline and alternative processing scenarios. The baseline scenario assumes material processing at the WTE Facility. The alternative scenario involves materials being reduced or diverted for recycling and/or composting programs. This analysis only considers the GHG emissions of managing solid waste as it enters the MSW system. It does not consider the GHG embedded in the production and manufacture of the products.

The cost impacts are planning level estimates (2022 dollars) using actual cost information provided by the County or estimated cost data based on research or experience from similar types of initiatives. **Appendix F** provides a more detailed description how the impacts of each initiative were calculated.

VOLUNTARY PROGRAM ENHANCEMENTS: SHORT TERM

The County has identified seven voluntary program enhancements that are prioritized for the initial six-year short term implementation period. A brief overview of each initiative is included in this section. Detailed information on the impacts of each initiative are included in **Appendix F**.

⁸ <https://www.epa.gov/warm>, Version 15

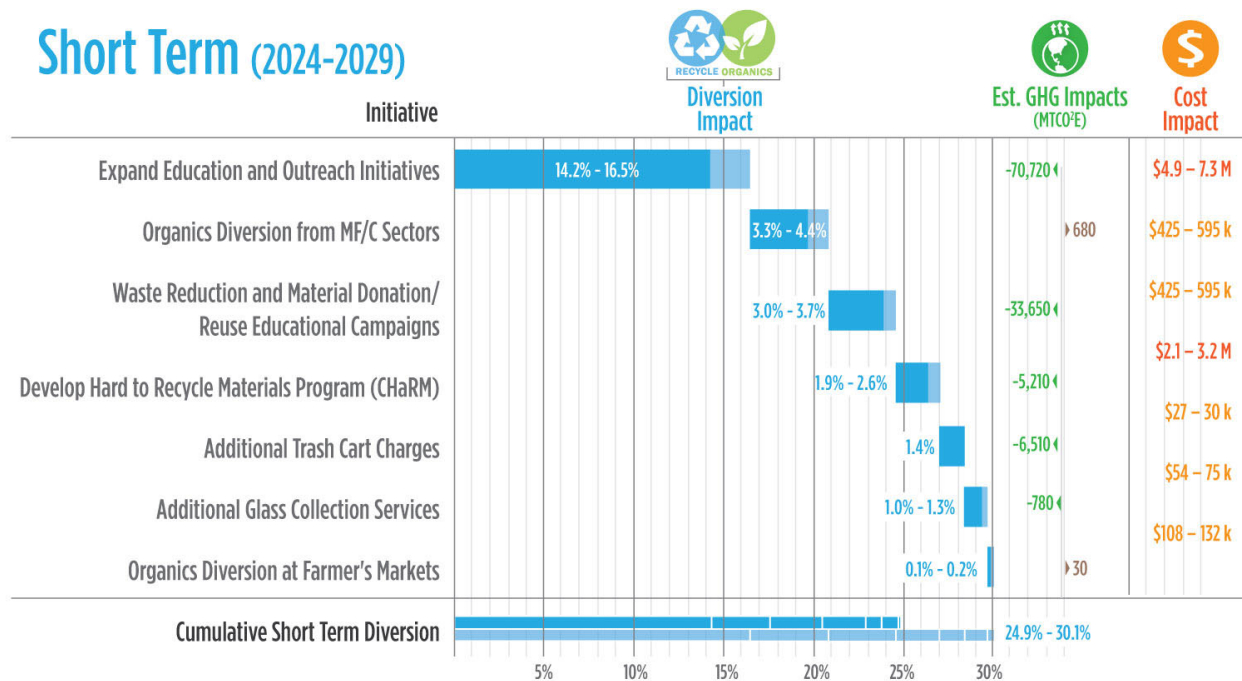
Short Term Initiative	Description
<p>Expand and Enhance Education and Outreach Initiatives</p>	<p>The focus of this initiative is to expand and enhance the County's current educational program to maximize use of the County's existing recycling and waste diversion infrastructure. The County has established a comprehensive program for residents and businesses to divert waste from disposal.</p> <p>Data from the County's most recent material audits (2021-2022) for both the residential (single-family and multi-family) and commercial waste generating sectors indicate that existing waste diversion programs and infrastructure are not being used to their full potential. Large quantities of materials that could be diverted through these programs are still being disposed.</p>
<p>Implement Waste Reduction and Material Donation/Reuse Education Campaigns</p>	<p>The focus of this initiative is to prioritize the highest tier of the Virginia DEQ and U.S. EPA waste management hierarchy, waste reduction, through specific education and outreach activities. Many opportunities exist for waste reduction, including material donation and reuse, which represents the most significant opportunity in solid waste management to conserve resources, reduce costs and protect the environment. Residents and businesses must rethink their purchasing practices to shift away from disposable products to reusable and durable materials that can be donated or reused.</p>
<p>Multi-Family and Commercial Organics Diversion</p>	<p>Organic materials represent a significant portion of the disposed waste stream in Arlington County. Opportunities to expand organics diversion exist, particularly in the multi-family and commercial generating sectors where few diversion programs currently operate.</p> <p>This initiative aims to encourage the voluntary diversion of organics by providing direct technical assistance and support to multi-family and commercial properties to set-up or expand existing organics recycling programs. Approximately 25 percent of the multi-family and commercial waste streams are organic materials, primarily food waste, which could be diverted for recycling.</p>

Short Term Initiative	Description
<p>Organics Diversion at Farmers Markets</p>	<p>The County sees farmers markets as a natural opportunity to advance their goal of zero waste through additional diversion of organic materials at them. The purpose of this initiative is to develop a partnership between the County and various farmers markets to establish a system whereby food that cannot be sold is diverted from disposal. The primary focus will be the “back-end” of the farmers markets and will target the vendors.</p> <p>The initiative may include the recovery of food waste from shoppers as the market is in particularly high-density areas. The farmers markets food recovery program will align with the priorities established as part of the U.S. EPA Food Recovery Hierarchy. This includes diverting food waste to feed people, followed by using wasted food to feed animals, and diverting it for industrial use (i.e. anaerobic digestion).</p>
<p>Additional Glass Collection Services</p>	<p>With the removal of glass from the curbside program in 2019, the County established glass-only drop-off containers in the County for residents to place their glass containers. The County would continue to build on the success of the glass recycling drop-off program as part of this initiative by establishing two new glass recycling drop-off locations in the multi-use areas of National Landing and in the Rosslyn-Ballston Corridor. These areas were selected to serve the commercial entities and high population of residents in these communities living in multi-family dwellings/properties.</p>
<p>Additional Trash Collection Charges</p>	<p>This initiative aims to align the resident fee of the second and third trash cart with the actual cost the County incurs for providing the additional trash collection services. It requires that the County amend the code of regulations to allow for a higher fee for these carts.</p> <p>The County expects to establish a new higher monthly fee per trash cart for households that more than one. This change in fee eliminates the subsidy the County provides residents for producing extra solid waste and the need for additional trash carts. While the fee for additional trash carts will increase, it will not impact residents who request additional recycling or organics carts. No increased fees will be implemented for those programs.</p>

Short Term Initiative	Description
Develop Hard to Recycle Materials Program	Providing for the recycling and diversion of hard to recycle materials is an important component of the County's zero waste strategy. The County aims to establish a comprehensive recycling facility. Multiple services will be included into the operation of this facility that will provide residents the opportunity to drop-off HHMs, recyclable materials, glass containers, and hard to recycle materials all in one place. The specific hard to recycle materials to be accepted as part of this facility will be decided upon a thorough review of available markets and end users. Materials that may be included as part of the CHaRM facility include mattresses, expanded polystyrene, textiles, carpet, and small appliances.

Figure 5 summarizes the diversion, greenhouse gas emission, and cost impacts of the short term voluntary program enhancements.

Figure 5. Short Term Voluntary Program Enhancement Impacts



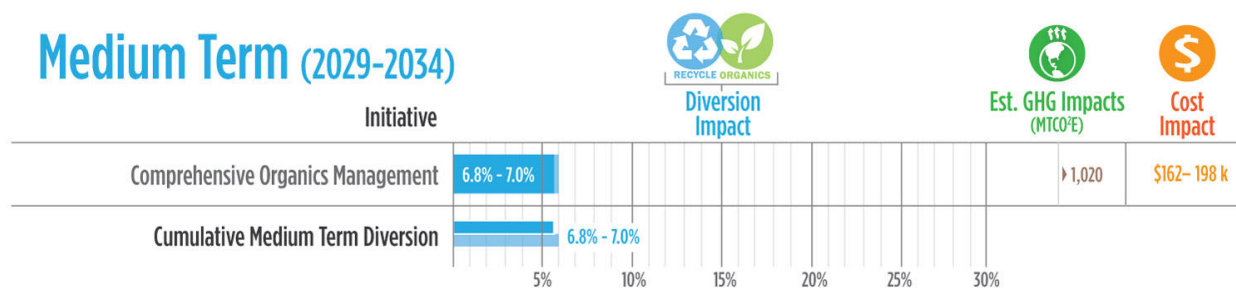
VOLUNTARY PROGRAM ENHANCEMENTS: MEDIUM TERM

The County has identified one (1) initiative to be completed as part of medium term of the County’s solid waste planning period. This timeframe is the period from 2029 to 2034.

- Comprehensive Organics Management** - This initiative builds on the organics diversion initiatives implemented in the short term planning period. It establishes a comprehensive organics management program for the diversion of organics generated in the County with a particular focus on food waste. Commercial and multi-family properties will be expected to establish an organics diversion program at their facility.

Figure 6 summarizes the diversion, greenhouse gas emission, and cost impacts of the medium term voluntary program enhancements.

Figure 6. Medium Term Voluntary Program Enhancement Impacts



VOLUNTARY PROGRAM ENHANCEMENTS: LONG TERM

The County has identified seven voluntary program enhancements that may be implemented at any time during the planning period. A brief overview of each initiative is included in this section. Detailed information on the impacts of each initiative are included in **Appendix F**.

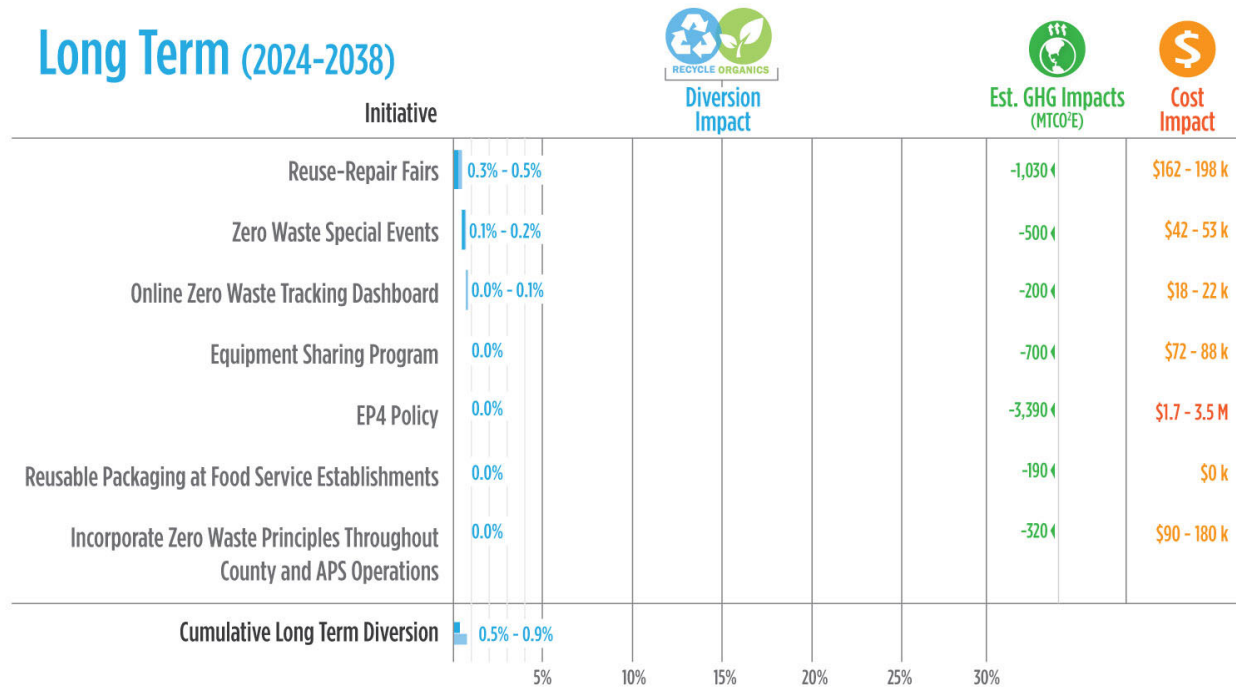
Long Term Initiative	Description
Zero Waste Special Events	This initiative aims to maximize waste diversion from special events throughout the County by requiring them to be zero waste. Although many special events in the County already provide recycling and organics diversion programs for attendees to use, this initiative will establish requirements that all events that go through the County's special events permitting process to be zero waste events that provide recycling and organics diversion options along with trash collection.

Long Term Initiative	Description
<p>Reuse and Repair Fairs</p>	<p>The County anticipates organizing and promoting a reuse and repair fair each quarter at the Earth Products Yard, a library, or another location to be selected. Reuse and repair fairs will be supported by education specialist staff to be hired as part of the County's zero waste initiative. The County can help facilitate behavior change by offering programs and services that get residents to rethink waste. Reuse is an important strategy to curb waste generation. It ranks higher on the waste management hierarchy because of its effort to extend the life of materials so they do not become waste.</p>
<p>Establish Zero Waste Dashboard</p>	<p>The County understands that achieving zero waste is a community effort. The County needs the support and participation of all waste generating sectors, single-family residential, multi-family residential, and commercial, for the zero waste program to be successful. One way the County expects to engage the community on the progress in achieving zero waste is to create an online "zero waste dashboard." The zero waste dashboard would visually show updated information to the community on the County's effort and progress in achieving zero waste</p>
<p>Equipment Sharing Program</p>	<p>For this initiative the County establishes a program whereby residents can "check-out" or borrow County-owned equipment for personal use. It expands the County's current sharing program to include small battery powered and electric hand-held equipment and lawn tools. Items such as drills, saws, lawn mowers, leaf blowers, etc. can be reserved by residents for a set period of time for personal use. Items would be returned to the County and be made available for another resident to check-out. This program would not include gas-powered tools and equipment.</p>
<p>Environmentally Preferable Purchasing/Sustainability Policy</p>	<p>In 2018, the SWB completed a report titled "<i>Arlington County Facilities Recycling and Waste Management Report</i>." For this study, 55 facilities with County employees were assessed for solid waste and recycling code compliance. One of the recommendations in the report was to update and expand the County's environmentally preferable purchasing policy (EP4). The County's current EP4 policy is focused on purchasing, but does not mention the County's code requirements for recycling.</p> <p>A revised EP4 policy and a new Sustainability Policy are important tools for the highest levels of the County's government to communicate the importance of zero waste and operating sustainably. This initiative aims to bring a revised EP4 policy and sustainability policy to the Board for adoption. The County expects to hire one additional staff in the Department of Management and Finance to support the implementation and compliance with this initiative.</p>

Long Term Initiative	Description
Reusable Packaging in Food Service Establishments	This initiative will reduce the amount of disposable take-out food packaging from food service establishments. The County will support food service establishments in their efforts to incorporate reusable food packaging into their operations by providing technical assistance and support. It may also include activities such as establishing a plastic prevention policy and helping entities comply with the statewide expanded polystyrene ban set to take effect in 2028.
Incorporate Zero Waste Principles Throughout County Operations	Explore opportunities to incorporate zero waste principles into County and Arlington Public School (APS) infrastructure and operations. This may include deconstruction of County facilities to facilitate material reuse and recycling at end-of-life, installation of water bottle refilling stations, composting programs at community gardens, systems to capture and reuse rainwater, and programs to separate organic materials/food waste from operations (see Comprehensive Organics Management initiative on page 40).

Figure 7 summarizes the diversion, greenhouse gas emissions, and cost impacts of the long term voluntary program enhancements.

Figure 7. Long Term Voluntary Program Enhancement Impacts



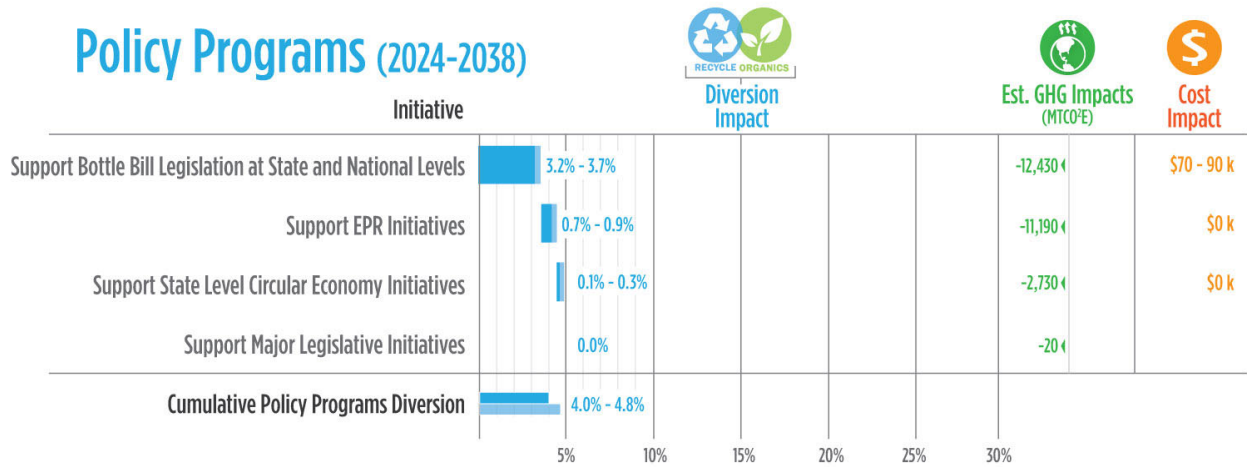
STATE AND NATIONAL POLICIES

Local policies are important tools to facilitate the movement of Arlington County to a zero waste community. The County anticipates implementing policies that promote zero waste where practical and feasible. The County will also strengthen existing policies to further promote sustainability. However, certain policies at the state and national levels can complement and help advance the County’s efforts. The County has identified three key policies that would help advance zero waste in the County. As part of the County’s annual legislative package that is prepared and distributed to the County’s state and national congressional delegation, Arlington will provide information on each of these policies and the County’s position with the hope policies are implemented and can support the County’s zero waste efforts.

Policy	Description
Extended Producer Responsibility	Extended producer responsibility or EPR is a policy whereby producers are responsible for the end-of-life management of the materials or products they produce. EPR shifts the responsibility to manage waste from local governments to the producers of those products. This type of policy can facilitate innovation and creativity among producers to design products with a longer life or eliminate packaging or increase recyclability of packaging as the producer bears the responsibility for management of the material.
Container Deposits	Recycling refunds, formerly known as “bottle bills,” are an EPR initiative whereby deposits are paid by consumers for beverage containers at the point of sale. If the consumer returns the beverage container to a recycling facility, the deposit is refunded to the consumer. As of 2023, only ten (10) states have recycling refunds for beverage containers. Beverage containers packaged in metal, plastic, and glass are often included in the recycling refund program. Recycling refunds are effective at encouraging recycling. States with recycling refunds for beverage containers typically have recycling rates of 70 percent or more compared to states without a recycling refund that have recycling rates of 30-to-40 percent.
Circular Economy	In general, a circular economy reduces material use, redesigns materials, products, and services to be less resource intensive, and recaptures waste as a resource for the manufacturing of new materials and products. Policies supporting a circular economy prioritize or incentivize product suppliers and manufactures to make their materials with fewer resources and reduce their pollution impacts, extend their usable life, and facilitate usage of waste into the production of another product.

Figure 8 summarizes the diversion, greenhouse gas emission, and cost impacts of the priority legislative initiatives for the County.

Figure 8. Policy Initiative Impacts

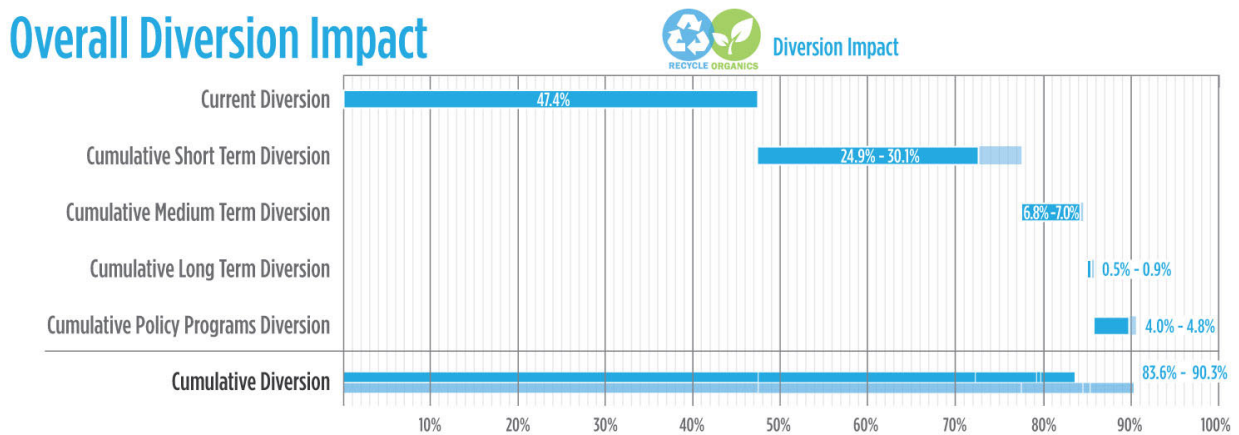


The County will continue to monitor legislation impacting solid waste and waste diversion at the state and national levels. The County will participate in local and national organizations, such as the Northern Virginia Regional Planning Commission, Washington Metropolitan Council of Governments (COG), National Waste and Recycling Coalition, and the Solid Waste Association of North America (SWANA), to lend its voice to support policies when appropriate.

SUMMARY

The initiatives discussed in this section provide the County many options and opportunities to achieve zero waste. Overall the combined impact of all these initiatives on the County’s diversion rate is estimated to be 83.6 – 90.3 percent. **Figure 9** summarizes the cumulative impact of all initiatives on the overall County diversion rate.

Figure 9. Overall Diversion Rate Impact of Voluntary Program Enhancements



Despite the comprehensive solutions and initiatives discussed in this plan, there are significant societal shifts that must occur. Making this even more challenging is the County has limited control over these changes, including the following:

- **Consumption Patterns** – Residents and business owners/operators must significantly change their consumption patterns. This includes shifting away from single-use materials and packaging. Several initiatives in this plan target changing behavior on consumption through education and outreach.
- **Product Manufacturing** – Waste generated in the County is impacted by the types of products and packaging that are sold within the community. In most cases, the County does not have control over what products and packaging are used in commerce. The County can use its collective purchasing power to support local and sustainable manufacturers. The County can also educate residents on buying products with limited or no packaging or packaging that can be recycled as part of the Waste Reduction Education Campaigns initiative if adopted by the County Board. Despite these opportunities, the County has limited impact over what is manufactured or sold in the County and region. To reach the highest level of waste diversion, the County is reliant on macro-scale changes in the marketplace.



8.0 FUNDING

This section provides information on how solid waste services and programs provided by the County are funded. Information is provided on current funding and anticipated funding needs over the 20-year planning period.

EXISTING FUNDING

The County's solid waste management program is designed to be a full-cost recovery program. This means the costs of the solid waste programs are fully paid for by the user fees charged to waste generating sectors for usage of the programs. This section discusses the current key funding mechanisms for the County solid waste management program.

Household Solid Waste Rate

The most significant source of funding for these programs comes from the annual Household Solid Waste Rate (HSWR). The HSWR is a fee charged to all households in Arlington County receiving direct services for solid waste, recycling, and organics management. The HSWR is reviewed as part of the annual budget process and adjusted, if necessary, by the County Board after a public hearing. The fee is based on the total costs for programs and services provided by the County minus user fees collected for special programs and services and the revenue generated from the sale of recyclable materials.

The annual HSWR is evaluated and adjusted to cover the cost of residential services. Expected increases in the HSWR is due to increased contract costs for material collection and recycling processing. The favorable pricing the County has received over the last few years is not expected to continue in renegotiated contracts. Despite the anticipated increase in the HSWR, Arlington County's rate is still about 25 percent lower than neighboring jurisdictions of the City of Alexandria and Fairfax County for providing comparable services. The HSWR is billed quarterly on each household's utility invoice. The County expects the HSWR to continue to be a full-cost recovery program fee over the planning period.

Multi-family and Commercial Recycling Program Fee

Similar to the HSWR, the County's multi-family and commercial recycling program fee is also designed to be full-cost recovery. The multi-family and commercial recycling program fee is charged to each business and multi-family property in the County. The fee is based on the square footage of the property and usage type. Although the County does not provide direct services to the multi-family and commercial sectors, the County has established regulations requiring them to establish and operate a recycling program. The program fee covers the County's cost for facility inspection and the processing of recycling reports that are required to be submitted as part of the County's regulations.

The County expects the multi-family and commercial recycling program fee to continue to be a full-cost recovery program fee over the planning period.

Other Revenue

The County receives additional revenue from the sale of scrap metal and electronics, compost bin sales, plastic bag tax, and services provided to other County departments. These revenue sources are not significant and are not designed to fully cover the cost of these activities or services.

FUTURE FUNDING

The current WDSA Arlington County has with Reworld and the City of Alexandria ends in 2038. The County expects to extend the service life of the existing WTE Facility by completing a facility retrofit and upgrade. To understand the costs associated with modifying the existing facility, the County will commission a study to identify funding sources and explore the feasibility of each option to upgrade the WTE Facility.

The County has identified a number of voluntary program enhancements for waste management to achieve zero waste by 2038. These initiatives do not fall within DEQ recycling requirements, but will help the County increase the recycling rate beyond the current rate of 52.4 percent (2021). Implementation of each initiative is subject to the annual budget process, feasibility analysis, and County prioritization, which gives the County the flexibility to implement new programs, services, and policies as resources become available.

As the County implements the voluntary program enhancements discussed in this plan, funds will need to be allocated to support them. These initiatives, when fully implemented, are expected to cost the County \$10.0 to \$24.8 million dollars over the 20-year planning period. Funding to support these initiatives may need to come from an increase in existing user and program fees (i.e. HSWR) or from the establishment of new fees or funding mechanisms (i.e. environmental investment fee). These new mechanisms may require state approval. In order to identify and evaluate the best option(s) for funding the programs and services needed to confirm long term disposal capacity and achieve zero waste, the County will need to conduct an in depth financial analysis and study to identify and evaluate funding sources and select the best option. Key components of this study should include:

- Funding mechanisms
- Sector(s) impacted
- Collection mechanism
- Escalation considerations
- Equity needs

The results of this study will help the County establish a funding program that supports the diversion strategies discussed in this plan along with ensuring the County has long term disposal capacity. Some potential funding mechanisms to be considered as part of the study are discussed below.

Funding Mechanism	Description
Household Solid Waste Rate	As discussed above, the HSWR is charged to all residential properties receiving County curbside collection services. The fee is full-cost recovery for the services provided to the residential sector. Many of the zero waste initiatives discussed as part of this plan impact the residential generating sector. The HSWR is an important source of revenue that may need to be increased to help pay for some of the County's zero waste initiatives.
Multi-family and Commercial Recycling Program Fee	As discussed above, the multi-family and commercial recycling program fee is full-cost recovery. With many of the zero waste initiatives discussed as part of this plan impacting the multi-family and commercial generating sectors, it may be necessary to evaluate this fee as a potential revenue source to offset some of the zero waste program costs.
Plastic Bag Tax	<p>In September 2021, the County Board passed a law that imposes a five cent per bag tax on disposable plastic bags beginning January 1, 2022. Plastic bags generally provided at grocery and convenience stores are impacted by this tax. Customers of these establishments who request a plastic bag for their purchased goods are charged five cents per bag. Fees collected through the plastic bag tax amount to about \$25,000 per month. In 2022, three of the five cent tax is remitted to the County while the retailer that collected the tax keeps the remaining two cents. In January 2023, the allocation of the tax was adjusted so that four of the five cents is remitted to the County and the retailer collecting the fee will keep one cent.</p> <p>The purpose of leveraging this tax is to reduce the consumption of plastic bags. The money collected the tax is used to support environmental programs in the County, such as buying reusable bags to distribute. The plastic bag tax provides a steady and important revenue stream that can be used to enhance and implement waste diversion and recycling strategies and support the solid waste programs discussed in this plan. It may be necessary to increase the tax in order to continue discouraging the use of plastic bags.</p>
General Fund	The County's general fund provides the resources for general County operations. The fund may also serve to help support the zero waste initiatives discussed as part of this plan.

Funding Mechanism	Description
Environmental Investment Fee	<p>An Environmental Investment Fee (EIF), or solid waste generator fee, is a fee that can be levied to both residential and commercial entities. The EIF is based on an entity's estimated waste generation rate. The revenues generated by this fee could provide funding needed to expand or implement the waste diversion initiatives and general solid waste planning issues discussed in this plan. It can also fund community-wide programs such as litter collection, street sweeping, and waste stream assessments.</p>



9.0 STAKEHOLDER ENGAGEMENT

Section 9VAC20-130-130 of Virginia DEQ’s Solid Waste Planning and Recycling Regulations establishes requirements for public participation in development of the SWMP. The requirements include hosting public meetings or establishing citizen advisory committees during the plan development process. Additionally, prior to the submission of the plan, the County is to publish a notice and hold a public hearing on the plan. The County hosted multiple opportunities for stakeholders to provide input throughout the development of the SWMP, listed below.

SOLID WASTE COMMITTEE

Arlington County’s new SWMP provides an opportunity to shape solid waste management activities for the next 20-years. As part of the public input process, the County established the Solid Waste Committee (SWC) in the early 1990s that was comprised entirely of Arlington residents. The SWC was formed as a successor to the Pilot Recycling Program Advisory Committee when the County’s curbside recycling program started. The Arlington County Board established the SWC as part of C2E2 in order to have citizen review and input into the broad range of solid waste management issues facing the County. The SWC is a subcommittee to C2E2 and provided input to help guide the development of the plan. Members of the SWC provided their perspectives on the following:

- Activities to meet Virginia DEQ recycling requirements
- Identification of diversion priorities to achieve zero waste
- Prioritization of diversion strategies
- Scope and activities of diversion strategies
- Timeframe for strategy implementation
- Scope and extent of the public participation process
- General guidance on solid waste issues

This input assisted the County in developing a SWMP that not only meets state requirements, but also provides a path for the County to achieve zero waste by 2038. The SWC included approximately 20 individuals that were selected by SWB staff. The County sought to establish a SWC that represented the diversity of the Arlington community and all potentially impacted sectors. Representatives from the following business groups and organizations were part of the SWC:

- C2E2
- Arlington Business Community;
- Arlington Citizens/Citizen Groups;
- Education Community;
- Restaurant/Hospitality Community;

9.0 Stakeholder Engagement

- Environmental Community;
- Nonprofits/Trade Associations;
- Hauler/Processing Community;
- Office and Apartment Building Community; and
- Arlington Public Schools

Individuals on the SWC represented those various constituencies throughout the County. Committee members were encouraged to take information provided by the County back to the boarder community they represented. Members were also encouraged to solicit feedback from the broader community they represent and provide it to the County as part of the regular SWC meetings or via separate communication with County staff.

The SWC met monthly with SWB staff and the contracted consultant beginning in February 2022 with continuing monthly meetings through February 2023. Each meeting included a presentation on some aspect of solid waste management in the County or development of the plan. The meetings were designed to be interactive to facilitate the input and perspectives of SWC members. Each meeting was recorded and the recording was made available to members of the public via posting on the County's website. The SWC met again monthly in May and June 2023 to review and adopt the SWMP.

The draft plan was adopted universally by the SWC in September 2023, understanding that it represents a compromise with some SWC members expressing concern with the Comprehensive Organics Management initiative possibly mandating organics diversion across the community.

COMMUNITY FEEDBACK

The County provided multiple opportunities for the community to provide feedback on the Solid Waste Management Plan. This included two public informational virtual town hall meetings in May 2022. The content of each town hall meeting was the same and it was designed to give community members options for participating in the planning process. During these meetings, County staff explained the goals and objectives of the solid waste management planning process and asked community members to submit ideas and comments on how to achieve the goals. Feedback was received via email to County staff. Specific ideas and comments received were compiled by County staff and provided to the SWC for further consideration and feedback. Community feedback opportunities were promoted through multiple County channels and social media along with the method to submit feedback. The recorded town hall meetings were posted on the County's website throughout the SWMP development process for community members to listen to at any time.

In November 2023, the Arlington County community was given an opportunity to review and provide feedback on the draft plan approved by the SWC. SWB staff presented an overview of the draft plan by a virtual town hall meeting and asked the community to review and provide comments online using Konveio, a public feedback platform. Resident feedback fell within a spectrum of support for waste reduction/diversion with sentiment ranging from not enough being done to opposition/low priority indicating similar divergence of views throughout the community.

Other community organizations (C2E2, Sierra Club, and EcoAction Arlington) also submitted letters to the board identifying very similar critiques of the plan. Survey responses, comments, and letters received as part of the community feedback process are provided in **Appendix G**.



Appendix A

SWMP Acronyms

Solid Waste Management Plan Acronyms

- AD – Anaerobic Digestion
- APS – Arlington Public Schools
- C2E2 – Climate Change, Energy and Environmental Commission
- COG – Council of Governments
- CNG – Compressed Natural Gas
- C&D – Construction and Demolition
- CHaRM – Center for Hard to Recycle Materials
- DEQ – Department of Environmental Quality
- EIF – Environmental Investment Fee
- EP4 – Environmentally Preferable Practices and Purchasing
- EPA – Environmental Protection Agency
- EPR – Extended Producer Responsibility
- HHM – Household Hazardous Materials
- HSWR – Household Solid Waste Rate
- LEED™ – Leadership in Energy and Environmental Design
- MRF – Material Recovery Facility
- MTCO2E – Metric Tons of Carbon Dioxide Equivalent
- RCRA – Resource Conservation and Recovery Act
- RMW – Regulated Medical Waste
- SWB – Solid Waste Bureau
- SWANA – Solid Waste Association of North America
- SWC – Solid Waste Committee
- SWMP – Solid Waste Management Plan
- WDSA – Waste Disposal and Service Agreement
- WTE – Waste-to-Energy



Appendix B

Arlington County Board SWMP Adoption Resolution



Appendix C

Historical Waste Diversion Quantities

Historical Waste Diversion Quantities

Annual Waste Diversion Quantities

In 2021 about 93,500 tons of materials were diverted from disposal through reuse and recycling programs in the County. This data includes diversion quantities from County programs and also information provided to the County through hauler reports. Special glass collection programs using purple bins located throughout the County started in 2019 and has grown significantly in recovering glass materials. Additionally, the County launched a residential curbside food scraps collection program (co-collection with yard waste) in September 2021. The increased amount of cardboard reported for diversion beginning in 2019 is from private haulers reporting data to the County. Error! Reference source not found. presents the past five years of annual waste diversion quantities by material type.

Table 1. Historical Waste Diversion Quantities

Recycled Material	TONS OF MATERIALS				
	2017	2018	2019	2020	2021
Recycled Material Stream					
Cardboard	NA	NA	21,845	19,929	22,842
Paper	18,930	19,694	19,362	25,470	12,880
Metal	8,693	11,968	11,344	9,658	30,888
Plastic	507	249	385	373	405
Glass	0	0	523	1,724	1,616
Yard Waste	17,238	19,914	23,419	22,433	17,893
Food Scraps	975	2,062	2,435	2,328	2,164
Kitchen Grease	1,526	994	943	886	741
Textiles	78	78	120	167	136
Electronics	1,096	186	185	174	184
Wood Waste	1,419	1,295	956	454	718
White Goods	0	37	178	163	1,226
Special Waste (oil, filters, batteries, etc.)	1,594	1,459	1,215	771	837
Scrap Tires	789	872	1,088	951	920
OVERALL TOTAL RECYCLED	52,845	58,808	83,998	85,481	93,450
Reused Material Stream					
Toner Cartridges	72	71	91	75	76
Food Donation	74	52	93	69	25
Other (i.e. books)	7	0	0	0	0
OVERALL TOTAL REUSED	153	123	184	144	101
TOTAL MSW DIVERTED	52,998	58,931	84,182	85,625	93,551

Sources: Virginia DEQ Solid Waste and Materials Management Annual Report (2017-2021)

Note: Special Waste includes used oil, filters, batteries, etc.



Appendix D

Disposed Material Composition by Generating Sector

Detailed Disposed Material Composition

The County completes annual material audits of the disposed waste generated by residential and commercial generating sectors. Additionally, in 2022, the County arranged for an audit of the disposed waste from one multi-family property. The following three tables provide the detailed composition of the disposed waste from each of the three waste generating sectors along with an estimated annual tonnage.

Table 1. Single-Family Residential Disposed Material Composition

Material Category	Material Type	Estimated Annual Disposal (tons)	Percent Composition
Recyclable	Newspaper	190	0.7%
	Cardboard	680	2.6%
	Mixed Paper including Magazines, Paperboard (cereal & cracker boxes), Phonebooks, Books	1,560	6.0%
	Milk & Juice Containers (aseptic containers)	90	0.3%
	Aluminum Cans	110	0.4%
	Tin/Steel Cans (including aerosol cans)	140	0.5%
	Aluminum foil and trays	110	0.4%
	Plastics #1	590	2.3%
	Plastics #2 CLEAR	200	0.8%
	Plastics #2 COLORED	360	1.4%
Compostable	Plastics #3, 4, 5, 6, 7	580	2.2%
	Compostable Paper (Paper plates, paper towels and napkins, wax paper, tissues)	1,480	5.7%
	Clean Food Waste	2,270	8.7%
	Contaminated Food Waste	2,120	8.1%
	Leaves, brush, prunings, plants	750	2.9%
Diverible	Grass/Sod	140	0.5%
	Scrap Metals/Small Appliances	500	1.9%
	Electronics/Computers	220	0.8%
	Glass Bottles/Jars	1,520	5.8%
	Concrete/Brick/Rock	340	1.3%
	Dirt	80	0.3%
	Latex Paint	0	0.0%
	Special Wastes: Oil-based Paint/Solvent, Lead Acid or Lithium-ion Batteries, Poisons, Corrosives, Fertilizers, Auto fluids	250	1.0%
	Fluorescent Light Bulbs/Tubes	70	0.3%
	Clothing/Linen	520	2.0%
	Other Textiles (Belts, purses, shoes, etc.)	470	1.8%
	Sheet Rock/Dry wall	570	2.2%
	Tires and Rubber	390	1.5%
	Lumber/Pallets	70	0.3%
Trash	Pots and pans	0	0.0%
	Plastics #6	0	0.0%
	Flexible plastics (juice pouches, condiment packets)	60	0.2%
	Non-recyclable plastics (no #), Solo Cups/Dishware, and Empty Contaminated Plastics (used motor oil containers, antifreeze, and pesticides)	650	2.5%
	Plastic Bags (shopping bags, newspaper bags, bread bags, plastic film)	930	3.6%
	Styrofoam (packaging, takeout containers, plates)	390	1.5%
	Other Glass (windows, mirrors)	50	0.2%
	Ceramics (dinnerware i.e., bowls and cups)	150	0.6%
	Carpets/Rugs	170	0.7%
	Fines (grit, material swept up)	210	0.8%
	Liquids	170	0.7%
	Miscellaneous Trash (not applicable to any other category)	3,080	11.8%
	Organic Miscellaneous (Diapers/Sanitary Prod, Cat Litter/Dog Feces)	2,750	10.5%
	Other Wood	1,110	4.3%
	Total	26,090	100.0%

Table 2. Multi-Family Residential Disposed Material Composition

Material Category	Material Type	Estimated Annual Disposal (Tons)	Percent Composition
Recyclable	Newspaper	0	0.0%
	Cardboard	2,110	3.3%
	Mixed Paper including Magazines, Paperboard (cereal & cracker boxes), Phonebooks, Books	16,680	25.9%
	Milk & Juice Containers (aseptic containers)	270	0.4%
	Aluminum Cans	380	0.6%
	Tin/Steel Cans (including aerosol cans)	490	0.8%
	Aluminum foil and trays	220	0.3%
	Plastics #1	1,780	2.8%
	Plastics #2 CLEAR	160	0.2%
	Plastics #2 COLORED	220	0.3%
Plastics #3, 4, 5, 6, 7	590	0.9%	
Compostable	Compostable Paper (Paper plates, paper towels and napkins, wax paper, tissues)	2,650	4.1%
	Clean Food Waste	10,100	15.7%
	Contaminated Food Waste	8,100	12.6%
	Leaves, brush, prunings, plants	110	0.2%
	Grass/Sod	0	0.0%
Diverfible	Scrap Metals/Small Appliances	920	1.4%
	Electronics/Computers	220	0.3%
	Glass Bottles/Jars	2,480	3.8%
	Concrete/Brick/Rock	0	0.0%
	Dirt	0	0.0%
	Latex Paint	0	0.0%
	Special Wastes: Oil-based Paint/Solvent, Lead Acid or Lithium-ion Batteries, Poisons, Corrosives, Fertilizers, Auto fluids	50	0.1%
	Fluorescent Light Bulbs/Tubes	0	0.0%
	Clothing/Linen	1,840	2.9%
	Other Textiles (Belts, purses, shoes, etc.)	0	0.0%
	Sheet Rock/Dry wall	4,800	7.4%
	Tires and Rubber	0	0.0%
	Lumber/Pallets	0	0.0%
Trash	Pots and pans	0	0.0%
	Plastics #6	50	0.1%
	Flexible plastics (juice pouches, condiment packets)	0	0.0%
	Non-recyclable plastics (no #), Solo Cups/Dishware, and Empty Contaminated Plastics (used motor oil containers, antifreeze, and pesticides)	700	1.1%
	Plastic Bags (shopping bags, newspaper bags, bread bags, plastic film)	1,570	2.4%
	Styrofoam (packaging, takeout containers, plates)	490	0.8%
	Other Glass (windows, mirrors)	0	0.0%
	Ceramics (dinnerware i.e., bowls and cups)	0	0.0%
	Carpets/Rugs	0	0.0%
	Fines (grit, material swept up)	0	0.0%
	Liquids	1,620	2.5%
	Miscellaneous Trash (not applicable to any other category)	3,890	6.0%
	Organic Miscellaneous (Diapers/Sanitary Prod, Cat Litter/Dog Feces)	2,000	3.1%
Other Wood	0	0.0%	
	Total	64,490	100.0%

Table 3. Commercial Disposed Material Composition

Material Category	Material Type	Estimated Annual Disposal (tons)	Percent Composition
Recyclable	Newspaper	0	0.0%
	Cardboard	1,250	9.4%
	Mixed Paper including Magazines, Paperboard (cereal & cracker boxes), Phonebooks, Books	950	7.2%
	Milk & Juice Containers (aseptic containers)	10	0.1%
	Aluminum Cans	220	1.7%
	Tin/Steel Cans (including aerosol cans)	0	0.0%
	Aluminum foil and trays	120	0.9%
	Plastics #1	690	5.2%
	Plastics #2 CLEAR	130	1.0%
	Plastics #2 COLORED	30	0.2%
Plastics #3, 4, 5, 6, 7	90	0.7%	
Compostable	Compostable Paper (Paper plates, paper towels and napkins, wax paper, tissues)	560	4.2%
	Clean Food Waste	2,010	15.1%
	Contaminated Food Waste	1,040	7.8%
	Leaves, brush, prunings, plants	0	0.0%
	Grass/Sod	0	0.0%
Diverfible	Scrap Metals/Small Appliances	190	1.4%
	Electronics/Computers	0	0.0%
	Glass Bottles/Jars	980	7.4%
	Concrete/Brick/Rock	0	0.0%
	Dirt	0	0.0%
	Latex Paint	0	0.0%
	Special Wastes: Oil-based Paint/Solvent, Lead Acid or Lithium-ion Batteries, Poisons, Corrosives, Fertilizers, Auto fluids	0	0.0%
	Fluorescent Light Bulbs/Tubes	0	0.0%
	Clothing/Linen	150	1.1%
	Other Textiles (Belts, purses, shoes, etc.)	0	0.0%
	Sheet Rock/Dry wall	60	0.5%
	Tires and Rubber	0	0.0%
	Lumber/Pallets	0	0.0%
Trash	Pots and pans	0	0.0%
	Plastics #6	30	0.2%
	Flexible plastics (juice pouches, condiment packets)	0	0.0%
	Non-recyclable plastics (no #), Solo Cups/Dishware, and Empty Contaminated Plastics (used motor oil containers, antifreeze, and pesticides)	940	7.1%
	Plastic Bags (shopping bags, newspaper bags, bread bags, plastic film)	880	6.6%
	Styrofoam (packaging, takeout containers, plates)	120	0.9%
	Other Glass (windows, mirrors)	0	0.0%
	Ceramics (dinnerware i.e., bowls and cups)	0	0.0%
	Carpets/Rugs	0	0.0%
	Fines (grit, material swept up)	150	1.1%
	Liquids	60	0.5%
	Miscellaneous Trash (not applicable to any other category)	1,500	11.3%
	Organic Miscellaneous (Diapers/Sanitary Prod, Cat Litter/Dog Feces)	1,040	7.8%
Other Wood	70	0.5%	
	Total	13,270	100.0%



Appendix E

Arlington County Zero Waste Resolution

Zero Waste Resolution County Board of Arlington County, Virginia

Adopted November 19, 2015

WHEREAS, the Arlington County Board (Board) is committed to the principles of sustainability and environmental responsibility, which serve to protect the quality of life in Arlington County now and for future generations; and

WHEREAS, the Board understands that local government should lead by example and that waste prevention, reuse, recycling, and composting are waste management strategies that conserve our finite natural resources while reducing environmental impacts; and

WHEREAS, Virginia Solid Waste Management Planning Regulations (9 VAC 20-130) require that Arlington County (County) develop and implement a Solid Waste Management Plan (SWMP) to achieve a minimum recycling rate of 25 percent of all municipal solid waste generated; and

WHEREAS, the Board adopted a SWMP in 2004 that addressed the County's solid waste management needs and set voluntary goals and objectives for the 20-year planning period, including increasing the County's recycling rate to 47 percent by 2024; and

WHEREAS, the County has already implemented nearly all of the SWMP objectives and surpassed the voluntary 2024 recycling goal of 47 percent with a recycling rate for calendar year 2014 of 47.2 percent; and

WHEREAS, Zero Waste management has been recognized internationally as an economically viable, ethical, and sustainable way to responsibly manage waste to better protect and preserve the environment by viewing discarded materials as a resource for others to use; conserving and recovering natural resources through waste prevention; reusing or recycling 90 percent of discarded materials rather than burning or burial; turning discarded resources into jobs and new products instead of trash; encouraging the production of products that are durable and recyclable; and discouraging products and materials that become trash after their use; and

WHEREAS, while striving to attain higher waste reduction goals, the County acknowledges that a certain amount of residual waste is inevitable, and thus will continue to give preference to waste-to-energy technology as the primary means of disposal rather than landfilling, consistent with the U.S. Environmental Protection Agency's waste management hierarchy; and

WHEREAS, by adopting a goal of Zero Waste disposal and pursuing Zero Waste principles, the County would be the first among local governments in the Commonwealth and would further demonstrate the County's commitment to sustainability and environmental protection;

THEREFORE, BE IT RESOLVED BY THE BOARD OF THE COUNTY OF ARLINGTON, VIRGINIA, that the Board directs staff, in cooperation with the community and the citizen-led Solid Waste Committee, to develop a Zero Waste Plan for Board consideration that explores all of the issues related to successful implementation of the Plan – to include an analysis of existing practices and opportunities to achieve the goals identified, and an assessment of the Plan's environmental, operational, and fiscal impacts. The Zero Waste Plan could serve as a revised SWMP aimed at increasing waste diversion to at least 90 percent by 2038 for County government, and for Arlington County as a whole



Appendix F

Zero Waste Strategy Detailed Impacts

Voluntary Program Enhancement Details

SHORT-TERM (2024-2029)

The County has identified seven voluntary program enhancements that are prioritized for the initial six-year short term implementation period. Each initiative is described in this section along with preliminary estimates on the impacts each will have on waste quantities, greenhouse gas impacts, and costs over the 20-year planning period.

Expand and Enhance Education and Outreach Initiatives

Overview

The focus of this initiative is to expand and enhance the County's current educational program to maximize use of the County's existing recycling and waste diversion infrastructure. The County has established a comprehensive program for residents and businesses to divert waste from disposal. Data from the County's most recent material audits (2021-2022) for both the residential (single-family and multi-family) and commercial waste generating sectors indicate that existing waste diversion programs and infrastructure are not being used to their full potential. Large quantities of materials that could be diverted through these programs are still being disposed.

Expanding and enhancing the County's educational program includes the following key activities, including:

- Hiring two new marketing and education specialists to join existing staff at the Solid Waste Bureau
- Developing new marketing and educational campaigns that encourage proper and maximum use of existing diversion programs
- Engaging a variety of media outlets to air educational messages/campaigns

The educational specialist positions will focus on educating residents and businesses on the existing material diversion programs available. This includes encouraging first time users and promoting infrequently used program. The enhanced educational program will also help users participate correctly to reduce or eliminate material contamination.

Sectors Impacted

Although this initiative will impact all waste generating sectors in the County, it will primarily focus on residents living in multi-family properties and other small communities (i.e. Fairlington Villages) that do not receive County solid waste services. Research by the County indicates these communities are not participating in diversion programs to the level that communities with County provided solid waste services are participating.

Material Quantities and Diversion Rate Impact

All material types currently targeted by existing County diversion programs, including curbside, drop-off, on-call, and special collections, are included as part of this initiative. This includes traditional recyclable materials such as corrugated cardboard, mixed paper, aluminum/steel cans, and plastic containers as well as glass jars and bottles, yard waste, food waste, household hazardous waste, and

electronics. Approximately 45,000 tons of these target materials were disposed in 2022. It is projected this initiative will divert 60 to 70 percent of these materials annually, or between 28,000 and 33,000 tons, when this initiative is fully implemented.

This initiative is projected to increase Arlington County's diversion rate by an additional 14.2 to 16.5 percent. It is not expected to reduce the quantity of waste generated; however, it will move materials from the disposed waste stream to the recycled/diverted stream.

Greenhouse Gas Impacts

Using U.S. EPA's Waste Reduction Model (WARM), the diversion of an additional 28,000 to 33,000 tons of materials will result in reduced greenhouse gas emissions of nearly 71,000 metric tons of carbon dioxide equivalent (MTCO₂E) annually. These emission reductions are equivalent to removing nearly 15,000 passenger vehicles from the streets of Arlington each year.

Preliminary Costs

This initiative is expected to cost the County between \$4.9 and \$7.4 million dollars over the 20-year planning period. These costs include the estimated salary and benefits packages for two new Solid Waste Bureau staff (Management Analyst Classification) to carry out the education and outreach activities for this initiative. Additional expenses include contracted media services to run television, radio, and other media announcements promoting the use of the County's solid waste diversion programs.

Implement Waste Reduction and Material Donation/Reuse Education Campaigns

Overview

The focus of this initiative is to prioritize the highest tier of the Virginia DEQ and U.S. EPA waste management hierarchy, waste reduction, through specific education and outreach activities. Many opportunities exist for waste reduction, which represents the most significant opportunity in solid waste management to conserve resources, reduce costs and protect the environment. Residents and businesses must rethink their purchasing practices to shift away from disposable products to reusable and durable materials.

Many opportunities exist for waste reduction. For waste reduction to have the high-level impact it has the potential to achieve significant achievements in facility design and behavior change are needed. Although this plan provides important initiatives and activities to facilitate waste reduction measures, the effort to change behaviors and consumption patterns is much larger than the authority of the SWB has been designated.

Central to this initiative is a campaign operated by SWB staff that educates business owners and owners/managers of multi-family properties of the benefits of material donation. It may include developing flyers that can be posted in multi-family buildings listing entities accepting donations to provide tenants with an alternative option to placing unwanted goods in the trash dumpster. This initiative may also include facilitating connections between entities that have items to donate with non-profit organizations that accept donations to establish a more formal arrangement for material donation.

Zero waste and waste reduction efforts require partnerships with the SWB and other County departments and outside organizations to design a system that prevents waste from being

generated. The County has an opportunity to be a leader and set an example to other communities and the private sector. It starts with designing County facilities that prioritize waste prevention. Building requirements that include container space for three streams of materials (trash, recycling, and organics), water bottle refilling stations, and other waste prevention methods are needed to establish the practice. This infrastructure will help the public begin to change their routines to incorporate waste reduction into their lifestyle. This may include waste reduction activities such as using reusable bags while shopping, reading electronic papers and magazines instead of print, using a refillable water bottle at home and work, packaging food items in reusable containers, or using cloth diapers in place of disposable diapers. This might also include providing information on issues such as freshness dating for foods to help people better understand shelf-life to reduce food waste. Education of the public is key to the success of this initiative. Staff resources for this initiative will include support from the education staff hired as part of the activities to enhance the County's educational and outreach initiatives.

Sectors Impacted

Although this initiative will impact all waste generating sectors in the County, it will primarily focus on residents living in multi-family properties and other small communities (i.e. Fairlington Villages) that do not receive County solid waste services. Research by the County indicates these communities are not participating in diversion programs to the level that communities with County provided solid waste services are participating.

Material Quantities and Diversion Rate Impacts

As discussed above, the opportunities for waste reduction are significant and include all materials currently entering the disposal, recycling, and organics waste streams. Approximately 104,000 tons of materials generated in the County are disposed annually. Achieving a waste reduction rate of 10 to 12 percent of the disposed waste stream through this campaign would result in a reduction in generation of 12,000 to 14,000 tons of material annually. A reduction of this amount would increase the County's diversion rate by an additional 3.0 to 3.7 percent.

Greenhouse Gas Impacts

Using U.S. EPA's Waste Reduction Model (WARM), the diversion of an additional 12,000 to 14,000 tons of materials will result in reduced greenhouse gas emissions of about 34,000 MTCO₂E annually. These emission reductions are equivalent to removing nearly 7,100 passenger vehicles from the streets of Arlington each year.

Preliminary Costs

This initiative is expected to cost the County between \$425,000 and \$595,000 dollars over the 20-year planning period. The main cost associated with this initiative is the contracted media services to run television, radio, and other media announcements promoting waste reduction messages and ideas.

Multi-Family and Commercial Organics Diversion

Overview

Organic materials represent a significant portion of the disposed waste stream in Arlington County. Opportunities to expand organics diversion exist, particularly in the multi-family and commercial generating sectors where few diversion programs currently operate. This initiative aims to encourage the voluntary diversion of organics by providing direct technical assistance and support to multi-

family and commercial properties to set-up or expand existing organics recycling programs. Approximately 25 percent of the multi-family and commercial waste streams are organic materials, primarily food waste, which could be diverted for recycling.

The County does not directly provide solid waste collection services to multi-family and commercial properties. However, the County does provide educational resources and support to multi-family and commercial entities interested in implementing and expanding diversion programs. This initiative focuses on expanding those existing resources and support to help commercial and multi-family properties prioritize organics recycling. It may include providing incentives for multi-family and commercial properties to voluntarily implement organics collection programs. Incentives might include tax breaks, grant opportunities, and/or adjustments to permitting fees. The specific support, resources, and incentives to help multi-family and commercial properties owners/operators to voluntarily divert organic materials will be based on funding availability and/or support from other County departments.

Multi-family and commercial properties implementing and adopting organics diversion programs will likely incur additional material handling and hauling expenses. In most cases separate collection equipment and staff resources are needed to divert organics for recycling. This initiative will help entities manage these costs before more long-term cost savings (i.e. reduced trash collection fees) can provide some relief.

Material Quantities and Diversion Rate Impacts

Organic material generated and disposed from multi-family and commercial properties in the County is estimated to be about 21,900 tons annually. This material includes food waste and soiled paper (i.e. napkins, paper towels, tissues, etc.), and to a less extent yard waste. A robust organics diversion program in the multi-family and commercial generating sectors will take time to build; however, with the expanded staff resources available as part of the County's zero waste plan this initiative could increase the County's diversion rate by an additional 3.3 to 4.4 percent.

Greenhouse Gas Impacts

The GHG impact of additional organics diversion varies based on the end disposal of the material. Diverting 8,800 tons of organic materials from disposal in a WTE facility, as is currently the case, to a composting facility increases GHG emissions by about 700 MTCO₂E annually. However, diverting that same amount of organic materials from disposal in a landfill results in a reduction in emissions of 4,500 MTCO₂E annually. The variation in emission reduction impacts is because of a WTE Facility's advanced pollution control equipment that tightly controls emissions compared to a landfill system that, although may have a gas control and collection system, do have fugitive emissions.

Preliminary Costs

This initiative is expected to cost the County between \$425,000 and \$595,000 dollars over the 20-year planning period. The main costs associated with this initiative is the contracted media services to run television, radio, and other media announcements encouraging organics diversion, and incentives the County provides to encourage early adoption of organics diversion programs.

Organics Diversion at Farmers Markets

Overview

The County sees farmers markets as a natural opportunity to advance their goal of zero waste through additional diversion of organic materials at them. The purpose of this initiative is to develop

a partnership between the County and various farmers markets to establish a system whereby food that cannot be sold is diverted from disposal. The primary focus will be the “back-end” of the farmers markets and will target the vendors. The initiative may include the recovery of food waste from shoppers as the market, particularly in high-density areas. The farmers markets food recovery program will align with the priorities established as part of the U.S. EPA Food Recovery Hierarchy. This includes diverting food waste to feed people, followed by using wasted food to feed animals, and diverting it for industrial use (i.e. anaerobic digestion).

Material Quantities and Diversion Rate Impacts

Organic material generated and disposed from farmers markets operating in the County is difficult to measure as individual farmers markets arrange with their preferred hauler to collect the material. Based on commercial waste data in the County, approximately 180 – 360 tons of organic material may be diverted through an organics recovery program at farmers markets. Diversion of this organic material could increase the County’s diversion rate by an additional 0.1 to 0.2 percent.

Greenhouse Gas Impacts

The GHG impact of additional organics diversion from farmers markets is impacted by the disposal program offset by the increased diversion, as discussed above. Diverting 180 to 360 tons of organic materials from disposal in a WTE facility, as is currently the case, to a composting facility slightly increases GHG emissions by about 30 MTCO₂E annually. However, diverting that same amount of organic materials from disposal in a landfill results in a reduction in emissions of 160 MTCO₂E annually.

Preliminary Costs

This initiative is expected to cost the County between \$108,000 and \$132,000 dollars over the 20-year planning period. The main cost associated with this initiative is the staff support needed to help farmers markets set-up a program.

Additional Glass Collection Services

Overview

In 2019, Arlington County removed glass from the list of accepted materials in the County’s curbside recycling cart. This change was made because of a lack of economically viable regional markets from glass collected through a curbside single-stream recycling program. The unavailability of a glass recycling market resulted in all glass collected through the program to not be recycled. The glass also reduced the quality of the other materials accepted as part of the County’s recycling program.

With the removal of glass from the curbside program in 2019, the County established glass-only drop-off containers in the County for residents to place their glass containers. In the first two years after the glass-only drop-off containers were established, over five million pounds of glass were recycled. Instead of the curbside glass being disposed, this source-separated stream of glass is transported to a facility where it is recycled. The County would continue to build on the success of the glass recycling drop-off program as part of this initiative by establishing two new glass recycling drop-off locations in the multi-use areas of National Landing and in the Rosslyn-Ballston Corridor. These areas were selected to serve the commercial entities and high population of residents

in these communities living in multi-family dwellings/properties. Material Quantities and Diversion Rate Impacts

Expansion of the glass recycling program is estimated to divert an additional 2,100 to 2,600 tons of glass annually. This equates to 40 to 50 percent of the estimated 5,100 tons of glass disposed in the trash. Diversion of this glass has the potential to increase the diversion rate by 1.0 to 1.3 percent by making glass recycling more accessible to residents in multi-family properties and businesses.

Greenhouse Gas Impacts

The GHG impact of additional glass diversion may result in a reduction of about 780 MTCO₂E annually. These emission reductions are equivalent to removing about 165 passenger vehicles from Arlington County streets and roads.

Preliminary Costs

This initiative is expected to cost the County \$54,000 to \$75,000 dollars over the 20-year planning period. The main cost associated with this initiative includes the purchase of additional collection containers.

Additional Trash Collection Charges

Overview

Arlington County provides curbside solid waste services to approximately 32,000 single-family households. As part of the annual HSWR, each household is provided separate weekly collection services for trash, recyclable materials, and organics. The County issues 64-gallon trash, recycling, and organics carts to each household as part of this service. Residents are allowed to place additional materials for collection next to each cart for collection in personal containers or plastic bags.

Residents also have the option of requesting up to two additional trash, recycling, or organics carts (six additional carts) to accommodate the amount of materials generated at their property. The cost to provide and service additional trash carts at a residence is not included in the HSWR. As of 2023, the fee for each additional cart is two dollars per month or six dollars per quarter per additional cart. A small number of residents have requested a second or third black cart and pay the additional cost for the added capacity. The two dollar cost per cart for the second or third additional cart is insufficient to cover the costs the County incurs to provide and service the cart weekly.

This initiative aims to align the resident fee of the second and third trash cart with the actual cost the County incurs for providing the additional trash collection services. It requires that the County amend the code of regulations to allow for a higher fee for these carts. Initially, the County expects to establish a new fee per trash cart for households that more than one. This change in fee eliminates the subsidy the County provides residents for producing extra solid waste and the need for additional trash carts. While the fee for additional trash carts will increase, it will not impact residents who request additional recycling or organics carts. No increased fees will be implemented for those programs.

Material Quantities and Diversion Rate Impacts

This initiative is expected to impact the amount of waste generated and diverted from the single-family residential generating sector. Implementing a program that requires residents to pay for the full cost of the collection and disposal of all solid waste generated may facilitate changes in

residents waste generation practices, particularly those that have been issued a second or third trash collection cart. It is expected that such a program will result in reduced waste generation of about 1,600 – 2,100 tons annually and increased diversion through recycling of about 1,700 – 2,000 tons annually. The County can expect a 1.4 percent increase in their diversion rate through this initiative.

Greenhouse Gas Impacts

The GHG impact of additional trash fees for single-family households with second and third trash carts may result in a reduction of about 6,500 MTCO₂E annually. These emission reductions are equivalent to removing about 1,400 passenger vehicles from Arlington County streets and roads.

Preliminary Costs

This initiative is expected to cost the County \$27,000 to \$30,000 dollars over the 20-year planning period, which mainly includes additional carts. To offset these additional expenses, the County expects an increase in revenue from residents that do not make changes to their waste generation practices and pay the increased charges.

Develop Hard to Recycle Materials Program

Overview

An important part of a community's solid waste management program is convenient services for the management of materials that are hard to recycle. These programs typically provide opportunities for residents to drop-off materials for recycling/diversion that are not accepted as part of a traditional curbside recycling program. These programs are varied across communities and accept materials based on local and regional markets. Facilities that provide these special waste diversion services are oftentimes known as Centers for Hard to Recycle Materials or CHaRM facilities.

Providing for the recycling and diversion of hard to recycle materials is an important component of the County's zero waste strategy. As part of the County's long-term plan for the management of solid waste, the County aims to establish a comprehensive recycling facility. The County anticipates including multiple services into the operation of this facility by providing residents opportunities to drop-off HHMs, recyclable materials, glass containers, and hard to recycle materials all in one place. The specific hard to recycle materials to be accepted as part of this facility will be decided upon a thorough review of available markets and end users. Materials that may be included as part of the CHaRM facility include mattresses, expanded polystyrene, textiles, carpet, and small appliances.

The development of a facility that includes a CHaRM is expected to take time. For the initial short-term planning period, the County anticipates allocated capital improvement funds to build the facility with construction also occurred during the near-term. Operations of the facility are not expected to commence until the medium-term planning period with further expansion and development over the long-term planning period.

Material Quantities and Diversion Rate Impacts

The impact of this initiative will largely depend on the types of materials a CHaRM facility will accept. The diversion impact estimated as part of this plan assumes all hard to recycle materials will be accepted, including small appliances, textiles, compact-fluorescent bulbs, drywall, lumber/pallets, sheetrock/drywall, tires, plastic bags, expanded polystyrene, and carpet. It is expected that such a program may result in increased diversion of about 3,700 – 5,200 tons annually. The County can expect a 1.9 to 2.6 percent increase in their diversion rate through this initiative.

Greenhouse Gas Impacts

Incorporating a CHaRM facility into the County's existing solid waste management program operations is expected to reduce GHG emissions by about 5,200 MTCO₂E annually. These emission reductions are equivalent to removing about 1,100 passenger vehicles from Arlington County streets and roads.

Preliminary Costs

Per Board approval as part of the County's next capital improvement program (CIP), the SWB will budget the funds needed to develop a CHaRM facility as part of a larger project to build a comprehensive recycling facility at the Trade's Center. Actual construction and establishment of the CHaRM facility will take the County into the medium-term planning period (2029 - 2034). The County expects the facility to be operating by the end of the medium-term planning period with full operation and achievement of material diversion goals throughout the remainder of the planning period. Development of a CHaRM facility is expected to cost \$2.2 to \$3.3 million dollars. These costs include the capital funds needed to build the CHaRM facility as well as the costs for hiring an SWB employee to operate the facility. Additional costs include the expenses for vendors to transport and process hard to recycle materials collected through the program.

MEDIUM-TERM (2029-2034)

The County has identified one (1) significant initiative to be completed as part of medium-term portion of the County's solid waste planning period. The medium-term timeframe is five year period from 2029 to 2034.

Comprehensive Organics Management

Overview

This initiative builds on the organics diversion initiatives implemented in the short term planning period. It establishes a comprehensive organics management program for the diversion of organics generated in the County with a particular focus on food waste. Commercial and multi-family properties will be expected to establish an organics diversion program at their facility.

Material Quantities and Diversion Rate Impacts

Organics comprise the largest part of the commercial and multi-family property waste stream and mandatory program requirements have the potential to significantly increase diversion in the County. Of the estimated 28,800 tons of organic materials (food waste, yard waste, and compostable paper) disposed annually in the County, this initiative is expected to divert 70 to 80 percent of this material, which amounts to 20,100 to 23,000 tons. Diversion of these organic materials would increase the County's diversion rate by 6.8 to 7.0 percent.

Greenhouse Gas Impacts

As discussed above for the short-term initiative for voluntary organics diversion from the commercial and multi-family generating sectors, the GHG impacts of diverting organics depend on the disposal method displaced. Diverting organics for composting from a WTE Facility as is currently the case with Arlington County's program results in a net increase in emissions of 1,700 MTCO₂E annually. However, if those materials were instead disposed in a landfill, the GHG emission impacts would result in a decrease of 10,900 MTCO₂E annually.

Preliminary Costs

The comprehensive organics management initiative will need staff support in order to facilitate multi-family and commercial compliance with the requirements for organics diversion. This initiative is anticipated to cost \$1.3 to \$2.0 million dollars, which includes costs for the salary and benefits of a full-time inspector and media services to educate entities about the requirements.

LONG-TERM (2024-2043)

Zero Waste Special Events

Overview

Arlington County is an engaged community where a number of special events are held to build community, promote competition, and facilitate learning and growth. Tens of thousands of residents and visitors attend these events every year. In 2022, hundreds of County-sponsored and public events were held throughout the County generating many tons of solid waste. These events ranged from large-scale communitywide events that draw tens of thousands of people such as the Arlington County Fair and Marine Corps Marathon to small neighborhood-specific block-parties with 50 or 100 people.

The SWB has long supported the solid waste needs of special events held throughout the County. The SWB provides recycling and organics management containers to event organizers and hosts to encourage material diversion. These containers are available on a first-come, first-serve basis to individuals that request them. Each event organizer is responsible for arranging with a private hauler for the recycling and diversion of materials collected in the containers. Material diversion at special events has been voluntary, but this initiative will make recycling and diversion of food a requirement of obtaining a special event permit.

This initiative aims to maximize waste diversion from special events throughout the County by requiring them to be zero waste. Although many special events in the County already provide recycling and organics diversion programs for attendees to use, this initiative will establish requirements that qualifying events that go through the County's special events permitting process to be zero waste events that provide recycling and organics diversion options along with trash collection.

Material Quantities and Diversion Rate Impacts

The County does not track the quantity of solid waste generated from special events. Tonnages from these events are included in the County's commercial waste generation estimates. Key materials generated at special events that would be impacted by this initiative include paper, plastic containers, metal, glass, food waste, plastic bags, expanded polystyrene, and other waste. It is estimated approximately 11,600 tons of this material is disposed annually and it is estimated this initiative could divert two to four percent of this material or 230 to 460 tons. Diversion of this material has the potential to increase the County's diversion rate by 0.1 to 0.2 percent.

Greenhouse Gas Impacts

Diverting additional materials for recycling from special events is anticipated to reduce GHG emissions by about 500 MTCO₂E annually. These emissions are the equivalent of removing about 100 vehicles from Arlington County streets and roads.

Preliminary Costs

Costs for this initiative consist of purchasing new recycling and organics containers for use at special events. These costs are estimated to be \$2,300 to \$2,800 annually or \$42,750 to \$52,250 over the 20-year planning period. Costs for staff support of this initiative are not included.

Reuse and Repair Fairs

Overview

The County anticipates organizing and promoting a reuse and repair fair each quarter at the Earth Products Yard, a library, or another location to be selected. Reuse and repair fairs will be supported by education specialist staff to be hired as part of the County's zero waste initiative. The County can help facilitate behavior change by offering programs and services that get residents to rethink waste. Reuse is an important strategy to curb waste generation. It ranks higher on the waste management hierarchy because of its effort to extend the life of materials so they do not become waste.

Material Quantities and Diversion Rate Impacts

Reuse and repair fairs are designed to serve the needs of the residential (single-family and multi-family) waste generating sector. Thus the portion of the waste stream impacted by this initiative is anticipated to be limited to that sector. While the specific reuse and repair activities will depend on the availability of skilled labor, for purposes of estimating this initiative's impact, materials such as small appliances, clothing/textiles, carpets/rugs, and other waste are anticipated to be reduced. Of the estimated 22,000 tons of these materials disposed annually, it is anticipated five-to-ten percent of these materials could be reduced from disposal. This amounts to about 1,100 – 2,200 tons of materials annually. This amount of waste reduction would increase the County's diversion rate by 0.3 to 0.5 percent.

Greenhouse Gas Impacts

Reducing waste through reuse and repair fairs is expected to reduce GHG emissions by about 1,000 MTCO₂E annually. These emissions are the equivalent of removing about 200 vehicles from Arlington County streets and roads.

Preliminary Costs

Costs for this initiative are expected to be about \$162,000 to \$198,000 over the 20-year planning period. Annual costs are expected to be between \$9,000 and \$11,000, which consists of contracted services to support the fairs.

Establish Zero Waste Dashboard

Overview

The County understands that achieving zero waste is a community effort. The County needs the support and participation of all waste generating sectors, single-family residential, multi-family residential, and commercial, for the zero waste program to be successful. One way the County expects to engage the community on the progress in achieving zero waste is to create an online "zero waste dashboard." The zero waste dashboard would visually show updated information to the community on the County's effort and progress in achieving zero waste.

As part of the dashboard, the County would select metrics, or goals, that are measured annually to monitor progress towards the zero waste goal. These metrics might include:

- Diversion rate
- Per capita waste generation
- Participation rate
- GHG reduction

The dashboard would visually show these metrics and compare them to the current state of waste management in the County. For example, the County's goal of 90 percent diversion from landfill and incineration would be included in the dashboard as a metric. This metric would be compared to the diversion rate calculated by the County for year one and subsequent years of the planning period to track progress.

Material Quantities and Diversion Rate Impacts

Although this initiative does not directly increase waste reduction or diversion, it has the potential to motivate the community to achieve zero waste. This tool will be designed to highlight the importance and need for all waste generating sectors to participate in the County's zero waste efforts. In keeping the dashboard updated, the County can use this tool to highlight accomplishments and encourage increased diversion. This motivation is expected to result in the diversion of an additional 0.1 to 0.2 percent of the total amount of waste disposed. This amounts to 70 to 140 tons, which would increase the County's overall diversion rate by up to 0.1 percent.

Greenhouse Gas Impacts

The diversion of an additional 70 to 140 tons is expected to reduce emissions by about 200 MTCO₂E annually. These emissions are the equivalent of removing about 40 vehicles from Arlington County streets and roads.

Preliminary Costs

Development of a zero waste dashboard is expected to cost the County \$18,000 to \$22,000 for initial set-up and implementation. It is expected that the County will contract with a vendor to update the dashboard with the most recent performance metric data. The annual updates are expected to cost \$1,400 to \$1,600 for a total of \$28,000 to \$32,000 over the 20-year planning period. Overall, the total cost of this initiative is expected to be \$46,000 to \$54,000.

Additional Diversion Strategies

Overview

Achieving zero waste requires a significant shift in product manufacturing and consumption patterns. Zero waste is a fundamental change in the way the Arlington community goes about its daily business. While the County has little control over product manufacturing or types of products and packaging sold in the County, it can influence behavior change through expanded education and outreach. The goal is for all sectors in the community to consider the waste impacts of all their purchases and activities, and to choose products that minimize waste. This perspective impacts all spheres of life in the County. Many of these changes are small and may not have a significant impact on the County's overall diversion rate. Nonetheless, they are important because they are part of the shift towards a zero waste community.

The County has identified a number of initiatives that are important for transitioning to a zero waste community, even though there may not be a measurable impact on the County's overall diversion rate. These activities do have important environmental benefits and are worth pursuing as part of the County's zero waste plan.

Initiative

- **Equipment Sharing Program** – For this initiative the County would establish a program whereby residents can “check-out” or borrow County-owned equipment for personal use. This initiative will expand the County's current sharing program to include small hand-held equipment and lawn tools. Items such as drills, saws, lawn mowers, leaf blowers, etc. can be reserved by residents for a set period of time for personal use. Items would be returned to the County and be made available for another resident to check-out. It is anticipated this program would be managed through the County's network of libraries. The initiative would reduce the need for residents to purchase durable goods and reduce waste packaging materials. It may reduce waste by 110 – 150 tons and GHG emissions by about 700 MTCO₂E annually. It is expected to cost the County \$72,000 to \$88,000 over the 20-year planning period for purchasing of the equipment and site improvements at various libraries to accommodate this program.
- **Environmentally Preferable Purchasing/Sustainability Policy** – In 2018, the SWB completed a report titled “*Arlington County Facilities Recycling and Waste Management Report.*” For this study, 55 facilities with County employees were assessed for solid waste and recycling code compliance. One of the recommendations in the report was to update and expand the County's Environmentally Preferable Practices and Purchasing Policy (EP4). The County's current EP4 policy is focused on purchasing, but does not mention the County's code requirements for recycling. A revised EP4 policy and a new Sustainability Policy are important tools for the highest levels of the County's government to communicate the importance of zero waste and operating sustainably. This initiative aims to bring a revised EP4 policy and sustainability policy to the Board for adoption. The County anticipates the need to hire an additional staff person in the Department of Management and Budget to oversee and implement an EP4 policy.
- **Reusable Packaging at Food Service Establishments** – This initiative will reduce the amount of disposable take-out food packaging from food service establishments. The County will support covered entities in their efforts to incorporate reusable food packaging into their operations by providing technical assistance and support to make the switch. It may also include activities such as establishing a plastic prevention policy and helping food service establishments comply with the statewide expanded polystyrene ban set to take effect in 2028. Finally, this initiative will include providing food service establishments with small grants to purchase reusable dishware. The initiative is expected to reduce waste by 20 to 40 tons and reduce GHG emissions by about 200 MTCO₂E annually.
- **Incorporate Zero Waste Principles Throughout County and APS Operations** - Explore opportunities to incorporate zero waste principles into County and APS infrastructure and operations. This may include deconstruction of existing facilities to facilitate material reuse and recycling, installation of water bottle refilling stations, composting programs at community gardens, and systems to capture and reuse rainwater. The initiative is expected to reduce waste by 30 to 70 tons and reduce GHG emissions by about 320 MTCO₂E annually.



Appendix G

Community Feedback

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No.	Applicable Sector	Category	Sub-category	Recommendation
1	All	Data	Data	Is the percentage of recycling that ends up as waste the recycling facility disposes of included in the AC 90% diversion calculation? It should be.
2	All	Enforcement	Oversight	Increase Transparency for Third Party Recyclers. Make it clear what third-party vendors are doing with commodities that are given to them. For example, for the third-party vendor who collects shredded paper, we should specify that this paper is certifiably being recycled, not just taken to the landfill or WTE.
3	All	Enforcement	Oversight	Programs should all be more robustly enforced. For example, waste management plans for developers could require the posting of construction bonds for failure to comply.
4	All	Enforcement		Conduct a two month, annual intensive campaign in which haulers check and tag recycling containers in neighborhoods where collection crews have observed high contamination.
5	All	Infrastructure	Ash	Encourage/require better analysis of ash content before the Covanta contract is renewed. Some advocates think that our WTE is producing highly toxic fly ash. I do not know if data on ash composition is publicly available (emissions data is). Access to information on ash composition in the monofil landfill might help dispel this worry. Coming up with more ways of repurposing the ash in more sustainable ways should be an express goal of the WTE/SWB partnership. Encourage expansion of Covanta's program for more sustainable ash that they already have at their facility in New Jersey.
6	All	Infrastructure	Equity	Arlington exports its waste to a waste to energy plant in Alexandria, which is located right across train tracks from an elementary school; a public park with athletic fields, a playground, and picnic area; and residential neighborhoods. Arlington has a Realizing Arlington's Commitment to Equity framework. Even though the people affected are in Alexandria, the location of the waste to energy plant goes against this framework AC committed to; County hasn't been taking into account "who is burdened by county decisions" when they continue sending abundant waste to the energy to waste incinerator. It's better than older incinerators, but still not the most efficient way to produce energy. And it is not renewable energy. Trash incinerators are the most expensive and polluting way to make energy or to dispose of waste.
7	All	Infrastructure	Facility	Keep the Covanta facility open, even if we get so good at waste reduction that we cannot send a minimum amount of trash. If it becomes economically unfeasible for the Covanta facility to operate, given a 90% diversion accomplishment, Covanta should continue to be safely operated and accept trash from other jurisdictions in Virginia. Use the facility rather than decommission it. We need to ensure that the facility is highly regulated with massive transparency rather than let to age and deteriorate.
8	All	Infrastructure	Facility	Build a CHARM facility to manage hard to recycle items (mattresses, plastic film, foam packaging, cooking oil, latex paint, small metal items/appliances, solar panels, rigid plastics
9	All	Infrastructure	Facility	Build facilities that support resource recovery over disposal
10	All	Infrastructure	Facility	Install plastic textile filters in wastewater systems/test sludge for microplastics. Some studies show that microplastic fibers contribute up to 90% total plastic mass in wastewater treatment plants.[1] Plastic from textiles is the #1 source of ocean plastic pollution.[2] The County should work to ensure that our water filtration systems and sludge management can contain microplastics so that they can be disposed of at the WTE, and also make sure that microplastics are not being inadvertently released into the environment (e.g., if preferred sludge management is agricultural siting, is that the wisest choice?). The County might also consider educating residents about in-home laundry filtration products that can reduce the amount of plastic textile fiber released into the municipal wastewater stream, e.g., The Guppyfriend Washing Bag.
11	All	Infrastructure	Incentives	Provide assistance in upgrading MRF technology to allow for capturing of smaller recyclables. I understand the MRF facilities are old and designed to capture paper, so a lot of what is sent there falls through the slats. Arlington could contribute to investing in more efficient recycling technology that would facilitate collection of smaller commodities that now fall through the processing slats. There is apparently a program in Lafarge, Canada that recycles Keurig Cups and turns them into cement.

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No.	Applicable Sector	Category	Sub-category	Recommendation
12	All	Legislation	EPR	Encourage State and/or federal legislation to place some of the recycling reuse burden on manufacturers for so-called extended producer responsibility laws. However, any EPR law that is passed should have government oversight of the program once the commodities are taken back to the manufacturer. If there's no oversight on the part of the government, there's no control over what the manufacturer does with its takebacks. They could throw it all in the ocean and we would have no recourse.
13	All	Legislation	EPR	Expand the commodities collected to include carpets, which may need to be handled differently than other textiles. Consider partnering with CARE (Carpet America Recovery Effort) to establish a solution for recycling & reuse of post-consumer carpet.
14	All	Legislation	Product Bans	Address measures to reduce plastic waste in the plan. Specifically, ban plastic and Styrofoam use for restaurant takeout and delivery containers, drink cups and bags. Paper products should be substituted whenever possible.
15	All	Legislation	Product Bans	I would like to advise - in keeping with your 90% diversion goal - that you significantly revise your approach. The current market is strongly pushing plastics - both on the production/market end and the "recycling" end. Although consumers and others have been told that several types of plastics are recyclable - we know that the vast majority of plastics are simply not recycled. The materials most supportive of your goals are glass and biodegradable products. Glass can be reused - several producers provide their products in glass which can be returned to the point of sale and reuse. This means no energy use to recycle - the containers are simply cleaned and reused. This system has been in use for generations and is a proven solution. Biodegradable products can simply be placed back into the soil and require no municipal service or be composted by the county for those that are not able to do so. The current system - which encourages plastic use and discourages glass use should be righted to best achieve your stated goals.
16	All	Legislation	Product Bans	Ban or tax most single use fossil fuel-based plastics. This might require a legislative change, but that may not be necessary to ban plastic straws and plastic water bottles in County facilities. The tax could potentially be applied to bakeries, grocery and other stores that use plastic not just to bag all goods at the end of a transaction, but to bag goods while the consumer is still shopping (like bread bags, produce bags). The County could work with these stores to encourage paper bags or compostable bio-based plastic substitutes.
17	All	Legislation	Product Bans	Stop "recycling" hard to recycle plastics. We should join neighboring jurisdictions and just eliminate much of plastics recycling, including banning from the blue bins hard to recycle plastics like take out containers. We don't want to be complicit in a system that might eventually lead to plastic being dumped in the ocean. We have a reasonable and accountable solution of burning hard to recycle plastics at the WTE. The proliferation of plastics has complicated and distorted recycling so much that I had a friend tell me she routinely put her used Invisaligns in the blue recycle bins "because they are plastic, and plastic can be recycled."
18	All	Legislation	Product Bans	Recognizing the challenges of Dillon's Rule, determine what opportunities there are to enact legislation that progressively phases out or completely bans the use of certain types of difficult-to-recycle materials. oEliminate plastic bags across the County. This has been a success in reducing waste and pollution in many jurisdictions. oMove to paper straws across the county.
19	All	Legislation	Product Bans	Advocate for federal and state legislation that shifts the burden of waste management to producers and bans or restricts single use plastic items
20	All	Legislation	State Level	Advocate for enacting Producer Responsibility Laws (make producer responsible to manage products at end of life)
21	All	Legislation	State Level	Advocate for state bottle deposit program
22	All	Legislation	State Level	Product bans (i.e. Styrofoam takeout containers)

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No.	Applicable Sector	Category	Sub-category	Recommendation
23	All	Outreach/Education/Engagement	Impact Assessment	Increase SWB's transparency and oversight beyond "dropping off" collections at the MRF. There is an expectation that what is being placed in the blue municipal bins is in fact being recycled, meaning commodities are sold and new products are being made with the recycled materials. This expectation caused much of the furor when the County announced that it would not be collecting glass anymore in the blue bins; people misinterpreted that as a move to "stop recycling" glass. So, we need more oversight and transparency into MRF operations, data about what is being sold, and make decisions based not just on what the MRF will accept, but on what is being sold & recycled and what we know about market conditions.
24	All	Outreach/Education/Engagement	Impact Assessment	Be Diligent About Recycling Partners – TerraCycle and Crayola Do Not Truly Recycle Products. I would advocate for strong diligence about our recycling partners. Some in the County may say, "let's expand our recycling through TerraCycle which can take all my chips bags and candy wrappers and recycle them." I have serious doubts that TerraCycle is successfully extruding raw components from chip bags, etc. They had a partnership with MOMS Organic Market to collect such items, and that partnership ended in January 2020 when TerraCycle informed MOMS that it couldn't process what MOMS alone was sending, let alone an entire county of people. No one in the plastics/chemicals industry has figured out how to extrude raw components from multi-layer plastic bags; there is no reason why we should think TerraCycle has figured that out either. Crayola also advertises a "crayon recycling program." However, in the fine print, you realize that what the program does is send crayons off to a WTE facility. The point here is again to emphasize accountability in service of residents' expectation that what we put in the blue bin truly gets used to create new things.
25	All	Outreach/Education/Engagement	Impact Assessment	Build a logic model (a graphic depiction that presents the shared relationships among the resources, activities, outputs, outcomes and impact of a program) to be used as a roadmap for ensuring all County activities are aligned with program impact.
26	All	Outreach/Education/Engagement	Impact Assessment	Collect data and create a dashboard to track waste reduction and recycling goals, including seeking to verify whether recyclable items are in fact recycled into new products
27	All	Outreach/Education/Engagement	Infrastructure	Educate the public on where their garbage goes and the reality of the negatives of how waste-to-energy works against circular economy producing toxic waste, air pollution, and contributing to climate change.
28	All	Outreach/Education/Engagement	Reduction	In the Town Hall presentations, there seemed to be relatively greater emphasis on getting residents to increase their use of existing programs and systems and less on exploring possible behavior change programs to help them modify their consumption habits and reduce their waste.
29	All	Outreach/Education/Engagement	Reuse	The Plan should emphasize actions the County can take to create a favorable environment to reduce waste generation and support reuse and repair activities as well as educating on individual behavior changes.
30	All	Outreach/Education/Engagement	Training	Develop master programs to take the burden off County personnel to educate the Arlington community and conduct outreach (e.g., Master Recyclers, Master Composters).
31	All	Outreach/Education/Engagement	Training	Create an intern-led summer program. -In the Puget Sound Area, Waste Management interns cover 26 cities for 10 to 12 weeks conducting site visits, checking dumpsters to assess recycling habits, and chatting with residents about how they can improve. Although individuals living in single family homes recycle about 60 percent of their waste, residents in multifamily housing recycle only 20 percent. This discrepancy largely occurs because of the high turnover rate in apartment buildings, and the fact that one individual's incorrect recycling can contaminate that of the entire apartment complex. With the property manager's permission, interns go door to door to talk to individual families about what goes in the recycling bin. They also give guides and flyers available in English, Amharic, Chinese, Hindi, Korean, Russian, Somali, Spanish, and Vietnamese. This intern program led to a seven million pound increase in recycling since the program began (Rusk 2016).
32	All	Outreach/Education/Engagement		Counter "greenwashing" with a targeted education campaign. Create promotional materials that specifically counter common greenwashing about recycling, e.g., that K-Cups are currently recyclable in Arlington, that Glad "recyclable" blue trash bags are ok, the difference between "Biodegradable" and "compostable," etc.

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No.	Applicable Sector	Category	Sub-category	Recommendation
33	All	Outreach/Education/Engagement		Consult Joe & Jane Arlingtonian before any printed recycling information is distributed. Convene a focus group of random Arlingtonians before any major trash and recycling communications are made, such as the semi-annual brochures. I have received feedback that, in response to the brochure entitled, "Keep It simple," many people were simply confused, with some assuming that Arlington County had drastically reduced the amount and type of recyclables allowable in the blue bins. People on staff and environmental advocates are too steeped in the materials and substance to be adequate evaluators of content intended for the general public. The simpler the message, the easier it is to understand. There has been a lot of helpful information distributed via cart brochures, but some of the information is just overload. The Economics of Recycling was very thorough; my husband read one sentence and put it down and he is an Economics reporter. Again, consulting with detached people before publication should help make the message more effective.
34	All	Outreach/Education/Engagement		Educate businesses and consumers about the importance of a circular economy.
35	All	Outreach/Education/Engagement		Educate on the negatives of using single use plastic so people are more open to reuse.
36	All	Outreach/Education/Engagement		County should create a comprehensive zero waste page on its website with resources, videos, ideas etc. to make it easy for people to reduce their waste. List local zero waste stores (in Alexandria and Vienna) and which grocery stores and restaurants have reuse/refill options. List websites that can help residents get started with zero waste practices.
37	All	Outreach/Education/Engagement		AC can create a yearly zero waste challenge that people can sign up for. Provide information/resources and do Zoom workshops/meetings to help residents make changes. Provide some kind of incentive to do it.
38	All	Outreach/Education/Engagement		Maintaining Citizen Interest/Enthusiasm - there is an opportunity to foster a sense of community through County-wide zero-waste programs. Hosting classes for residents to learn about zero-waste practices, partnering with the business community to host gadget/appliance repair workshops, offering a program that consumers can use to identify merchants that support zero waste (i.e., bring your own container), and teaching zero-waste in school to students, are just a few examples of programs that could motivate zero-waste practices and create community.
39	All	Outreach/Education/Engagement		Engage the broader Arlington community outside of the current listserv (e.g., include an outreach materials with the utilities bill).
40	All	Outreach/Education/Engagement		Conduct focus groups with members of our community that represent the diversity (e.g., age, socio-economics, of Arlington to really understand how they view waste management (e.g., recycling, composting, reusing) and what are the barriers that are preventing them from participating. Develop personas as references when creating education and outreach material.
41	All	Outreach/Education/Engagement		Create a multicultural steering committee to develop and implement a door-to-door outreach program that included information and tips specifically geared towards Latino multifamily residents. -In King County, Washington, members of a similar effort created an outreach group that visited each apartment, reminded residents of their local recycling guidelines and supplied them with a recycling tote bag. They also distributed door hangers or recycling reminder cards to residents about contaminants often found in the recycling bins. -When creating educational flyers and dumpster stickers for the property, the project team collaborated to decide on slogans and images that would resonate with the Latino community. Additionally, the project team had at least two translators review any translated content to not only fix errors, but catch subtle cultural and linguistic nuances. -The combined efforts of door to door communication, recycling reminder cards, and appropriate on-site recycling collection contributed to a 85 percent increase in recycling of targeted multifamily buildings. These sites also saw a 19 percent decrease in recycling contamination
42	All	Outreach/Education/Engagement		Frequently evaluate outreach and education efforts to determine effectiveness or how to refine approach.
43	All	Outreach/Education/Engagement		Implement Educational efforts to reduce waste generation
44	All	Outreach/Education/Engagement		Provide more education on food waste reduction techniques and benefits
45	All	Outreach/Education/Engagement		Robust and ongoing education and outreach campaign on "sustainable shopping". Program will be focused on products and packaging to avoid and alternative options to these products.
46	All	Outreach/Education/Engagement		Implement an education campaign on the negative impacts of fast fashion and a disposable life style

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No.	Applicable Sector	Category	Sub-category	Recommendation
47	All	Outreach/Education/Engagement		Leverage technology by developing apps, using gamification and incentives. -In Portugal, citizens accumulate points when performing actions as varied as recycling beverage packaging and using public transport. These points can then be exchanged for goods such as tickets to shows, tickets to cultural facilities or biological products. The City Points application won the UN World Summit Award for digital innovation in governance and citizen engagement.
48	All	Partnership		Build strong partnerships with local organizations such as EcoAction Arlington, Sierra Club, and neighborhood groups to leverage support for County Zero Waste initiatives. Non-partisan neighborhood-based groups that the public can trust serve as messengers to promote the city recycling program.
49	All	Policy	County Code	Using Legal Authority - I also support the County influencing behavior through legislation (similar to San Francisco's requirement that residents and businesses separate recyclables and compost from their trash) or through its authority to tax (i.e., disincentivize single-use items provided at businesses by levying a tax similar to the bag tax).
50	All	Policy	County Code	Ban organics disposal from the trash
51	All	Policy	Timeline	AC needs to move at a faster pace than using 2038 as the deadline; scale up rapidly to provide health benefits (less plastic and other waste to incinerator), contribute to solutions for climate change (less carbon dioxide emitted from incinerator, less plastic production if people/companies switch to reuse, etc.), and keep new plastic out of our oceans--by 2050 there will be more plastic than fish in our oceans (by weight).
52	All	Policy	Timeline	Interim SWMP Updates - While I understand that the Commonwealth requires jurisdictions to complete a SWMP every 20 years, I would like to suggest that the County also conduct interim updates to its Master Plan (e.g., every 5 or 10 years) to account for new practices, changing awareness about zero-waste, etc. It would help to keep Arlington's zero-waste goal at the front of people's minds, and it would also enable the SWMP to keep pace with changing waste management and climate change mitigation needs. Personally as a County resident, I would also love to see regular reports on Arlington's progress towards its goals.
53	All	Program	CDD	Require much more stringent waste-reduction minded construction, such as what is provided via Green Business Certification Inc.'s TRUE certification. TRUE (Total Resource Use and Efficiency) strives to change the way materials flow through society so that all products are eventually reused and diverted from landfill, incineration (waste-to-energy) and the environment.
54	All	Program	CDD	Waste diversion requirements and on-site recycling separation should be a component of any construction permit. Minimum recycled content requirements could also be a required part of any new construction. This type of source reduction would, at a minimum, require coordination with the Building Permit department. Since construction & demolition waste is prohibited to be disposed of at the WTE, any such c&d waste is likely taken to the landfill, the last resort disposal option.
55	All	Program	CDD	A big part of the waste stream in Arlington comes from construction. While an unusual suggestion, the County might consider encouraging facilities outside Arlington that receive this waste to increase their dumping fees as a disincentive to this practice. It might also try to create additional incentives for developers to repurpose / reclaim construction "waste" to reduce embodied carbon in future construction projects in the County. This waste originates in Arlington, therefore it is really our responsibility.
56	All	Program	Data	Randomize the quarterly waste audits. I understand that quarterly MSW waste audits are done at the same 100 homes across Arlington. Perhaps these audits could be performed on a more random selection of homes, as it might be a better gauge of actual recycling rates, for example, take 10 random homes from each collection area, but get different houses from the same collection areas each time the audit is conducted.
57	All	Program	Glass	Consider offering more than five glass recycling collection points in Arlington to reduce the barriers (for some) to recycling glass.

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No.	Applicable Sector	Category	Sub-category	Recommendation
58	All	Program	HHM	Expand the HHM Swap Shop. Alexandria allows full or nearly full paint cans to be dropped off and then they are donated to Habitat for Humanity. Arlington can improve upon that model, providing some sort of a swap shop or donation drop off where certain materials can be deposited and picked up for reuse by residents. Tennessee has an interesting program called the Tennessee Materials Marketplace. Among other things, this program connects businesses to help find material reuse opportunities, especially in construction and development. Beyond building materials, perhaps the swap shop or another standing location could be set up for school and art supplies; this could support families as well as reduce waste.
59	All	Program	Incentives	Arlington County (AC) needs to make it as easy as possible for people to reduce waste. Economic incentives help.
60	All	Program	Incentives	Waste companies are not incentivized to have their customers reduce waste—the more waste they provide, the more profit they make. I would keep this in mind with whatever Zero Waste ideas/suggestions that come from representatives from Arlington's current waste company. Conflict of interest.
61	All	Program	Incentives	Identify partnerships with programs such as Feet on the Street where grant money is also available to support outreach efforts. oPuts a team of people on the streets of Atlanta to audit residential recycling carts for contamination. Provides residents real-time feedback on the quality of their recycling with an "Oops" tag on the cart if contamination is found. Delivers a broad-based educational campaign across the City to improve recycling outcomes.
62	All	Program	Metal	Make it easier to recycle micro-quantities of scrap metal. Although the MRF has an eddy current system and the WTE can sort ferrous materials, I don't know that micro-amounts, things like nails, paper clips, metal lids, staples, etc., are making it through those processes. The county could have a collection site for small scrap metal that could, once reached a certain size, collectively be brought to a scrap metal recycler.
63	All	Program	Organics/Food Scraps	Require that composting be part of the multi-family and commercial facility Recycling Plans.
64	All	Program	Organics/Food Scraps	Expand composting to include BPI certified compostable products such as bio-based utensils.
65	All	Program	Recycling	Expand the commodities collected to include textiles and shoes. There are some private metal boxes at gas stations for these commodities, but there is no transparency in terms of who owns these boxes and what actually happens to materials once donated. Seattle has a successful textile and shoe recycling program partnering with Threadcycle.
66	All	Program	Recycling	Set up the County's own collection for plastic film, potentially other goods. Consider purchasing a baling machine to compress plastic film to sell to Trex or other third party consumers. The grocery stores do not provide education about plastic film, thus their film receptacles can end up looking like trash bins. Further, during the pandemic, collection of plastic film was halted or modified, and it is unclear which grocery stores have restarted their programs and what film they are collecting. This could also create an opportunity to work with Virginia Hospital Center, drycleaners and others to recycle plastic film. (I note that the Women's Imaging Center at Virginia Hospital Center recently started providing reusable bags for women to keep instead of a plastic film bag for personal belongings during certain procedures like mammograms.)
67	All	Program	Recycling	Enhance textile recycling opportunities
68	All	Program	Recycling	County provided plastic film drop off locations
69	All	Program	Recycling	Clarify what types of paper can be brought to shred. The County offers a paper shredding service. Make it clearer that people can bring paper shredded at home to this collection, or, if this is not currently allowed, expand the program to permit this.
70	All	Program	Recycling	Simplify the recycling process for the community to help minimize contamination. There is a lot of confusion as to what to recycle.
71	All	Program	Reuse	County could start some type of repair workshop/program for clothes/small appliances, etc. Other countries have a café where you can bring an item to be fixed and you eat/have a drink while you wait for it to be fixed. This adds a community element to reuse/zero waste.
72	All	Program	Reuse	County sponsored biannual "Fix it" Fairs
73	All	Program	Reuse	Swap and Drop, Repair/Reuse Clinics, Tool Lending Library
74	APS	Data		Work with APS to encourage data sharing with schools on recycling and trash.

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No.	Applicable Sector	Category	Sub-category	Recommendation
75	APS	Outreach/Education/Engagement	All	all the issues set forth in the September 2017 DES Solid Waste Bureau's Report, "Arlington County Public Schools (APS) Recycling and Waste Management Progress Report," are still quite current and unresolved
76	APS	Outreach/Education/Engagement	Organics/Food Scraps	AC should involve APS and model food scraps collection and foodware reuse in the school cafeteria if it isn't already being done. What the children practice at school will go home to their families, spreading the zero waste "gospel."
77	APS	Outreach/Education/Engagement	Resources	Solid Waste Bureau should be the primary driver for all training (including of custodians and staff), education, and public information programs for waste reduction in the schools. This should include without limitation the authority for creating kid-appropriate marketing materials and delivering them with regularity to the schools. All students, teachers, staff and custodians should go through the same recycling education program, developed by SWB in the lead, and it should happen at the beginning of every school year. There isn't a single person in APS who is solely focused on sustainability and waste management. Perhaps the new county-wide director of sustainability will be granted direct authority over waste management at the schools to improve education and outcomes.
78	APS	Outreach/Education/Engagement		Encourage composting as part of school gardening programs
79	APS	Outreach/Education/Engagement		Showcase schools with effective strategies in place for waste management. Create a community of practice where schools can learn from one another.
80	APS	Outreach/Education/Engagement		Education/Outreach and operational changes at APS to increase recycling rate
81	APS	Partnership		Develop a stronger partnership between APS and the County to jointly create standardized waste reduction programs across all of APS. This should include administrators, custodial staff and teacher engagement.
82	APS	Partnership		Partner with APS and use the North American Association of Environmental Education's "best practices in environmental education" to create a 24 lesson classroom activity guide aimed at teaching students the 4R's: Reduce, Reuse, Recycle, and Rot.
83	APS	Partnership		Provide opportunities for school kids to take field trips to a MRF or composting at the Yards Scale House at 4300 29th St S.
84	APS	Policy	Product Bans	Ban single-use plastics at APS
85	APS	Policy	Recycling	APS needs a comprehensive overhaul of its recycling programs to ensure consistency, competency, and transparency.
86	APS	Program	Food Sharing	Food Share Programs should be set up in schools. Every day in schools across Arlington, unopened, unused food is thrown in the trash. This food could be redistributed, through share shelves/refrigerators within each school or via partnerships with hunger organizations, or on an inter-school basis (for example, SWB could support programs where unused unopened food is sent to a school "food hub" where demand for such food is high, e.g., in a neighborhood with a higher percentage of free school lunch recipients). Concerns about liability are overstated, food donation is long standing policy among all child nutrition programs, and will not affect reimbursement for federally supported meals. California, Los Angeles, and Washington State have policies and programs supporting food share tables
87	APS	Program	Organics/Food Scraps	Involve APS in food scraps collection
88	APS	Program	Organics/Food Scraps	Administer APS schools composting program. Raleigh, NC, is a community of similar size and composition to Arlington that has successfully had a schools composting program for years without issue. Likewise, schools should be using reusable or compostable serve ware products for meals served at school.
89	APS	Program	Organics/Food Scraps	Roll out a food scraps pick up program in APS.
90	APS	Program	Recycling	a county-wide program to educate students, staff (custodial, administrative), parents and teachers about how to recycle right in schools
91	APS			Shift to preparing food onsite, using less pre-packaged food, and use of reusable foodware in APS

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No.	Applicable Sector	Category	Sub-category	Recommendation
92	Commercial	Legislation	Product Bans	Take-out containers. Although Styrofoam may at some point be phased out in Commonwealth restaurants,[1] the County could take a proactive leadership role in ensuring that this type of food packaging waste, as well as other types of hard to recycle food packaging, is eliminated. The County could work with businesses to negotiate and/or provide discounted compostable containers and utensils (and thereby help ensure that what is being purchased actually is compostable, not some greenwashed “biodegradable” product). Additionally, the County could sponsor a pilot project or otherwise help coordinate the use of reusable take out containers, through partnerships with companies that make forever ware products. This article[2] discusses reusable container companies in operation in cities across the country and how they work, along with a profile of a Philadelphia restaurant that has incorporated reusable containers in its online ordering with a QR system for assignment and tracking.
93	Commercial	Outreach/Education/Engagement	Economic Development	Encourage reuse / dishwashing companies to come to NOVA, like the startups that are in California and other forward-thinking locations (e.g., https://dispatchgoods.com/home and https://upstreamsolutions.org/dishwashing-services-dishcraft
94	Commercial	Outreach/Education/Engagement	Economic Development	Create a hub for the mid-Atlantic area by incentivizing circular economy reuse businesses/startups so that there are reuse systems for restaurants that use single-use items for dine-in and other restaurants who use other single-use items for takeout/doggie bags.
95	Commercial	Outreach/Education/Engagement	Product Bans	all grocery stores provide the compostable produce bags made from plants rather than the plastic ones. MOM'S market has been providing these for quite some time and they work well. They are also provided by some vendors at farmers markets, but it would be nice if all did it.
96	Commercial	Outreach/Education/Engagement	Reduction	Encourage restaurants not to offer single-use plastic utensils for take-away, unless explicitly requested.
97	Commercial	Outreach/Education/Engagement		Engage the business community / restaurants in reuse
98	Commercial	Partnership	Organics/Food Scraps	I also suggest encouraging stores in our community to carry biodegradable bags. I searched for some in a local Target recently, but couldn't find any and will have to continue buying them online.
99	Commercial	Policy	CDD	Require or incentivize developers to reduce materials and recycle waste, including when tearing down existing structures
100	Commercial	Policy	Data	AC should take out-of-town visitor waste into account at hotels, restaurants, facilities, parks.
101	Commercial	Policy	Data	CDD recycling and reuse reporting requirements
102	Commercial	Policy	Recycling	Reuse of cardboard boxes. Restaurants and retail could be discouraged from using bags for takeout and purchases, and rather use cardboard boxes. With the increase in online shopping, there are so many cardboard boxes, and almost all of them could be reused at least a couple more times. But instead, they are just put in the blue bins right away. Perhaps, there could be a place where only cardboard boxes could be distributed for reuse, kind of like Costco, but for Amazon and other boxes that are more versatile.
103	Commercial	Program	Economic Development	AC could create a hub for the mid-Atlantic area by incentivizing circular economy reuse businesses/startups so that there are reuse systems for restaurants that use single-use items for dine-in and other restaurants who use other single use items for takeout/leftovers. It ends up being cheaper to have a restaurant switch to reusables versus single use items, plastic OR compostable. Check out links below for reports on this.
104	Commercial	Program	Economic Development	Provide grants to businesses to pilot waste reduction innovations (repair facilities)
105	Commercial	Program	Glass	Consider working with businesses to develop incentives for them to offer products with refillable glass bottles.
106	Commercial	Program	Incentives	Improve incentives for commercial waste management companies serving commercial and multi-family residences to support the goals for waste reduction and diversion
107	Commercial	Program	Incentives	Identify financing options for businesses to support reuse and repair options and otherwise enhance the circular economy or reduce their waste generation
108	Commercial	Program	Incentives	Encourage or incentivize grocery stores to reduce packaging—support using refillable containers
109	Commercial	Program	Incentives	Green restaurant incentive. There could be some sort of green restaurant certification process whereby restaurants could get points towards reducing whatever business fees the county levies if they follow waste reduction practices.
110	Commercial	Program	Incentives	In the new Plan, suggest giving greater emphasis to upstream innovations, such as reusable business models, incentivizing use by businesses of products with high post-consumer recycled content or a zero waste philosophy.

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No.	Applicable Sector	Category	Sub-category	Recommendation
111	Commercial	Program	Incentives	Incentivize food delivery companies like Doordash and Uber Eats to provide local restaurants with reusable containers, given their margins are often small.
112	Commercial	Program	Incentives	Create small grant program to help restaurants make the switch to reusable foodware for in-person dining—and for reusable containers for takeout.
113	Commercial	Program	Incentives	County subsidized reusable takeout container program (County will subsidize a portion of the costs for restaurants and food service businesses that use reusable take-out container services).
114	Commercial	Program	Incentives	Provide financial incentives to businesses to waste less and recycle more
115	Commercial	Program	Organics/Food Scraps	Create a program for food scraps collection from restaurants and other businesses
116	Commercial	Program	Organics/Food Scraps	Consider expanding the food waste collection program to restaurants, hospitals and schools.
117	Commercial	Program		We need reuse systems in place to make it easy for the public to reuse and reduce the excessive waste that comes from restaurant takeout and leftovers containers. <ul style="list-style-type: none"> o Engage business community / restaurants in switching to reuse (see Rethink Disposables link below) o County should encourage reuse / dishwashing companies to come to NOVA like the startups that are in California and other forward-thinking locations. (e.g., https://dispatchgoods.com/home and https://upstreamsolutions.org/dishwashing-services-dishcraft)
118	County	Outreach/Education/Engagement	EPRY	Clarify what sort of “rock” is processed at Earth Products Yard. Make it clearer whether granite and quartz countertops can be accepted for crushing at the Earth Products Yard, or expand the program to allow this.
119	County	Outreach/Education/Engagement	Resources	Improve the Where Does It Go? Website function, Part I. Add a widget on Where Does It Go page, so that if people entered a search term and it came up blank, they could report what the search term was to the County for consideration in the Where Does It Go page. This process could also be used to generate an email response from the County about proper disposal for the item in question.
120	County	Outreach/Education/Engagement	Resources	Improve the Where Does It Go? Website function, Part II. Eliminate all language on the Where Does It Go page that says an item “must be taken to the proper drop-off location for disposal.” This is not helpful. Rather than say, “proper drop-off location,” the search should return an answer saying something like, “call the SWB staff at.... for information on the proper disposal location.” Or just add in the specifics about which drop off an item goes, specify the Earth Products Yard, a grocery store, or whatever SWB means by the “proper drop-off location.”
121	County	Outreach/Education/Engagement		the Solid Waste Bureau makes the climate change connection clear in all its communications, both internal and external. Leading with WHY we are doing waste management in our County, rather than the WHATs and the HOWs of waste management, can help inspire residents and businesses to waste not and recycle right.
122	County	Policy	Product Bans	Adopt a policy banning single-use plastics within county facilities
123	Events			Require all special events to have Recycling and Organics collection services
124	Events	Policy		Require County sponsored events, like the County Fair, to be zero waste. Require vendors to submit zero waste plans, provide water troughs, limit the amount of non-recyclable free giveaways that could be handed out, especially those handed out by County agencies.
125	MF	Enforcement		Educate and incentivize appropriate recycling, including not collecting improperly sorted recycling
126	MF	Enforcement		Encourage the Fairlington Board to switch the relative frequency of recycling vs. trash collection to incentivize the preferred activity (recycling);
127	MF	Outreach/Education/Engagement	Resources	Create a comprehensive zero waste page on the County website with resources, videos, ideas etc. to make it easy for people to reduce their waste. List local zero waste stores (Alexandria and Vienna) and which grocery stores and restaurants have reuse/refill options
128	MF	Outreach/Education/Engagement	Resources	Develop and deliver comprehensive, continuing education programs on waste reduction recycling and composting
129	MF	Outreach/Education/Engagement	Resources	hire more SWB staff to coordinate more regularly with MF building managers and boards to encourage them / their residents to adhere closely to best practices. Provide incentives to do so, where possible.
130	MF	Outreach/Education/Engagement	Resources	Work with MF building management to ensure instructions for / education of residents are up to County standards and in clear graphics and commonly-spoken languages.
131	MF	Outreach/Education/Engagement		Intensive education and outreach to MFC to improve recycling rates

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132	MF	Outreach/Education/Engagement		Create a zero waste challenge that people can sign up for. Provide information/resources and do Zoom workshops/meetings to help them make changes. Provide some kind of incentive to do so.
133	MF	Outreach/Education/Engagement		Educate on the negatives of using single use plastic so people are more interested in reuse
134	MF	Outreach/Education/Engagement		Educate and/or incentivize apartment residents on reducing waste since their recyclables have a very high percentage of contamination
135	MF	Outreach/Education/Engagement		Work with managers of multi-family residences to emphasize recycling and composting over trash – and make it easier to reduce waste
136	MF	Outreach/Education/Engagement		Develop model programs and best practices for recycling in multi-family residences
137	MF	Outreach/Education/Engagement		Support for MF/C sector.
138	MF	Policy	PAYT	Implement a “pay as you throw” PAYT system of charging by the load—variable rates for waste collection
139	MF	Policy		Encourage MF building managers to convert trash chutes into recycling chutes (assuming not proscribed by code; if so, seek changes to the code).
140	MF	Program	Hauling	Provide a county option, rather than total reliance on private haulers, to provide trash & recycling services at multi-family and commercial facilities. Increase education to improve recycling rates and provide incentives for recycling right, such as pay as you throw. Also interview multi-family residents to inquire if there are barriers to accessing the recycling and trash services that are supposed to be happening in their buildings
141	MF	Program	Metal	Make it easier to recycle scrap metals and textiles
142	MF	Program	Organics/Food Scraps	Add more places for apartment dwellers to bring food scraps in addition to farmers markets and county trades center
143	MF	Program	Organics/Food Scraps	Expand local composting at community gardens
144	MF	Program	Organics/Food Scraps	Work with MF building management to encourage adoption of a food scraps collection program similar to the one the County offers.
145	MF	Program	Organics/Food Scraps	Community compost sites—AC could add more places for apartment dwellers to bring food scraps in addition to farmers markets and county trades center. Local community centers or all library branches, for example. Communicate with apartment building owners/management to get them to publicize these dropoff sites.
146	MF	Program	Organics/Food Scraps	Roll out food scraps in MFH.
147	MF	Program	Organics/Food Scraps	Food scraps composting in MFC and County facilities
148	MF	Program	Organics/Food Scraps	Mandatory food scraps collection for MF/C.
149	MF	Program	Organics/Food Scraps	Mandatory food scraps collection for Multi-family and commercial properties
150	MF	Program	Organics/Food Scraps	Recycling and Organics Enforcement at residential and MF/C (including APS and other County facilities)
151	MF	Program	Reuse	Start some type of repair workshop/program for clothes/small appliances, etc.
152	MF	Program		Develop measures to reduce food waste
153	Public Realm	Enforcement	Litter	Restart public advocacy, awareness and enforcement programs that discourage littering.
154	Public Realm	Outreach/Education/Engagement	Organics/Food Scraps	Create public education programs on food sustainability—especially geared to low socioeconomic groups, including encouraging them to plant home gardens when possible—as well as rebuilding green areas to foster better overall community health.
155	Public Realm	Program	Litter	Make a plan to combat the litter problem along the 4 mile run creek in both Arlington and Alexandria. I ride my bike regularly on the bike path between route 1 and George Mason Drive and am depressed by all the trash on the embankments and in the creek along my whole route. The county could hire people to pick up trash and do their waterway beautification efforts if jobs don't already exist. There also needs to be a multilingual public education campaign. Or perhaps fines to apartment complexes that are directly behind the piles of trash or additional dumpsters provided to those complexes. Of course waste washed downstream, so all trash sources would have to be considered and targeted. The litter is really an ugly blight on our “green” community and needs to be addressed.
156	Public Realm	Program	Litter	employ measures, at storm drains, that collect street trash such as bottles, Styrofoam and bags from getting into the Potomac.

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157	Residential	Enforcement		Stop collecting recyclables if not properly set out, or fine residents for putting the wrong things in the recycling bins. The trash haulers could similarly be empowered to just leave improperly placed items with a sticker saying why stuff was not collected. I understand that fines for "recycling wrong" are regularly used in Europe and Japan.
158	Residential	Outreach/Education/Engagement	Organics/Food Scraps	I suggest telling County residents that larger bags are available for purchase. I had to search for them, but found some that are not only larger, but even stronger than those provided by the County.
159	Residential	Outreach/Education/Engagement	Resources	No Wishcycling – Use Clear, Negative Terms To Describe what DOES NOT go in the blue bin. County cart hangers and similar brochures about recycling seem to favor listing what is acceptable for recycling while at the same time relying on an assumption that anything not listed is not acceptable. That is a very reasonable approach, however, there are too many people in Arlington who now practice "wishcycling." They let their minds leap to incorrect conclusions. There should be very clear language about what cannot be put in recycling, and/or very clear language that makes the point that if it is not on the list it goes in the trash! (When in doubt, throw it out!)
160	Residential	Outreach/Education/Engagement	Training	Create Citizen Waste Warrior Brigade. The County should train citizens in every precinct in the County who can educate at civic associations and other events (like farmers markets) in a systematic way. And be empowered to issue "friendly reminders" about proper recycling. The events that County staff go to educate the public could thus be amplified by trained and certified waste warrior volunteers.
161	Residential	Outreach/Education/Engagement	Training	Citizen Waste Warrior/Enforcement Officers. Create publications, in the form of large sticky notes, with a simple rule like "DO NOT BAG YOUR RECYCLABLES, PLACE LOOSELY IN THE BINS," or "FLATTEN YOUR CARDBOARD BOXES," with images, that could be printed and distributed to the trained Citizen Waste Warrior corps. Then, if these people are driving around on Trash Day and see violations, the friendly reminder stickers could be placed on the bins. Having the County's imprimatur carries more weight than a scrawled yellow post-it from a neighbor.
162	Residential	Program	Glass	Perhaps instead of adding more projects, you start w the basics? You charge us for curbside recycling of glass, but in the last year we've been forced to put glass into trash bins or drive it somewhere. Do you think that's right?
163	Residential	Program	Glass	I urge the County to reassess glass recycling. In my opinion we have a lose-lose situation now where glass either goes to incineration -- absurdly! -- or we have to waste time and emissions driving our glass to the limited pickup points (which I do). I think experience is demonstrating that people are motivated to have their glass recycled and that there are beneficial uses for glass even if the market has failed. I would like to see Arlington explore a creative option like, for example, once-a-month glass pickup from households, or something similar.
164	Residential	Program	Glass	Reinstate glass recycling home collection and find a better solution do glass can be continued to be recycled - not only used for playgrounds.
165	Residential	Program	Metal	Recycling by itself shouldn't be the primary action that is encouraged/emphasized/ talked about. Recycling is PART of the answer, but it should be reiterated as something you do AFTER you Reduce and only if you can't Reuse an item. AC should make it easier to recycle scrap metal, which is more recyclable and more valuable than plastic. Clarify what metal items are recyclable. Add more metal recycling containers around the county (like you did with glass) or add weekly curbside pickup for larger metal items or bins of exclusively metal items. Recycling metals, glass, paper, cardboard should be prioritized over plastic since plastic is not truly recycled into brand-new containers, only downcycled or burned. Recent report on the abysmal U.S. plastic recycling rate: https://www.beyondplastics.org/news-stories/us-plastics-recycling-rate-slumps-below-6-analysis-finds
166	Residential	Program	Organics/Food Scraps	The county might consider providing the same green-and-white plastic buckets used by Falls Church (see Capture21.jpg attached) in its food scrap recycling program. [See Christian Beers Email for image] The smaller containers would be easier to schlep out to the curb and make more sense in situations where weekly waste is only a few gallons. It might also encourage more participation. Arlingtonians wanting buckets could purchase them from county; thereby keeping costs down for the county and to taxpayers not participating in the program.

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167	Residential	Program	Organics/Food Scraps	small rolling carts for food scraps weekly pickup. By small I mean about half the size shorter than the regular carts. That would make them easy to clean out and might eventually eliminate the need for biodegradable plastic bags.
168	Residential	Program	Organics/Food Scraps	Buy wheeled containers that don't tip over so easily. The newer bins for single-family households are awful. Too long for the width. If you only have a small amount in them, as I often do, they tip all the time. I need a new black one due to holes in the bottom of my current one after 20+ years, but will not request one because of the tipping factor. For older residents, like myself, they are a hazard.
169	Residential	Program	Organics/Food Scraps	observed an employee dump the green cart into the same truck with waste from black carts
170	Residential	Program	Organics/Food Scraps	I thought the new program to collect food scraps was a good idea. I participated fully until I ran out of bags. Twice I contacted Arlington trash portal with the question where to get more little green bags for the waste recycle container that the County provided and that I get in the kitchen. I got one reply but not an answer to my question.
171	Residential	Program	PAYT	<p>We moved here a few years ago from Athens, GA, and they had a trash policy I thought made sense: People were charged different rates according to the size of their trash cans. You could get smaller trash cans and pay less on your trash bill.</p> <p>We have the small size trash cans here too, but we don't get a discount on the trash bill, so there's no incentive for it. Adding the incentive might help!</p>
172	Residential	Program	PAYT	Provide financial incentives for reduction in trash. Residents could be given options to "Pay As You Throw."
173	Residential	Program	PAYT	<p>AC could implement a "pay as you throw" PAYT system of charging by the load—variable rates for waste collection. Arlington just switched water use to paying for what you use, why not trash too? Families can opt to replace their trash cart with a smaller cart (eventually adding the rule that trash outside the cart won't be picked up). If Arlington County continues to pick up everything that is placed at curb, residents have ZERO incentive to change their ways. In a future version of Arlington County waste removal, weekly trash collection could switch to twice a month. Yard waste/food scraps and recycling carts would still be weekly. This reduction in collection could be introduced over a period of 10 years with the idea of meeting certain goals with each new change to the pickup rules. Gives people time to plan and get used to reduced collection for garbage. At the same time this is happening, publicize the website where you list all the ways you can donate, or give things away for free (Craigslist, Buy Nothing groups, church groups, refugee groups, etc.).</p> <p>o The Reason Foundation summarizes the benefits of PAYT well in its policy study. First, it's equitable that people who use more of the service should pay more for the service. Second, it sends an economic signal and leads people to act in the desirable way rather than simply restricting the undesirable behavior; economics reaffirms that this is really the only way to get people to act. Third, effective incentives will lead to waste reduction, increase in recycling, and overall environmental benefits.</p>
174	Residential	Program	PAYT	Elimination of unlimited curbside bulk collection (fee-based service for amounts over 5 cubic yards)
175	Residential	Program	PAYT	PAYT system (unlimited recycling and organics)
176	Residential	Program	Trash	When will the county redesign trash and recycling bins w. a simple latchable lid to prevent wind-strewn waste & recycling on pickup day? It's surprising how often the wind kicks up on trash day in my neighborhood! Other places must've figured out how to address this problem.

Comment ID	Date posted	Type	Comment	Page
7293	11/30/2023 - 10:26am	Suggestion	<p>One issue that comes up in my apartment building is glass recycling. The building shows that glass can be put in the recycling bins, but residents have put up signs that say glass shouldn't be put in those bins. I personally have opted to keep my glass separate and bring it to a specific glass drop off location (Quincy Park).</p> <p>So better outreach about what can and can't be recycled, targeted at apartment buildings (so they can help inform their residents) might be a good action.</p>	1
7240	11/24/2023 - 9:58pm	Suggestion	<p>-The plan does not address the climate and other environmental impacts of Arlington's waste streams -- estimating the embodied carbon in our waste streams would make Arlingtonians more aware of the magnitude of the cost to the environment of consuming and disposing beyond our needs</p> <p>The Plan should include more specific and ambitious objectives for waste reduction and effective recycling for multi-family housing, construction and demolition debris, and Arlington Public Schools</p> <p>-Proposed outreach and education efforts should be strengthened and include expanded partnerships with organizations within Arlington, including EcoAction Arlington.</p> <p>-The Arlington Government should lead by example by establishing policies and programs to reduce waste streams in its facilities and operations.</p>	1
7151	11/13/2023 - 10:44am	Question	COST???	1
7248	11/26/2023 - 5:28pm	Question	<p>By ignoring costs (and the real-world constraints on the ground), we are failing to recycle what we are claiming to "recycle," and we are paying a premium for failing to reach our own "aspirational" goals. See "Recycling plastic is practically impossible — and the problem is getting worse" (2022) https://www.npr.org/2022/10/24/1131131088/recycling-plastic-is-practically-impossible-and-the-problem-is-getting-worse. And Three Reasons Recycling Is Failing: https://www.forbes.com/sites/jeffmcmahon/2021/05/22/three-reasons-recycling-is-failing/?sh=307dba0b7e09.</p> <p>because we are sending trucks out for 3 separate passes (to collect trash, recycling and now yard waste), we are promoting the use/combustion of fossil fuels. This is especially true of the yard waste trucks, which drive 20–25 miles in order to drop off those materials for composting. I have to wonder how many of the waste trucks have been converted from diesel fuel. At less than 5 miles to the gallon, these trucks consume large amounts of fuel (particularly when loaded), and they emit a significant amount of pollutants into the local air we all must breathe: https://afdc.energy.gov/data.</p> <p>Recycling, in short, doesn't offer significant reductions in carbon emissions: https://ncse.ngo/climate-change-literacy-action. And that's especially true in Arlington because we have trucks making three separate passes over 376 miles of roadway each week. Please don't misunderstand, responsible waste management is important. But the focus of Arlington's plan isn't responsible because it's based on fantasy, not reality.</p>	1
7241	11/25/2023 - 2:42pm		<p>The county needs to make stronger and more specific goals and action steps toward reducing waste, which has a big impact on carbon emissions.</p> <ol style="list-style-type: none"> 1. First, the county should measure and publicize the carbon impact of Arlington's waste. 2. Next, the plan should create strong and specific goals for waste reduction, not just recycling. 3. Finally, the plan should include stronger and more specific goals for reducing waste for apartment buildings, construction, Arlington government, and APS. For example, we need a compost pickup system for apartment buildings. 	1

7249	11/26/2023 - 5:58pm		<p>Agree that the county's raze-and-replace redevelopment policies generate significantly more commercial solid waste going into landfills than municipal solid waste. See "We Can't Build Our Way To Net Zero": https://nextcity.org/urbanist-news/we-cant-build-our-way-to-net-zero.</p> <p>Demolition and reconstruction rank among the highest contributors to carbon emissions of any activity on the planet: https://www.wbcd.org/Programs/Cities-and-Mobility/Sustainable-Cities/Transforming-the-Built-Environment/Decarbonization/news/Construction-industry-needs-whole-life-carbon-understanding-to-hit-net-zero-new-report-shows</p> <p>See also "Construction & Demolition (C&D) Waste: 14 Facts That Will Blow Your Mind": https://www.rubicon.com/blog/construction-demolition-waste-facts/</p> <p>Fact 1: The Environmental Protection Agency estimates that 230 million to 600 million tons of C&D are produced nationwide each year in the United States. Fact 2: In just one year, C&D debris accounted for more than twice the amount of generated municipal solid waste in the U.S. Fact 3: The South Carolina Department of Health and Environmental Control estimates that more than 29% of all waste disposed of in the state in 2017 was C&D debris. Fact 4: More than 90% of C&D debris comes from demolition projects, while new construction accounts for less than 10%. Fact 5: Concrete accounted for 23.1 million tons of waste during construction and a total of 358.7 million tons of demolition debris in 2015....</p> <p>"When a house is demolished, more than the home is lost": https://theconversation.com/when-a-house-is-demolished-more-than-the-home-is-lost-42579</p>	1
7254	11/28/2023 - 3:47pm		These significant behavioral changes can happen with enough support from Arlington County through its education outreach, Zero Waste programs, and mo	6
7300	11/30/2023 - 9:04pm	Suggestion	The county already has made a decent start to helping consumers figure out with a database for typing in 'where does it go' but this resource/part of the web	7
7244	11/25/2023 - 8:51pm	Suggestion	Clean-up programs for litter?	7
7288	11/29/2023 - 11:15am	Suggestion	I agree that education and outreach are essential to increasing compliance, and that compliance is essential to meeting our goals. However, I think that the b	7
7169	11/15/2023 - 11:47am		Will the outreach opportunities also be provided to County employees and APS students and staff? Perhaps on an annual basis, as a reminder to best practice	7
7243	11/25/2023 - 8:49pm	Suggestion	Possible rewards/penalties for (im)proper recycling?	7
7255	11/28/2023 - 4:01pm		Educational materials and multimedia campaigns are a good start, but these specialists should get creative in how and where they interact with the public. W	7
7301	11/30/2023 - 9:07pm	Suggestion	I agree. Moreover, the specialists hired should have experience in the art of behavioral science to ensure that campaigns are designed to give Arlingtonians th	7
7256	11/28/2023 - 4:03pm		Again, multimedia campaigns will only reach a certain subset of people. The county needs to think creatively on how to reach the general public.	7
7302	11/30/2023 - 9:13pm	Question	What if charges were increased for anyone needing more than 1 64 gallon trash cart? We weekly only generate one kitchen sized bag for a family of 4 (mean	8

7159	11/13/2023 - 1:10pm	Question	why punish large families for producing more waste than single household or small families?	8
7152	11/13/2023 - 10:52am	Suggestion	Must add compost requirements for churches and commercial businesses.	8
7287	11/29/2023 - 8:54am	Suggestion	Please ensure this is available for use by non-owner residents. I was told by a county representative earlier this year that I (an apartment resident) had no off	8
7257	11/28/2023 - 4:13pm		You would get a good response also if you incentivize: Offer smaller garbage containers to those who don't throw away as much. Do garbage collection every	8
7170	11/15/2023 - 11:49am		Pay to throw is an acceptable practice for encouraging diversion	8
7158	11/13/2023 - 1:08pm	Suggestion	Can you there be old fashioned "trash cans" that can receive glass recycling, really in neighborhoods - every few blocks.	8
7156	11/13/2023 - 12:10pm		Include packing materials that come with deliveries. For example, plastic wrap, plastic bubbles, Styrofoam peanuts, etc., Reuse of much of these materials is	8
7303	11/30/2023 - 9:16pm	Suggestion	There are some Parcel stores that gladly will take donations of clean packaging material for reuse in their business! I wonder if there's a way the County can i	8
7171	11/15/2023 - 11:51am	Question	Will the current facility for the HHM be able to accommodate additional services? Will the upcoming improvements to the Water Pollution Control Plant imp	8
7164	11/13/2023 - 9:50pm	Suggestion	need more consideration for those without private vehicles. Current facilities require people to get to a few central locations. This seems at odds with Arling	8
7178	11/16/2023 - 2:38pm	Suggestion	I haven't read through the whole document yet, but are the incentives listed? Would be good to list current thoughts on those	8
7242	11/25/2023 - 8:47pm	Suggestion	In locations that are easily accessible by modes of transport other than car	8
7165	11/14/2023 - 1:30pm	Question	How many people have stopped putting food waste in the organics cart -- because of a pest/rodent problem?	9
7304	11/30/2023 - 9:23pm	Question	Building on this, it would be good to see what perceived and actual barriers are to better use of the green cart. There are lots of other cities who have gone d	9
7259	11/28/2023 - 4:27pm		These could be held at various locations of library branches or community centers throughout the year to reach people all over the county to make it easy for	10
7263	11/28/2023 - 4:50pm		Good idea to move this program along and expand it.	10
7262	11/28/2023 - 4:49pm		Good idea to expand, regardless of whether it affects waste. It has many other health and environmental benefits.	10
7168	11/15/2023 - 10:30am	Suggestion	In addition to what's already mentioned (Buy Nothing, FreeCycle etc), I would suggest working with the small businesses providing these services to increase	10
7260	11/28/2023 - 4:41pm		Do you have plans to encourage people to do reusables instead of just relying on recycling? Plates, flatware, and cups are not recyclable. Using compostable	10
7160	11/13/2023 - 1:12pm	Suggestion	Social media sites seem to address this - Next Door, FreeCycle, etc. Why not just support this organic response?	10
7179	11/16/2023 - 2:44pm	Answer	The one distinction I see is someone keeping the item versus offering to someone else. If it's broken, it's still broken - it'll last longer when it's repaired. Bonus that 'repair' could prop up any potential local businesses that specialize in repairs. Regardless though, YES let's push Next Door, Free Cycle or whatever for these items as well.	10
7258	11/28/2023 - 4:25pm	Answer	We need the actions to be All of the Above. I love Freecycle, Buy Nothing, Listservs, etc. Those work great, but having reuse-repair fairs would reach addition	10

7161	11/13/2023 - 1:13pm		For our non-profit events, we switched to compostable products several years ago. Only down side is that we need to purchase on Amazon versus Costco.	10
7261	11/28/2023 - 4:47pm		Knowing the true percentage that is recycled would be helpful in calculating how well the county is doing on Zero Waste. If the metrics say that the county is	10
7172	11/15/2023 - 11:54am	Suggestion	This is the wrong principle! Not a headmaster!	10
7264	11/28/2023 - 4:56pm		While it says there will be minimal impact (likely because all of this is lightweight) it is still important to pursue this. The more people see reusables and circular	10
7305	11/30/2023 - 9:32pm	Suggestion	I agree. Reducing waste in the first place starts with shifting one's overall mindset. To consider... encouraging establishments to ask if someone wants a disposable item (a default that favors reusable items will automatically reduce the amount of trash generated). Highlighting leaders in the County to show it works. There are many studies showing the benefit of making the lower-impact option the default and asking a shopper to 'opt-in' for something like a straw or disposable cutlery etc.	10
7173	11/15/2023 - 12:02pm	Suggestion	Deconstruction of facilities, installation of water bottle refilling stations, systems to capture rainwater are all already in place at APS. In fact, the captured rainwater is a failure at the Langston Community Center, it has never worked properly, and that building was completed in 2003! The real gains for APS would need to start with Food Services. The community is clueless on the amount of waste that is a result of Federally funded meal programs and from all the single package materials. Students need access to breakfast and lunch and this initiative should not inhibit opportunities, but APS could do a better job of ensuring the food is not wasted, a great example is milk. One just needs to volunteer as a cafeteria monitor to witness the excess.	10
7265	11/28/2023 - 5:00pm		Put dishwashers in every kitchen in every school. Invest in reusables. This will cut down on waste from food service. Compost discarded food.	10
7267	11/28/2023 - 5:03pm		While it definitely is important to support State Level Circular Economy Initiatives, Arlington County can still do a ton of initiatives, programs and practices on	11
7266	11/28/2023 - 5:01pm		Agree and support!	11
7289	11/29/2023 - 4:59pm	Suggestion	Developing statewide DRS and EPR schemes will go a long way to addressing collection. It is not enough to call them "Long Term" initiatives with a 2038 deadline. Maine, Oregon, Colorado, and California all have legitimate packaging EPR schemes on the books and many other states have EPR-adjacent laws or are in the process of legislating or researching EPR schemes (our neighbor Maryland, included.) 10 states already have Deposit Return Schemes (DRS). They are a tool, but not a magic bullet in terms of collection and diversion. Yes, passing and implementing these policies takes time. But it need not take 15 years. How does Arlington County specifically intend to "support" this not-yet put forward legislation? How can our county government work with other counties and localities in the Northern Virginia area to create a harmonized ecosystem where they can be quickly developed, advocated for in Richmond, and inclusive and accessible to all citizens? It is these policy changes, not simple "education" and "awareness" campaigns, that will truly catalyze change and mobilize resources. If this is truly a goal for the county, advancing these policies at the state level and setting ourselves up to implement them at the local level, this should be a top priority.	11
7162	11/13/2023 - 1:15pm		agree and support	11

7180	11/17/2023 - 4:43pm	Suggestion	While for planning purposes the conservative approach is to assume trends will remain constant when projecting out the the future, this "business as usual"	20
7199	11/18/2023 - 3:49pm	Suggestion	Based on the slide presentation, County audits suggest that well over 50 percent of the content of MFH recycled containers are trash and food waste product	20
7294	11/30/2023 - 10:51am	Suggestion	The plan needs to reduce the per capita waste generation by 25% to account for growth. Many products are reworking their delivery and packaging metho	21
7181	11/17/2023 - 4:52pm		What is the estimate GHG emissions of the WTE disposal? Knowing this information would provide crucial data on the GHG emissions of our waste managem	21
7201	11/18/2023 - 4:01pm	Question	What is the percentage of trash in the combined waste stream that would include organics and recyclable for each of the sectors? This plan seems to be focu	22
7184	11/17/2023 - 4:59pm	Question	How much of the divertible category is glass?	22
7183	11/17/2023 - 4:58pm	Question	When was this data collected--before or after curbside collection of food waste began? How much of a difference has the program made?	22
7182	11/17/2023 - 4:57pm	Question	Do we know where the commercial services dispose of their trash -- landfill or WTE--and what the respective GHG emissions are?	22
7200	11/18/2023 - 3:53pm	Suggestion	This report should also include the data included on composition of recycle bins to provide a broader perspective on the composition of all waste streams. Fr	22
7245	11/25/2023 - 9:01pm	Question	Is there any data on the impact of having to transport and divert to other counties?	25
7185	11/17/2023 - 5:06pm	Suggestion	Is the County considering maintaining the SWR at current levels once the tip fee goes to zero (or at least not reflect the full elimination of this cost in the rate	25
7290	11/29/2023 - 5:29pm	Suggestion	<p>If Arlington County really wants to be a leader on issues of sustainability and recycling, we need to consider putting our (considerable) money where our mouth is and make investments in collection and recycling infrastructure. This needs to go far beyond "educating the consumer".</p> <p>Yes, we need to make more clear to residents what can, and cannot be recycled. But we also need to work with our neighboring counties to be more clear about what we are recycling, what we could be recycling, and what we want to be recycling. Some have raised doubts about the actual fate of mixed, single-stream materials. You can regularly see PET, PP, and PS all recycled together, let alone all together with cardboard and paper. Styrofoam and plastic bags are regularly tossed in with plastic bottles at the Quincy drop-off. This is not just a result of Arlingtonians not knowing better, it is also a result of them not having clear alternatives for disposal. Facilitating a market for post-use material is entirely dependent on the quality, and purity, of its feedstock stream. As the charts above indicate, waste generation is going to increase by nearly 25% in the next 20 years. We need to be creative in our partnerships with our neighbors, and not just ship our problems to them. If this means helping Fairfax, Loudon, Prince William, or Stafford financially to develop more capacity or invest in new technologies, then we should be open to it. We should take a leadership role and push for it.</p>	25
7186	11/17/2023 - 5:09pm	Suggestion	Report should also mention some of the downsides of WTE--pollution (mentioned) but also the toxic waste that needs to be disposed of as well as the GHG e	25
7187	11/17/2023 - 5:17pm	Suggestion	Is there any traceability information on what happens to the materials when they leave the MRF? What percent of materials are sent to landfills? In particul	25
7250	11/28/2023 - 3:08pm	Suggestion	YES!!!! I keep wondering all this myself. I have asked at past DES webinars how much of the recycling at the MRF actually gets thrown away instead of recycle	25
7268	11/28/2023 - 5:22pm		The SWMP does not address how to deal with waste haulers—including county contractors—who do not fulfill the terms of their contracts. Fines could be a	25
7269	11/28/2023 - 5:36pm		I highly encourage the county to take a much closer look at which private trash hauler meets the terms in their contracts--current haulers and during the nex	26
7246	11/25/2023 - 9:03pm	Question	Any insight into what happens to glass that still ends up in the curbside cans?	26

7202	11/18/2023 - 4:17pm	Suggestion	The data reported shifts between pounds and tons--suggest sticking to the same unit of measurement to facilitate understanding of relative volumes.	26
7078	11/10/2023 - 7:22am	Suggestion	From my knowledge, 2009 saw the end of distribution of 96-gallon county carts to residential households, not 2021.	27
7270	11/28/2023 - 5:53pm		Education specialists could do some work here in encouraging residents to rake leaves into the garden bed so that insects can have places to overwinter. To e	28
7238	11/24/2023 - 7:12pm	Question	When you say that the "County receives a rebate of \$15 per ton for glass collected" do you mean the County sells the collected glass for \$15 per ton or the Co	28
7239	11/24/2023 - 7:15pm	Question	Has the County measured the impact of organics recycling on the rodent population in Arlington? I understand the sense of recycling produce waste in the o	28
7189	11/17/2023 - 7:24pm	Suggestion	These facilities should be treated separately from commercial entities as the County has greater responsibility for managing the waste streams and more too	29
7188	11/17/2023 - 5:59pm	Suggestion	Could the County also require that commercial haulers provide an annual audit of waste generation for each facility for composition of both trash and recycle	30
7247	11/25/2023 - 9:09pm	Suggestion	A page documenting these private entities and their specialty recycling would be great	31
7192	11/17/2023 - 7:36pm	Question	The County does have a plastic bag fee. What has been the impact and how much does Arlington collect from this fee? How is the money being spent? Arlin	31
7191	11/17/2023 - 7:34pm	Suggestion	Mom's does not take plastic bags but does collect a range of other items for recycling such as batteries, cork	31
7190	11/17/2023 - 7:32pm	Suggestion	The County should do more to educate residents on the best way to recycle these materials and point them to organizations and companies that have a track	31
7193	11/17/2023 - 7:42pm	Suggestion	Not clear whether commercial haulers are actually reporting these streams and not breaking it out from other streams. This is likely a large portion of Arlingt	31
7203	11/18/2023 - 4:30pm	Question	Is industrial waste included in data provided by commercial haulers or is it not reported at all?	32
7194	11/17/2023 - 7:47pm	Suggestion	The County should adopt a policies of deconstruction and diversion of materials for reuse or recycling when tearing down buildings and prioritizing use of use	32
7234	11/19/2023 - 12:02pm	Suggestion	Time to completely overhaul the Where does it go feature on the recycling pages. The data base needs to reflect all of the many things available for disposal	33
7196	11/17/2023 - 7:51pm	Question	What happens to these items once the HFC are removed? Are they recycled or landfilled?	33
7205	11/18/2023 - 4:37pm	Suggestion	Has the County studies how effective these outreach efforts are in changing behaviors and has it explored ways of identifying the best strategies to do so? Su	33
7271	11/28/2023 - 6:04pm	Suggestion	This would be helpful. I'm guessing a small percentage of homeowners make the effort to access the county website for comprehensive waste disposal inform	33
7195	11/17/2023 - 7:49pm	Suggestion	What does the County do with the tires collected curbside? Could it be included along with the tires from County-owned vehicles for recycling?	33
7204	11/18/2023 - 4:33pm	Question	How much of this ash is generated each year?	33
7275	11/28/2023 - 6:21pm		Because this company collects both trash and recycling, they have a little bit of a conflict of interest since it makes more money the more waste it collects. Se	34
7274	11/28/2023 - 6:15pm		I think the outreach in this way is really helpful compared to just sending out pamphlets. However, the person who gave one of these talks to our neighborh	34
7273	11/28/2023 - 6:11pm		Great opportunity to also educate on Zero Waste Principles	34

7272	11/28/2023 - 6:08pm		My cart hanger has never been securely hung on my cart. Workers typically open the cart top once it's empty and just close the bin onto the paper to keep it	34
7197	11/17/2023 - 7:53pm	Question	I thought this program was dropped in the current budget	34
7198	11/17/2023 - 7:55pm	Question	I hear nothing about this program. How many active participants are their in this program? How many streets? What feedback do participants provide?	35
7209	11/18/2023 - 5:16pm	Suggestion	Not clear how this hierarchy plays into the SWMP or the zero waste plan as much of the focus in on recycling right and composting. This plan also does not ad	36
7276	11/28/2023 - 6:26pm	Question	Where does Arlington County Government lead by example? It's one thing to try to educate people, but I don't know how Arlington is leading by example.	37
7210	11/18/2023 - 5:19pm	Suggestion	Does the County conduct studies to identify the best approached to encouraging these behavioral changes and the impact of its waste reduction communica	37
7212	11/18/2023 - 5:25pm	Suggestion	Not all recycling processes are equally effective and environmentally sustainable and the plan should provide some background in the current state of recycli	37
7278	11/28/2023 - 6:31pm	Suggestion	Yes, very important. Cardboard is highly recyclable, but unfortunately American Disposal Systems frequently picks it up as trash if it isn't inside the blue bin. V	37
7211	11/18/2023 - 5:23pm	Suggestion	Promoting and tracking reuse activities should be a key component of this plan, given it's importance to achieving the zero waste goal and adhering to the w	37
7277	11/28/2023 - 6:28pm	Suggestion	Yes. This is very important. Arlington County can do SO much more to encourage reuse.	37
7213	11/18/2023 - 5:28pm	Suggestion	I mention again that this plan should be more forthcoming on what the true recycling rate is to the extend the County can estimate its success rate. High con	38
7206	11/18/2023 - 4:49pm	Suggestion	What are the specific programs that are included and How does the state calculate the diversion? MIght help to be more specific so readers understand this c	38
7207	11/18/2023 - 4:59pm	Suggestion	Do all commercial haulers take their trash to WTE facilities or just for the services provided by the County The plan should be clear about where commercial f	39
7208	11/18/2023 - 5:04pm	Question	Are there any environmental justice issues to be concerned about at the WTE facility? In particular, is housing for low income or BIOPOC communities nearby	40
7291	11/29/2023 - 5:40pm	Question	Perhaps the County might consider how this drop-off recycling center would relate to a) any future state-wide EPR schemes, or b) the privately owned MRFs	44
7157	11/13/2023 - 12:37pm	Suggestion	We found the composing program unworkable and went back to paying a private service. They bring a seven gallon bucket that we leave outside the back door and put out front for weekly collection. Here were our problems with the county system: <ul style="list-style-type: none"> • Collection bucket provided was much too small for our weekly needs. • We purchased compost bags after using the initial supplies, but they tore more often than not, so were very frustrating. • Bags also tended to degrade after being placed in the county trash bin. In summer, the whole thing became a smelly mess. <p>If participation in the county composting is low, you might want to do some focus groups to see whether this is just an education need or whether the system doesn't really help people succeed.</p>	44
7174	11/15/2023 - 2:09pm	Question	Was this a missed opportunity in the redesigned water pollution control plant? Don't they utilize ADs?	45
7214	11/18/2023 - 5:32pm	Suggestion	Plan should be clearer as to how the County will follow the food waste hierarchy as part of the SWNP and Zero Waste Plan	45
7279	11/28/2023 - 6:49pm		These action steps technically support Goal B, but the goal itself isn't ambitious. It just continues with what the county is already doing. However, I agree with	47
7175	11/15/2023 - 4:05pm	Question	Is this obligation currently applied to APS facilities? I ask because as mentioned above the County states, APS is held to the standards similar to commercial p	47

7280	11/28/2023 - 6:51pm		Arlington needs better oversight of its curbside hauler to make sure it lives up to its contract.	47
7215	11/18/2023 - 5:36pm	Suggestion	None of these action steps appear to address tracking and measuring rates of successful recycling, just the infrastructure to support recycling.	47
7217	11/18/2023 - 5:46pm	Suggestion	I think that the County understates the impact that a robust program supporting reduce, reuse, repair, resell, etc could have on the overall amount of trash, p	48
7251	11/28/2023 - 3:22pm	Suggestion	I agree! Putting the efforts toward a robust program of reuse, repair, etc. will not only reduce trash in the ways you mentioned, but these programs will also	48
7216	11/18/2023 - 5:42pm	Suggestion	The County could also provide incentives and perhaps some financial support through a Green Bank or similar institution to support entrepreneurs interested	48
7281	11/28/2023 - 6:54pm	Suggestion	This is important! Arlington and the Washington, D.C., area needs these companies to become part of the reuse infrastructure. It makes it very hard to set up	48
7218	11/18/2023 - 5:51pm	Suggestion	The GHG measures used for this plan only reflect the impact on solid waste process and fail to address the huge impact that the embodied carbon in this was	49
7153	11/13/2023 - 11:04am	Suggestion	Korea has some innovative systems to make composting easy in urban areas: https://www.theguardian.com/environment/2022/nov/20/south-korea-zero-food-waste-composting-system https://www.newyorker.com/magazine/2020/03/09/how-south-korea-is-composting-its-way-to-sustainability	50
7219	11/18/2023 - 6:00pm	Suggestion	Shouldn't this come first? I might be helpful to outline potential actions the county can take to promote such efforts beyond just public education campaigns	50
7220	11/18/2023 - 6:02pm	Suggestion	Can the County offer any incentives to encourage organics diversion in addition to technical support, which would be valuable.	50
7155	11/13/2023 - 11:07am	Suggestion	This has been the biggest disappointment for us with Arlington's recycling program. We drive all of our glass to the facility by Central Library / Quincy Park ev	51
7292	11/29/2023 - 5:45pm	Suggestion	Ryan is exactly correct with this comment. It is absurd of the county to think that the existing drop-off sites+2 will be enough. Let alone the fact that our cour	51
7154	11/13/2023 - 11:05am	Suggestion	At DC's Dupont Circle farmers market they have a place where people can drop off their compost from their homes. This helps a lot of people living in multi-	51
7221	11/18/2023 - 6:09pm	Suggestion	Would be helpful to have incentives or awards for households which generate less than average waste for trash and recyclables. Perhaps offer smaller contain	51
7252	11/28/2023 - 3:27pm	Suggestion	100% support these suggestions! I would love a small container. Takes up less space in our tiny yard, too. Reduced garbage collection would be a good incent	51
7163	11/13/2023 - 6:00pm	Suggestion	The information on what can be recycled is not clear and consistent in the various flyers you have sent in the past. Are the numbers on plastics sufficient or c	52
7253	11/28/2023 - 3:33pm	Suggestion	This is REALLY a problem area. Recycling information has never been clear, which ends up meaning that there is a lot of wishcycling--people throwing clamsh	52
7222	11/18/2023 - 6:21pm		These are not truly zero waste events. Having attended the County Fairs for decades, almost no one pay attention to the bins resulting in contaminated recy	53
7282	11/28/2023 - 7:06pm		Agreed. The description for this initiative does not fit the definition of Zero Waste. Just putting out a recycling bin that gets filled with recyclable materials, m	53
7223	11/18/2023 - 6:26pm	Suggestion	County could also encourage and provide assistance or point to resources to create neighborhood-based systems for sharing lawn equipment, tools, party su	54
7224	11/18/2023 - 6:29pm	Suggestion	The County could also adopt a policy of eliminating single-use plastics at government and APS facilities and events, similar to what Governor Northam issued	54
7167	11/14/2023 - 10:35pm	Suggestion	"principles"	55
7283	11/28/2023 - 7:09pm		What is the county's definition of "providing technical assistance and support"? What does this look like and how does it encourage restaurants to adopt reu	55

7284	11/28/2023 - 7:10pm		include installing dishwashers in school kitchens so that food service workers can wash reusable containers.	55
7225	11/18/2023 - 6:31pm	Suggestion	Rather than just explore this should be a commitment. Lots of opportunities particularly in the schools.	55
7226	11/18/2023 - 6:39pm	Suggestion	These long-term initiatives would seem to have a large potential for sharply reducing waste, especially single-use plastics, over the long term as Arlington mo	55
7229	11/18/2023 - 6:47pm	Suggestion	Again pointing out that there is a big gap between what our current reported diversion rate and what we're actually achieving. None of these estimates seem	57
7228	11/18/2023 - 6:44pm	Suggestion	EPR laws could have a big impact on waste reduction and also promote more effective recycling or shift to materials for reuse or easier, more effective recycl	57
7227	11/18/2023 - 6:41pm	Suggestion	The County could take steps to encourage the infrastructure for a circular economy, which will by necessity be more locally based.	57
7230	11/18/2023 - 6:53pm	Suggestion	I don't think it's very helpful to just say that we actually can't control what happens I agree that it's important to acknowledge that many of the solutions to g	58
7166	11/14/2023 - 1:34pm	Question	How much money did the County save by having individuals drop off their own glass -- rather than paying the contractor to pick it up and sort it? Is that savin	59
7285	11/28/2023 - 7:15pm		Many of these voluntary programs that emphasize circularity and reuse will hopefully be reducing waste rather than affecting the recycling rate, so it might n	60
7231	11/18/2023 - 6:57pm	Suggestion	How will the elimination of the tipping fee at the WTE facility impact the HSWR--could the savings be used to fund these initiatives/	61
7233	11/19/2023 - 8:55am	Question	how is current street sweeping already funded? Would this be additional sweeping?	62
7232	11/18/2023 - 6:59pm	Suggestion	Can this fee be tiered to reward residents and commercial, MFH buildings for meeting a threshold on volume and successful diversion--ie pay as you through	62
7176	11/15/2023 - 4:09pm	Question	Will the County subject their own buildings as well as APS buildings to these audits?	71
7177	11/15/2023 - 4:10pm	Suggestion	Wrong principle	88
7286	11/28/2023 - 7:33pm		This is one of the most important parts of this item. Helping food service buy reusable dishware.	88

1. To what degree do you agree or disagree that the 19 voluntary initiatives proposed by the County can help achieve its zero waste goals by 2038?: Select one [#229920]	Comments: 2. Do you have any additional comments about the 19 voluntary initiatives to achieve the County's zero waste goals? [#229389]	3) Please indicate your level of agreement or disagreement with the following statements:: 60% waste diversion by 2028 is an achievable target goal for Arlington County [#229391]	3) Please indicate your level of agreement or disagreement with the following statements:: 75% waste diversion by 2033 is an achievable target goal for Arlington County [#229393]	3) Please indicate your level of agreement or disagreement with the following statements:: 90% waste diversion by 2038 is an achievable target goal for Arlington County [#229394]	Comments: 4. Do you have any additional comments about the County's proposed waste diversion targets? [#229399]
	<p>Given the rising home assessments and rising tax rates, I am utterly opposed to Arlington prioritizing climate issues over quality of life issues (like reducing crime, preserving individual rights, protecting families (by not overcharging large families for water usage, for example). Recycling is not the biggest issue of the day! I am also completely opposed to any mandates/requirements for citizens to do so. Education about basic American civics, constitutional principles and other large matters are more important than the climate drama being forced on people/students/elderly. Intellectual diversity has virtually disappeared in Arlington so these citizen input programs are probably a farce in any case.</p> <p>PS There is no way to answer your first question "To what degree..."</p>	Strongly disagree	Strongly disagree	Strongly disagree	Focus on larger issue. Start cutting government spending and then cutting taxes. These initiatives are "feel good" programs for County employees. They do not benefit the tax payers nor the citizenry at large. Trash is not more important than ending the car jackings, armed robberies and differential prosecutorial enforcement of crimes.
	<p>1. There are no incentives or benefits to households that reduce or produce less refuse. I suggest a sliding scale for households that need weekly v bimonthly pickup.</p> <p>2. Incentivize less packaging—save in buying bulk foods; charge large stores for plastic packaging; incentivize stores to remove/recycle packaging on site.</p> <p>Maybe send shock waves through the state and country—manufacturers will be taxed for plastic packaging.</p> <p>In short, let's explore how to reduce plastic and garbage before it reaches a household. Incentivize simplicity in packaging—no unnecessary boxes, less to no plastic (bottles, blister packs, etc)</p>	Agree	Agree	Agree	
	<p>Unless we can verify that what we recycle actually gets recycled, we are wasting time and effort. I have read that so much of what goes in recycle bins is contaminated and goes to landfill or incinerator anyway, causing extra costs. Also, so much gets shipped overseas and who knows what happens there. We can't just assume that because something goes in a blue bin that we have done our job.</p>	Neutral	Disagree	Strongly disagree	
	<p>I don't know that i understand what all the initiatives are, but the critical issues I'd love to see addressed are the compost recycle containers - we'd love to be using that but it just gets too disgusting (bugs, etc.) to be able to collect it for a week before pick up.</p>				I think there is a lot of confusion about what packaging, e.g., to go food containers can be recycled.
	<p>reinstate home glass recycling. While many of us do go to the recycling sites you have whittled them down to just a couple and you have to drive there, using fuel and causing congestion. You have to be smart enough to figure out how to do it safely and if you set up your own facilities to recycle it in concert with neighboring communities and states you can make your own market. You should also know that farmer's markets don't sell all that much organically grown product. You could have supported the Arlington Coop when it existed but you didn't and now it's gone, but Moms and Whole Foods and even the little that supermarkets carry is far in excess what you can find at any Arlington Farmer's market.</p>	Strongly agree	Strongly agree	Strongly agree	Of course that depends on people participating willingly. Should conservatives win the day on this all bets are off.
	<p>While I was unable to note the degree of agreement/disagreement with the County proposal, like many things from the County, the question is worded in a prejudicial way. It is not whether these initiatives "can help achieve" the zero waste goals, but rather whether these initiatives are the best ones to do that or whether they should be done at all. It is clear that some of these initiatives are hardly "voluntary," because they will be imposed upon Arlingtonians as a requirement (e.g., additional cart fees). Many of these proposals are also expensive (e.g., education), without specific benefits outlined. While laudable, to be sure, if initiatives are to be both voluntary and effective, the County needs to design such initiatives with a better understanding of what those words mean in order to find the nexus. Given all this, I'm going to "strongly disagree" at this point. Thanks.</p>				
	<p>I agree but could not indicate so in 2 different browsers. You need to do a much better job of educating what can and cannot go in the blue cart. Pictures or drawings would be helpful for non-english speakers</p>	Strongly agree	Neutral	Disagree	
		Strongly agree	Strongly agree	Strongly agree	incorporate glass bottles!

		Strongly agree	Agree	Agree	
Disagree					
Agree	Noa	Neutral	Agree	Neutral	
Neutral	Please resume glass recycling	Agree	Disagree	Disagree	
Strongly agree		Agree	Agree	Agree	
Strongly agree	As a condo dweller who has paid a private company to compost for me because it is not offered by my building, I'm very excited about how you can help increase composting in multifamily dwellings	Strongly agree	Strongly agree	Strongly agree	
Agree	It is commendable that the County is looking into this problem and taking steps to try to solve it. There is some confusion about the right procedure for processing recyclable items, and which items are recyclable. The list on the County's web page gives basic guidance, but many items people dispose of are missing. Also, it would be good for the County to encourage recycling of textiles, which make up a great deal of unnecessary waste. Thanks in advance for considering my comments.	Strongly agree	Strongly agree	Strongly agree	I hope the County will continue to support these ambitious targets through outreach.
Neutral	what is the COST??? Arlington is taxing us to death.	Neutral	Disagree	Strongly disagree	be clear on the COST and let residents voice their concerns with the COST
Disagree		Neutral	Disagree	Strongly disagree	
Agree	I'm interested in hearing more about the Hard to Recycle materials program. My biggest frustration now is not knowing for sure what can and can't be recycled.	Strongly agree	Strongly agree	Strongly agree	I'd like to see a focus on taking the guesswork out of recycling categories, which would improve voluntary participation, and on technology for capturing/redirecting items that are in the incorrect waste category.
Disagree	There needs to be more education and maybe some penalty like the trash cart charges. It is difficult to know what can be recycled. I think it has changed over time and different in different jurisdictions.	Agree	Agree	Agree	Agree but more education and encouragement is needed. Most public and commercial recycling bins contain everything.
Strongly disagree	If past is prologue, Arlington will spend an enormous amount of time and money on this, hiring many expensive consultants along the way, and have precious little to show for it at the end. Please, Arlington--focus on executing the basics of local government with a high level of competency.	Agree	Disagree	Strongly disagree	
Agree	Commercial establishments (businesses, churches) should be required to either join the residential collection program (which would then of course be expanded) OR the county should mandate that commercial collectors must include compost and must adhere to recycling standards. Has the committee considered the huge CO2 impact of having scores of different commercial contractors driving all over the county every day collecting waste from commercial establishments? Limiting the commercial options to 2-3 companies that adhere to standards, which include commercial composting, would be a huge benefit to the air quality in the county, and would double the positive impact by 1) reducing CO2 emissions by reducing heavy trucks on county roads and 2) adding compost to the collection from churches, etc. Many thanks.	Strongly agree	Strongly agree	Agree	Need to add composting in commercial and church establishments.
Disagree	Well, I appreciate that Arlington county wants to be seen as a leader in all things, green and environmentally possible. It occurs to me that there are some compelling economic reasons that need to be accounted for in your planning. I think some of the actions listed are ahead of their time from a cost effectiveness and economic viability perspective. I think these initiatives, not unlike the programs that have been put in place with regard to highways, and Arlington are a bit shortsighted. As a population ages, they will not, for example, be able to ride their bikes to the grocery store for the usual weekly shopping. It seems the counties leader ship has no appreciation for the frailties of aging and our only bacon Thusi us hence perfectly good four-lane highways being reduced to Tulane highways with bike lanes which are hardly ever used. It's a waste of taxpayers money, and does not show county leader ship as being good stewards of the taxpayers money. Simile some of the environmental and other green initiatives being put forth well in a perfect world and if it was a Costa, this world would be wonderful to have. We are not there yet.; To achieve zero for any initiative is virtually impossible in a cost-effective fashion. I would council county leader ship to rethink its objectives to achieve a reasonable outcome at a reasonable price for the taxpayers, rather than some unachievable pie in the sky objective, which will bankrupt all taxpayers in Arlington county	Disagree	Strongly disagree	Strongly disagree	In economics, everyone knows that the last X percent of an objective are the most costly to achieve while one might be able to make a change of 50% for some reasonable cost to achieve 100% of anything is extremely expensive and usually prohibitively so. So having a vision zero or a zero pollution or zero waste or concepts that cannot be achieved economically. County leader ship needs to rethink its approach to that which is more reasonable, and that which is going to be accommodated by existing economics.

	<p>My black trash bin goes to the curb only once a month on average, and then it is only about half full, while I see neighbors' full black trash bins out every week. So my tax dollars are paying for, essentially subsidizing, all those people's wasteful habits and excessive trash generation. I have no faith in the County's using voluntary measures to achieve zero waste. I don't know of any practical way to charge people for the volume/weight of trash they generate, but the County's Voluntary plans are another demonstration of my tax dollars wasted on feel-good but totally ineffectual staff time and mega-trash generation - Prime Example: the County's distribution of largely unused and straight-to-garbage plastic "countertop kitchen waste bins". Not only a waste of my tax dollars but a mega generator of plastic waste!!!</p> <p>The same psychological and political marketing manipulation that's created expectations of near-instant gratification of package and food delivery, with associated increases in trash generation and pollution and traffic obstruction from vehicles.</p> <p>Unless you develop a mandatory plan with penalties, you're wasting my tax dollars.</p>					Unless the County develops a plan for Mandatory actions, with enforceable penalties, you're engaging in feel-good, do-nothing window dressing that's wasting my tax dollars.
Disagree		Disagree	Disagree	Disagree		
Agree	<p>The overall goal seems challenging, while worthwhile. A concern is how not to discourage residents who think we will never get there. The deposit idea on recyclables is something many might be used to from other states.</p>	Agree	Neutral	Neutral		None
	<p>They all seem good but I do not think they will move the needle as dramatically as the County believes. Recycling has been in place for decades, yet we are only at a 49% diversion rate.</p>					<p>Too ambitious. It would be better to tie specific programs to achievable outcomes (dates seem random) and avoid the appearance of failure.; Too ambitious. I don't think these targets are achievable and will signal failure. It would be better to tie initiatives to specific outcomes. This looks like randomly selected dates and thresholds.</p> <p>On another note: I feel the County made a big mistake in eliminating glass from household collection. It signals that glass is not really recyclable (regardless of the reality). It is always better to teach than reteach when conducting public education. The County should just have assumed the expense of glass recycling in order to maintain the validity of the importance of recycling. Contradiction in messaging can create a lack of trust and ultimately reduce participation.</p>
Disagree		Disagree	Disagree	Disagree		
Neutral	Food scrap plan a loser	Neutral	Disagree	Strongly disagree		
	<p>taxes/fees should not be increased and should only come from the additional users as the number of residents grow.</p> <p>I'm skeptical of accomplishing these initiatives (is it 19 as noted or 15 which is the number that are listed here) when we can't seem to get a recycling company that actually cares about collecting recycling with pride. They continually leave recycling lining the streets as they collect and don't bother to pick up the many random pieces they drop while they are rushing (actually racing) to do their job. There are many retail locations (e.g., along Langston Blvd from North Glebe down past N. George Mason. Especially Garden City Shopping Center. There is constantly trash filling the parking lots and streets with no trash management responsibility. There are no trash/recycling cans and no one is being held accountable for littering. It's shameful.</p>					
Neutral		Neutral	Neutral	Neutral		
Disagree	Too complicated. Too costly. Unattainable.	Disagree	Disagree	Strongly disagree		
	<p>Please look at companies like Clear Drop that are making appliances to collect thin plastics and melt them into a solid block for recycling: https://www.onecleardrop.com. They are looking for local recycling facilities to accept the melted thin plastic and then will trial their appliances in the local jurisdictions. Right now we bundle these up and take them to the grocery store for thin plastic recycling, but unclear what happens after that point.</p>					
Strongly agree		Agree	Agree	Neutral		
Strongly disagree						
Strongly agree		Strongly agree	Strongly agree	Strongly agree		These are fantastic goals which should be plastered everywhere for Arlingtonians to see
Disagree	Composting participation is very low in my neighborhood	Disagree	Strongly disagree	Strongly disagree		
Strongly agree		Strongly agree	Strongly agree	Strongly agree		
	<p>Some are just not going to happen and a waste. Like organic collection on a large scale. As well the trash services for large apartment style buildings needs to be the focus not the SFH where there are options for sorting, storing recyclables, etc.</p>					<p>You can get to a certain level but at some point no further improvements can be made. As well with all the growth the county is pushing which will drive in renters (typically don't care as they are transient) the numbers will actually get worse with more refuse.</p>
Neutral		Disagree	Strongly disagree	Strongly disagree		
Agree		Agree	Neutral	Neutral		

Disagree	Many of these feel like more of the same without addressing core reasons why people aren't recycling or composting materials currently accepted; or people don't have the opportunity (e.g. food scraps for apartments/townhomes). Consider partnering for discounts on separated trash cans inside homes (consumer gets a coupon and can pick). Those compost totes were terrible and an absolute waste of money and plastic - for initiatives like that, make it optional for people to get. Or address the real need - a closed (animal resistant container) that can be kept just outside a door rather than inside. Need a glass recycling place off the western end of route 50. The drop offs are still quite clustered and not convenient.	Strongly agree	Neutral	Neutral	
Neutral	We need curbside glass collection.	Agree	Agree	Neutral	Drop off services are inconvenient and are typically fulfilled via round trip vehicle traffic, where that vehicle has an ICE. Find ways to pickup glass, "hard to recycle" materials (charm), etc like appliance or e-waste which will result in higher diversion rates and less overall vehicle trips
Neutral	Judging whether or not the goal is achievable should be left to experts rather than to ordinary people who are unlikely to understand (or care to read about) all those initiatives. Just do what experts say should be done, tell us succinctly how we would be affected, and if necessary, let us vote on it. And looking closely at how these issues have been successfully managed in Europe without any hassle would surely help.	Neutral	Neutral	Neutral	How on earth could I know? Ask experts.
Neutral	Please recycle glass with home recycle bins	Disagree	Disagree	Strongly disagree	
Neutral	How much is this going to cost me?	Neutral	Neutral	Neutral	no
Agree	I think the plan is useful. I think that single stream recycling should be scaled back to allow only cans/bottles and cardboard. There is too much confusion about what can be recycled, and most of the items get contaminated.	Agree		Agree	None
Strongly agree	I think you may be underestimating the need for recycling education: as an early-morning dog walker, I am struck by how many of my neighbors seem unaware of what can't be recycled. Or perhaps they're just sexist who don't care: I happened to see a neighbor who was putting a plastic bag in the recycling, and when I said that was a no, he said the box said it was a recycling bag and that Arlington County was wrong (I guess because Glad is selfless?)	Agree	Neutral	Disagree	
Agree	Make it easier to dispose of large items without having going to the solid waste center. Increase the number of leaf collections or move the 2nd collection at least a week later in the season	Disagree	Disagree	Disagree	without specific recommendations, the targets will not be met because of mixing of waste products between categories
Agree		Strongly agree	Strongly agree	Strongly agree	
Neutral		Strongly agree	Agree	Neutral	
Agree	Need to get the Arlington community gardens involved in organic diversion. Right now their organic waste is considered trash so it gets burned. I have asked my county POC about this and got no where. Very frustrating that all this beautiful garden waste could be composted vice being burned. Goes against county initiatives to compost organic matter. What a complete waste of organic matter.	Strongly agree	Strongly agree	Agree	
Strongly agree		Strongly agree	Strongly agree	Strongly agree	
Strongly disagree	This is all just verbiage. There is nothing substantive about it. Why not start charging residents in single family houses based on the amount of waste they generate. Crack down on improper recycling such as people putting recyclables in plastic bags into the blue cans. Mandating composting. Also raising awareness of which plastics are truly recyclable.	Disagree	Disagree	Strongly disagree	No
Agree		Agree	Agree	Agree	
Neutral	As a novice in this area it is difficult for me to have an opinion, but I am commenting as a matter of good faith in the research and judgement of the professionals undertaking this work on our behalf.	Strongly agree	Strongly agree	Strongly agree	Our organization is committed to supporting sustainability. Being able to directly reflect performance under the programs the county develops will be of interest to us.
Agree	Suggest identifying opportunities to collect food waste at grocery stores and restaurants. Start with incentives and then go to mandatory requirements. Consider incentives to increase the amount of residential food waste collected.	Agree	Agree	Disagree	While 90% is a good goal, I am not sure that it is achievable based on people's always going for convenience over the environmental benefits of waste diversion. ; Keep going for as much as possible.
Disagree					
Strongly agree		Strongly agree	Strongly agree	Strongly agree	
Strongly agree		Strongly agree	Strongly agree	Strongly agree	
Agree	Without consumer buy in, it will not succeed. A carrot/stick approach is needed.	Strongly agree	Agree	Agree	

Agree	Curbside collection of glass will likely increase citizen compliance with glass recycling. Recycling (including of plastics) is only meaningful if collected material is actually recycled. The curbside composting fee is an imposition for those of us who have long composted kitchen fruit/vegetable and grass clippings/non-seeding weed waste.	Disagree	Disagree	Disagree	Commercial building compliance and sloppy waste collection thwart best-laid goal achievement. Styrofoam and packaging plastics (from widespread use of delivery services and many store purchases) will challenge the target percentages.
Agree	The reason for agreeing is that neighborhoods need to be educated. Any additional fees will break down this process because Arlington County does not seem to know how to manage their budget. Additional office buildings and wasteful expenses causes the communities to fight hard on additional cost for the residence. Everything is expensive as is and residence do not want to pay additional fees to county. This will discourage neighborhoods to participate. Cut cost in the use of office buildings that are vacant or vehicles that are updated with new ones so often so to keep the budget going.	Agree	Agree	Agree	
Agree	The initiatives would do a lot more of they weren't voluntary. It's hard to believe that there's a real commitment to better recycling on the county's part after home glass recycling was discontinued. How much more fuel is burned by all the individual vehicles traveling to glass collection points than by home collection?	Strongly agree	Agree	Neutral	
Agree	If this is going to work, Arlington County will need to do a LOT of education, re-education, AND be transparent at what the County is doing towards meeting these goals. Some people are going to be put off by the costs being borne by the residents in terms of increased fees. Recycling of paper, plastic, glass has limited impact on climate changes as has been documented well. The bigger issue is what isn't being reused, recycled, disposed of well as mentioned--carpeting, mattresses, cars, metals, etc. We have been conditioned to be consumer. What is Arlington County going to do to address that issue?	Disagree	Disagree	Disagree	My previous comments apply. Until enough of the population recognizes that we have been conditioned to be consumers, it will be difficult to meet any targets. In addition to the previous comments, what is happening to all the waste from old homes being torn down to make way for larger homes that potentially will require more energy to run? What about the building that Arlington County does and allows to be done? What happens to the waste when streets are repaved? ; No.
	Sometimes in helping the county do better, it becomes more work for us at home to accomplish your ideas. We are still thinking about styrofoam, the number symbols in the triangle that my older eyes can hardly read! Ideas are great but manufacturers have to do more to assist in your goals. Long term goals of 5 year increase are just that. Goals. We all try hard to comply but, raising prices to accomplish your goals always seems a punishment at our end for those people who don't or can't comply.	Neutral	Disagree	Neutral	Garbage doesn't have to be a messy subject. Change attitudes about how to implement ideas. E happy to have containers that are much easier for us to move to street. Broken ones, replaced faster, have crews that can come around & clean them for us as we age or have impaired health. We have to work so you can get results. Don't make it feel like another burden. Everyone wants to feel appreciated for their cooperation & waste management has to make us feel we get more for our money besides living up to your plans. Not easy dealing with people. Good luck!
Strongly agree	Composting: We need to improve educating county residents about importance of composting. Most families are not using county composting services. One solution is to incorporate environmental education in K-12 schools curriculum. If students are educated about county waste and composting program, then they will encourage their parents and families to actively participate in Arlington County's waste management program and composting program!!				
Neutral	I'd like to be able to add more materials to my recle bin such as glass and plastics. Make it easier for home owners to comply. I am not interested in food waste containment - I will not keep in my home or outside container re: animal control.	Agree	Neutral	Neutral	
Strongly agree	I strongly support all efforts to increase recycling and reduce use, and the goal of zero waste goals is commendable. At the end of the day, it's about education -- I see many households recycling materials in plastic bags, even food waste -- and the degree of success depends on how committed as well as educated households and others are. I especially support increasing fees for using black bins. I shall also be happy to pay more to further strengthen recycling. I have very much appreciated the glass recycling centers and am happy to see that you will be adding a couple more. The only recycling capacity I don't have enough of is the organic recycling bin during the grass-growing season. By contrast, I put the black one out only once every 4 to 6 weeks, and the blue bin every 3 weeks or so. Organic waste recycling has truly transformed our waste disposal and recycling, so a big thank-you to the county.	Strongly agree	Strongly agree	Agree	
Strongly agree		Agree	Agree	Agree	
Agree		Agree	Agree	Agree	

Neutral	Many of them appear to be routine "blather." As a single person in a single family home who has lived in Arlington for 30 years, I have heard about all the recycling and waste programs for years. I do what takes simple effort (recycle paper and metal and allowed plastics, return plastic bags etc. to grocery stores, take my glass bottles to the dumpsters) and I don't do what makes no sense for me, such as saving minimal amounts of food scraps in a smelly container in my kitchen and then dumping them into the green bin and dragging the green bin to the curb each week (which otherwise does not need to go to the curb). Your endless notices of what a great thing this process is are just wasted time and energy so far as I am concerned. Likewise, I have a two-car garage and one car, so I can save glass containers easily. Most of my neighbors don				
Strongly disagree	Another Cty Board/Gov't program rammed through just like missing middle. If you drop missing middle, you drop density. Is there a cost benefit analysis of this, and if so, what does the county save or even make as income ? Again, single family homeowners will try to comply but high density area will continue overall noncompliance, so as the County usually does, it will continue to squeeze home owners, tell us we are anti environment, and tax us to make the Board feel better. Enough is enough. Enforce county regulations throughout the density areas of the county and stop forcing homeowners on guilt trips to carry " The Arlington Way"	Strongly disagree	Strongly disagree	Strongly disagree	Why are we doing this, is it a budget issue, or is it a let's mess with the homeowners issue ?
Strongly agree	I think plastic bags should be outlawed at grocery stores in particular. And non-recyclable things like styrofoam too. Restaurants could use paper and aluminum containers just as easily. I compost, i never use bags in stores yet 90% of what i put in trash is plastic.	Strongly agree	Strongly agree	Strongly agree	I'd try to meet these targets sooner if possible.
Agree	I think education is extremely important. There is still significant confusion about what items may be placed in recycling bins, including the types of plastics. Many in my neighborhood were surprised to learn that paper should not be placed in paper bags.	Agree	Agree	Agree	
Disagree	No enough detail to evaluate effectiveness of proposal.	Agree	Neutral	Disagree	It would be difficult to to increase diversion after some relatively low-hanging benefits, so further diversions would be much harder, this is not a linear process.
Agree		Agree	Agree	Agree	
Neutral	I am not against this plan as long as the plan doesn't increase my bill. We pay to much for the county services now.	Neutral	Neutral	Neutral	Lofty goals which will be almost impossible to achieve.
Disagree	My husband and I are in our early eighties and may not be driving a car in 10 years. We will not be able to transport glass to recycling stations. Recommend that you restore addition of glass to recycling carts.	Neutral	Neutral	Neutral	Recycling food scraps by having households put food scraps in green recycling containers was not feasible for us because of the difficulty of moving the green container out to the curb each week from the rear of our townhouse (roots, uneven surface, soggy ground, etc.). There are only the two of us and we had so few bags of food waste, such that the collection crew just fished them out of the green container and tossed them into the truck that was collecting trash from the black trash container. I reported this to the County and they replied that this was not proper.
Agree	If you could charge people per pound of waste, that would be a bigger incentive to reduce waste.	Neutral	Neutral	Disagree	
Disagree	I do not think a "zero" waste goal is achievable and certainly not worth the money to support.	Disagree	Disagree	Strongly disagree	There are higher priorities in the county than zero waste.
Agree	As much as possible there needs to be further incentives (such as financial benefits) and mandates to get households and businesses to minimize trash production. A reliance solely upon voluntary matters is likely to produce disappointing results. Work with our State legislature to enact legislation that outlaws much of the single-use plastic/styrofoam packaging and enacts bottle bill and other deposit and fee legislation. Understand that trash which never produced is the best possible outcome. I see no explicit mention of regional measures, will Arlington team up with other northern Virginia or DMV jurisdictions? Overall the plan is on the right track but maybe needs to be a bit bolder in its actions in order to achieve its laudable goals,	Strongly agree	Strongly agree	Strongly agree	

Neutral	Additional Trash Collection Charges - So basically raising rates just to make trash more expensive on the hope it induces reduced usage- how does this even help when trash bills are only quarterly? This is a poorly explained and possibly poorly designed policy idea. Makes things more expensive with little explanation for how this would influence behavior. Unpopular and I would question the degree of waste reduction- trash is not a normal economic good that you can just apply price elasticities to.	Agree	Neutral	Disagree	A lot of the last 25 percent is going to be hard, and influenced by manufacturing, supply chain, and consumer preferences wrt to packaging, shipment, etc. More efficient, more recyclable packaging, and greater ability to reuse packaging (circular economy) would be needed, but that can't be implemented just locally. But Arlington could try to support changes by industry, CPG, transportation and logistics players. ; Is construction waste part of the reduction targets? Seems that's a pretty large amount of waste that could be reduced that might about same order of magnitude as all trash cart waste by volume.
Strongly agree	A good focus is MF/C organics diversion.; I request that the county include a requirement for all commercial establishments (and churches) to utilize contractors that provide commercial compost collection. In addition, it would be very helpful to reduce the number of commercial contractors in the county as consolidating the number of contractors by adding routes would be much more efficient and would lower CO2 emissions.	Strongly agree	Strongly agree	Strongly agree	
Strongly disagree	The county's partial reliance on its residents to follow rules and sort its trash and recyclables is a dream (or nightmare). Until Arlington creates a plan that relies on its own resources, its proposal will fail. Along with that, who will pay for the cost of an effective program? As one piece of evidence, consider the food waster program as an example. Or, are you satisfied with voluntary glass recycling? What procedures will you use and who will pay need realistic answers?	Strongly disagree	Strongly disagree	Strongly disagree	
Agree					
Strongly agree	The public needs more education/information to motivate them to recycle responsibly/reuse/and not WASTE food. This is especially important areas where people think it is ok to walk away with grocery carts, litter, leave beer and wine bottles in the parks, etc. We need a strong campaign on this in languages to reach all of our population.	Agree	Neutral	Neutral	Educate, educate, educate the public about the benefits of recycling and not wasting food and other precious resources! Educate, educate, educate the public to recycle and not waste food and other resources!
Disagree	The glass recycling "program" is total nonsense	Disagree	Disagree	Disagree	
Neutral		Neutral	Neutral	Neutral	I think a video talking about the plans, instead of these charts and arrows, would give me a clearer picture of what you you are suggesting and what can be accomplished
Strongly disagree					
Strongly agree	no	Strongly agree	Strongly agree	Strongly agree	no
Agree	This is not a survey. It's a bunch of graphics and 1 question. All very poorly put together. I can't figure out what the 19 voluntary initiatives are. It should not be that difficult to complete a 1 question survey. I support the county's waste program and appreciate the opportunity to contribute to the County's zero waste goals. But if you want feedback, and just not to check a box that you "asked for feedback", please put together a survey that can gather information and ask questions that are answerable.	Neutral	Neutral	Neutral	How would I have any idea if the % waste diversion by 2028/33/38 is an achievable target goal for Arlington County
Agree		Agree	Agree	Agree	
Strongly agree	I was not able to select "Disagree" above. I am already being charged a lot for trash collection. I am also expected to deliver glass to recycling bins myself. Giving me more trash bins (in addition to the four I already have to deal with) will only make me more frustrated. There's be a whole lot less to recycle if people weren't getting deliveries of everything, wrapped in plastic and either in cardboard boxes or plastic (Amazon Prime) bags. When I shop locally, in person, I don't produce the waste. Of course, the County can't force people not to have everything delivered, so instead you try to make people who produce less trash pay more and spend more time and effort sorting trash. I am not happy.	Disagree	Strongly disagree	Strongly disagree	See prior comment. If you want less waste, convince people to have less stuff delivered in plastic and cardboard.
Strongly agree	no	Agree	Agree	Agree	no
Disagree	The County should operate at the lowest cost possible for the taxpayer. We do not need popular or virtue-signaling projects --- for example the largely disapproved missing--middle initiative.	Disagree	Disagree	Disagree	
Agree		Agree	Agree	Neutral	

Strongly disagree	Every year, our trash fees (and taxes) go up and up, and every year, we get less services for what we pay - and Arlington asks us the taxpayers to dispose of our own trash including food waste, yard waste, plastic bags and glass. As Arlington identifies the problem, it is too much trash due to increasing population. However, the Arlington County Board just keeps allowing more and more high density projects which bring in even more residents which exacerbates the problem. With the world going to telecommuting, we need to get ahead of the curve and limit population growth in the county (which will also help with green initiatives as we stop cutting down trees and bulding on every empty spot of land.) Not willing to keep paying more to the County for less.	Strongly disagree	Strongly disagree	Strongly disagree	Every year, our trash fees (and taxes) go up and up, and every year, we get less services for what we pay - and Arlington asks us the taxpayers to dispose of our own trash including food waste, yard waste, plastic bags and glass. As Arlington identifies the problem, it is too much trash due to increasing population. However, the Arlington County Board just keeps allowing more and more high density projects which bring in even more residents which exacerbates the problem. With the world going to telecommuting, we need to get ahead of the curve and limit population growth in the county (which will also help with green initiatives as we stop cutting down trees and bulding on every empty spot of land.) Not willing to keep paying more to the County fo
Agree	Voluntary is a good start, but fines (for say, repeated improper recycling sorting) and fees (say, for leaf collection) are necessary as Step 2.	Strongly agree	Strongly agree	Strongly agree	These goals will require sticks, not just carrots. If so, it can be done.
Neutral	Covanta creates toxic waste and air pollution. Also I live in Fairlington so much of what Arlington does is off limits to residents here by design. Not the best set up going forward. I have to drive my glass, compost, plastic, cardboard, paper to Taylor St Yard. Fairlington "recycler" pick questionable. Plus yard waste bags just go in trash truck in Fairlington. City could do better for sure.	Agree	Agree	Agree	
Strongly agree	These 19 are great. They'll really help. I especially like the plan to promote reusable packaging in food service establishments. One additional idea: transfer the cost of disposing of plastic packaging to product manufacturers. This would likely need to be addressed by the state legislature. The idea would be to discourage the use of plastic packaging and encourage the development of alternatives that are more easily recycled and/or more quickly degrade.	Strongly agree	Strongly agree	Strongly agree	No - this can be achieved!
Disagree	Residential trash collection is not well organized. By eliminating trash collectibles such as metal, glass and plastic bags the figures are hiding where these materials end up. The organized collection (even if voluntarily separated) by the trash collector trucks allows a more thorough effort at disposing of materials consistently. too much burden is placed on individuals and therefore inconsistency of disposition.	Neutral	Disagree	Disagree	
Neutral	Would like to accomplish waste reduction with as few changes to our current trash/recycling/yard services as possible.	Agree	Neutral	Disagree	Don't set too high a goals without the infrastructure to support them.
Disagree	What are the additional trash cart charges all about. I have one small black trash cart + my recycling cart + my green recycling cart. I am opposed to any additional charges. I do everything I can to keep my trash footprint small. Please no more fees! Do the County's recycling efforts even make sense? What happens to all the collected recycled materials? Are they actually removed from landfills/repurposed? You need to take a realistic approach to recycling. Actually listen to what residents are willing to do and encourage them to do that. Don't shoot for unattainable utopian goals. The current food scrap program is an example of a niche idea that was not supported by the majority of residents. Focus on glass collection. Increase compliance by businesses and multi-unit residential buildings.	Neutral	Disagree	Strongly disagree	
Agree	Don't double charge businesses that are part of condos for refuse fees. My condo paid fees for this, I use their facilities to throw/recycle my refuse, but my business still gets charged an additional fee as if I were not going through my condo.	Agree	Strongly agree	Strongly agree	
Strongly agree	1. Maybe the CHaRM initiative will address this, but the "where does it go" site needs work. The 'answers' are often missing and frequently unclear (what does 'single use plastic' really mean?). In this day and age of artificial intelligence, machine learning, and even Google image search, we should be able to hold something up to our phone cameras and instantly get a "where does it go" answer. Lacking that (or in addition), how about a 'chat' (robotic or human) where someone can ask for an answer. 2. Many (most?) of these seem aimed at those of us who try. How about the rest of the community (example, those who put recyclables in a plastic bag in their recycle cart (face plant!)), Not sure what to do there....	Strongly agree	Agree	Neutral	no

Neutral	The County does not have funds to support this initiative at this time	Neutral	Neutral	Neutral	The County does not have the funds to support this initiative at this time
Disagree	a lot of people, especially in the apartments and condos (high density), do not care one little bit about waste goals	Neutral	Neutral	Neutral	People in high density housing tend not to care
Agree	Stop trash contractors from picking up boxes that aren't broken down and piles of brush not reduced to 4' length - or take their glass to recycling dumpsters. Those who choose not read your handouts, read great website info - or comply with our great service options need some tough love. I can live with watching this trash accumulate in front of their \$2M+ homes until they finally start being part of the solution instead of the crux of the problem.	Strongly agree	Strongly agree	Strongly agree	Do not coddle or enable the scofflaws! They will get it when it doesn't get picked-up after a week or two.
Strongly agree	Definitely adding the food waste recycling/composting goes a long way to the goals. Absolutely important that this continues.	Strongly agree	Strongly agree	Strongly agree	
Disagree	I want to be able to recycle glass from my home. Give me a bin or single stream. It's one of the original recyclables, and I have to travel to drop it off? It is ridiculous.	Disagree	Disagree	Strongly disagree	I want to be able to recycle glass from my home. Give me a bin or single stream. It's one of the original recyclables, and I have to travel to drop it off? It is ridiculous.
Agree	I had not thought I would be able to adopt the procedures necessary to recycle food waste, but the counter top container and outdoor green waste bin has made it possible to do this, so I think even more habit change is possible.	Neutral	Neutral	Neutral	Education and ease of implementation may make it possible to meet these goals.
Strongly disagree	Sorry, but after taking away glass from being recycled AND raising the waste taxes, I don't believe this "plan" is anything more than Arlington having people do more of their work for them. But cute graphs.	Strongly disagree	Strongly disagree	Strongly disagree	
Strongly disagree	The additional fee comes across as a money generator vice the County taking measures to achieve the goal. Consider changing initiatives to make it easier for individuals to contribute toward the goal vice taxing them.	Neutral	Neutral	Neutral	
Agree		Agree	Agree	Neutral	
Neutral	PLEASE do not gather community input using poorly designed survey questions. This question provides no useful information: "1. To what degree do you agree or disagree that the 19 voluntary initiatives proposed by the County can help achieve its zero waste goals by 2038?" The question asks whether the initiatives can help *more than zero*, which means anywhere from extremely little to very much. A good survey would explicitly ask the question you want answered, such as "To what extent will the 19 voluntary initiatives proposed by the County help the County's zero waste goals? The possible 5 choices would range from none to very much.; PLEASE do not gather community input using poorly designed survey questions. This question provides no useful information: "1. To what degree do you agree or disagree that the 19 voluntary initiatives proposed by the County can help achieve its zero waste goals by 2038?" The question asks whether the initiatives can help *more than zero*, which means anywhere from extremely little to very much. A good survey would explicitly ask the question you want answered, such as "To what extent will the 19 voluntary initiatives proposed by the County help the County's zero waste goals? The possible 5 choices would range from none to very much.	Agree	Agree	Agree	
Agree		Strongly agree	Strongly agree	Strongly agree	NA
Strongly agree					
Disagree	These are all good ideas, and I would be glad to see them implemented. But until manufacturers are required/incentivized to eliminate wasteful packaging and single-use plastics, consumers can't be expected to do all the heavy lifting. Instead of informational fairs, I would like to see funds go to, for instance, grants for businesses that switch to reusable and compostable containers.	Neutral	Neutral	Neutral	I very much support ways to make recycling and reuse easier, such as more glass recycling facilities and ways to recycle more products. The county is doing a great job already with organics recycling; it's very easy and clear. I recall a community giving out awards to residents that do the best job with their waste management; that could be a fun way to encourage voluntary practices. I don't know how the awards were determined, though.

Agree	For nearly 40 years in a house near Pentagon City, I have given neighbors who move in your flyers on recycling and trash, asking them to read them and do their best to follow the guidelines. Increasingly, we have renters in these houses, not the owners. I do not see the will to follow what is needed to implement these goals. I feel very discouraged as I say this, but I am exhausted and have spent hours repackaging and taking on trash of neighbors who throw all the wrong things in the cans. I am too old and too tired to continue doing this; besides, our block is about 40 percent renters at this point. Some families try harder among the renters; the track record for un-related renters in one house is awful. I have also spent hours on the phone trying to keep up to date with news from the county on what to include and what to leave out. I applaud your goals, but I find them, for my neighborhood at least, quite unrealistic because I don't see the will to pay attention to this among my neighbors--even among the homeowners who have lived here at least 20 years.	Disagree	Disagree	Strongly disagree	please see comments above that I wrote. I see noncompliance by neighbors, even the ones who are homeowners (not just the many renters on our block near Pentagon City. I am very discouraged.
Strongly agree		Agree	Strongly agree	Strongly agree	Household education will be a must to achieve these targets. Suggest hiring and training college- and high-school aged people to accompany the waste-pickup trucks and assess each household's success in meeting waste/recycling compliance, then follow up with personalized contact and education.; Also, if feasible, weigh total waste/recycling load and charge disposal fees accordingly.
Strongly agree	Why not add more recycle station with container for "Paper", and continue with Glass and Cardboard. The idea would be to have less to sort after people throw into their blue bin. Educate people and give them an easy way to recycle aluminum in churches, places where a lot of people congregate and use aluminum containers. Place recycling bins on big grocery store parking lots to make it easy for people who want to recycle (everyone goes to grocery stores...). Educate in school and have recycling bins for certain recyclables (small ones like batteries or aluminum) and give kids rewards with a point reward system.	Neutral	Neutral	Neutral	If people contribute and are on board it's going to be achievable like in Austria, and other European countries, but if they don't care and are not educated (or rewarded) it's just going to be an impossible dream...
Neutral	Not educated to a degree that I can comment	Neutral	Neutral	Neutral	
Neutral	What data shows these are the right goals for Arlington? What data shows that these initiative will accomplish the goals? What data is available about the success of past-year goals and initiatives?	Neutral	Neutral	Neutral	What data shows that these are the right targets and timelines?
Strongly agree	There are so many great ideas that I'd never thought of!	Strongly agree	Agree	Neutral	I think the targets are great, but I'm a bit skeptical about the 90%
Neutral	I rarely have a garbage or recycling bin out once a month but I pay for approx 8 cans a month. That is a disincentive. I have composted on site for decades. What do I save for being proactive?				
		Agree	Agree	Agree	Agree with caveat as to what the requirement and charges will be. It seems that we will likely be required to do more and pay more, for the duties services that the recyclers should be doing today.
Agree	I would love to see "reusable packaging at food service establishments" move to a short-term or medium-term goal. You should also implement a law similar to Montgomery County that only orders that request silverware, napkins and straws come with food to-go or delivery orders. Lastly, I would love to see a law that to-go business must allow customers to request food in their own clean reusable packaging. You could sponsor more free / swap meets like the one the Main Library recently had for craft supplies. You could being a small business incentive program to help a refill store small business open (like the ones in Vienna and Arlington)	Neutral	Agree	Agree	I think the County must differentiate between what is "put" in recycle bins and what is actually recycled "wish-cycling." The County should also publicize what is truly recycled and what is burned for power or still sent to landfill (due to low prices on recycled materials)
Strongly disagree					
Strongly disagree	Stop using utilities to fund your vanity projects	Neutral	Disagree	Strongly disagree	No
Agree		Agree	Agree	Agree	
Disagree		Disagree	Disagree	Disagree	

	You did not include a focus for the initiatives. For example, who is the targeted audience for education? Arlington is moving away from single family housing and towards multi family housing. Do you plan to educate commercial trash collectors? That's who picks up the trash in multi-family housing. For the limited number of single families remaining in Arlington you plan to increase the cost of additional trash cans? Really? The cost of all this needs to be contained. Many of us will simply turn in our green and blue cans if you charge more for them.; You do not explain where you will focus your efforts. For example: education. Who do you plan to educate? Arlington is moving away from single family homes (where it is easier to pre-sort trash) and towards multi-family homes. Do you plan to educate landlords? Commercial trash companies? Corporate building owners? Air B&B Owners - many of whom do not live in Arlington? Also, you indicated you would add additional trash cart charges. What does this mean. I have three carts now and pay for all of them. Do you plan to charge me more?					How did you come up with the estimate? Do you have any control or true knowledge of the trash vs recycle vs green waste of commercial and multi-family buildings?
Strongly disagree		Disagree	Disagree	Disagree		
Agree		Agree	Neutral	Disagree		It seems unrealistic past about 3/4 because that (at least per my interpretation) means that the composition of the 'trash' category would need to have new processes to divert/handle, or there would need to be a major change in consumer behavior. ; Otherwise, I think there are a lot of easy wins with better trash behavior across the community!
Agree		Agree	Neutral	Neutral		
Strongly disagree	It has been demonstrated over and over that these programs are expensive, politically motivated and do not even have a chance of fulfilling their stated goals.	Strongly disagree	Strongly disagree	Strongly disagree		There is a crime crisis in Arlington, an illegal immigration crisis at the US Border which has impacted local taxes and welfare programs, as well as a fentanyl crisis in the Arlington Schools. You have failed to address all of those, or made them worse through woke political policies. Why should one believe that your garbage collection plan, however dressed up, will be effective in its stated aims? Perhaps the voters will wake up one day, although it seems clear that you do not think they will.
Neutral	I don't think there is the appetite or ability to pay more for all of these efforts.	Disagree	Disagree	Strongly disagree		
	Are there areas of the county that need special attention, that do not recycle.					
	Batter recycle points at food stores, hardware stores.					
Disagree	Less cardboard in deliveries - ie amazon	Disagree	Disagree	Disagree		
Strongly agree		Strongly agree	Strongly agree	Strongly agree		
Agree	Implement mandatory compost at restaurants and use of compostable containers. Ban styrofoam and other hard to recycle materials. Award/recognize leading recyclers/waste diverters in ARL—commercial, residential, and retail.	Strongly agree	Disagree	Strongly disagree		
Neutral	Would like more information on actual implementation.	Neutral	Neutral	Neutral		
Agree		Strongly agree	Strongly agree	Agree		
Neutral	I don't completely understand them. I also think single stream collection should be replaced by separate stream collections (one week paper; the following week plastics; the week after that metals). Separate stream collection works in other cities, with enough public education and encouragement, it could work in Arlington.	Disagree	Disagree	Strongly disagree		
Neutral		Neutral	Neutral	Neutral		
Neutral	Some initiatives are not described. What is EPA4?	Neutral	Neutral	Disagree		You have given very little information to answer the questions.
Agree	Are you sure their are 19 listed voluntary initiatives? Listed above are 15. As indicated in the long term, how will zero waste principles be incorporated in County and APS operations?	Neutral	Disagree	Strongly disagree		I don't believe the community is aware of the lifestyle choices necessary to have a 90% waste diversion by 2038. The commitment and interest is evident in the community but the County as a whole is speculative at best.
Agree		Strongly agree	Strongly agree	Strongly agree		
		Agree	Neutral	Disagree		
Agree		Agree	Agree	Agree		
Agree	Need to balance goals with costs. Where is the cost benefit analysis?	Disagree	Strongly disagree	Strongly disagree		Again, where is the cost benefit analysis?
Agree		Agree	Agree	Neutral		
Agree		Agree	Agree	Neutral		
Agree		Agree	Neutral	Neutral		
Strongly agree		Agree	Neutral	Neutral		
Agree		Strongly agree	Agree	Disagree		

Neutral	Why aren't commercial businesses included on these initiatives? They are some of the biggest polluters to our landfill. I've watched employees throw dozens of florescent bulbs on the trash as well as chemicals, metal, shredded clothing, food.... Most people are recycling so until you ask for commercial properties to have standards, there will be little impact.	Neutral	Neutral	Agree	Create standards for commerical properties!; Create standards for commerical properties!
Strongly agree		Strongly agree	Strongly agree	Strongly agree	
Agree	Why would organics diversion INCREASE Greenhouse gases? And if it did increase them, why do them in the first place? My understanding is that natural composting releases different gasses better for the environment as oppose to being thrown into an overall junkyard. More explanation on those initiatives would be helpful. I'm not sure how firm the allocated money is; will this money DEFINITELY be spent on these initiatives, yielding this cost impact? I'm not sure what the impact means on the bottom line. That would be a good explanation overall for these, or each one individually if it's different. Not for the initiatives but the overall graphics - the cost impact colors are somewhat confusing. I could see the darker red was for a greater impact, but it was confusing without original context.	Agree	Agree	Neutral	Bold goals, and I hope they are achievable. I'd like to see these original goals alongside actual measured progress throughout the years so we can measure the success of these.
Neutral					
Disagree		Disagree	Disagree	Disagree	
Disagree	The initiatives are great. The consistent push forward to make this a reality needs to be implemented immediately to meet a 2038 goal. The amount of work ahead is immense. Being born and raised in Vermont, recycling has always been a part of my life from a young age. Right now, Arlington does not have the proper infrastructure or resources offered - there's a lot of work ahead.	Neutral	Strongly disagree	Strongly disagree	Need to get on it, if this is gong to actually happen.
Neutral		Neutral			Glass and Tires can be used to Augment Both Roadway and Concrete Aggregate...
Disagree	You must incorporate apartment buildings into the planning otherwise, a huge percentage of waste is not addressed.	Disagree	Disagree	Disagree	These numbers are arbitrary and do not seem to be supported by evidence.
Disagree	Voluntary initiatives appear too timid and almost inconsequential in meeting zero waste goals. Overall it's unclear what the target actually means and to what extent reduce and reuse strategies play a role, as all such measures are estimated to have minimal impact in meeting the County's goal. The proposed plan does not put our current waste streams in context with their impact on greenhouse gas emissions as well as other, serious environmental impact or acknowledge that recycling, particularly for plastics, has been a failure and "recycling right" will not really address these climate and environmental impacts. I'm also not clear how the County would measure success in waste reduction and these impacts.	Disagree	Disagree	Disagree	The County plan should adopt more specific targets on waste reduction and disaggregated targets for specific categories in the waste stream such as food waste and plastics as well as sectors to include residential, MFH, commercial, APS and County facilities. I'm also not clear on what the targets would actually mean. County audit data indicate that well over 50 percent of the recycled content in the MFH stream is trash or food waste, which would make almost all of the recycled collection in that sector contaminated and sharply reduce what is actually recycled. Better recycling might not even move the needle in the data collective and could make it look worse.
Strongly disagree		Strongly disagree	Strongly disagree	Strongly disagree	
Disagree		Agree	Neutral	Disagree	
Agree		Agree	Agree	Neutral	
Agree					
Agree	You must consider how products we purchase are packaged. Mostly out of our control but leads to excessive waste production. Be careful what the county proposes does not lead to residents buying less to meet county waste reduction goals. That could have unforeseen consequences.	Neutral	Neutral	Neutral	I don't know if the goals are achievable. You should ask if we agree with the goals. ; I agree in general but supplier packaging needs to be factored in.
Strongly agree		Strongly agree	Strongly agree	Strongly agree	
Strongly disagree	Too costly and coercive	Disagree	Disagree	Strongly disagree	Unrealistic and too costly
Agree		Agree	Agree	Agree	
Disagree	Increasing organics diversion also increases GHG? I support composting but that is a discouraging stat.	Disagree	Disagree	Disagree	
Neutral	These graphics are confusing and do little to help me understand the proposed programs	Neutral	Neutral	Neutral	How in the world does the information presented help me to understand whether or not these goals are achievable? I moved here from a municipality that has far greater waste diversion, and their outreach and regulation were easy to understand.
Neutral		Neutral	Disagree	Disagree	
Neutral		Agree	Neutral	Disagree	

Agree	Increase glass recycling with a small residential cart. Use that cart for metal as well. Make it voluntary like the compost carts. Increase education media to include all public buildings and voluntary signs posted in commercial establishments. Make all charts large enough to read. Zero Waste events should be in 2 places once a year: at the hazmat disposal place by the water treatment plant; and at another location north of route 50.	Neutral	Neutral	Disagree	The problem is us. Everybody talks about recycling but many don't participate or participate partially and all of us mistakenly recycle things that aren't recyclable. The goals are worthy but I don't know if we will make any of them. It'll be great if the percentage continues to rise.
Strongly agree	Please start implementation as soon as possible!! Do not delay!!	Agree	Agree	Agree	They are great targets but I do not really know if they can be achieved. However, they are worth having as targets even if they are not met.
Neutral		Neutral	Neutral	Neutral	
Agree					
Agree				Strongly agree	
Agree	I think these initiatives are great for Arlington, but unfortunately the cause of having to dispose of so much waste needs to be handled at levels outside of the county.	Agree	Agree	Neutral	I think it will be challenging to get to the last target.
Agree		Agree	Agree	Agree	
Agree					
Agree	Organic waste diversion at the Farmer's Market is a good start, but many households don't regularly shop at those markets. There should be a more comprehensive program to incentivize food waste diversion from the trash. For example, offering more drop off locations throughout the week for compost, or offering compost pickup service just as we have for trash and recycling. When you make it easier for people to participate, they will!	Strongly agree	Strongly agree	Strongly agree	It would be helpful to have more specific information about where and how to properly dispose of certain materials like old appliances, electronics, shelving, lighting, etc.
Strongly disagree	The County's wasting our tax dollars on ineffectual wishful-thinking green-washing churning out slides and graphics that some County employees use to justify their jobs but will do little to nothing to reduce garbage ("solid waste" euphemism included). Want to reduce garbage? Find a way to charge every garbage producer for the amount of garbage they produce. I produce very little garbage and resent having my tax dollars subsidize neighbors' overflowing garbage bins. Voluntary = garbage	Strongly disagree	Strongly disagree	Strongly disagree	
Neutral	I am concerned that the County has not fully thought out the impact of food waste recycling. Recycling plant based material is fine, but composting meat products and sugar products will attract rats, particularly in high density areas and in areas where rats naturally live (i.e., Arlington parks). How will the County control the increase in rat populations that recycling these food products will produce?	Disagree	Neutral	Neutral	Residents may support the initiative, but how will you compel landlords to provide the resources needed for these kinds of initiatives to work?
Strongly disagree	The Plan must further outline targets for the reduction of waste and not focus to such a great extent on recycling	Strongly agree	Strongly agree	Strongly agree	
Neutral	I think the county has positive goals, but the county needs more specific and ambitious goals to reduce waste, such as a tax on bags of trash.	Agree	Agree	Neutral	I think it's good to set high targets due to the urgency of the climate crisis. That said, we also need to back up these targets with strong concrete steps for waste reduction.
Strongly agree		Agree	Neutral	Disagree	
Disagree	Move the glass recycling efforts up and focus on hard to recycle materials. Community outreach isn't likely to have the most profound effects if people don't have options to choose from, and the people who don't recycle already aren't likely to unless those options are easily accessible.	Agree	Neutral	Neutral	

Strongly disagree	<p>than substantive. Most plastic — even when placed in the blue recycling bin — isn't truly being recycled. Instead, a first-hand observer has reported to me that most or all of what is placed in the blue carts goes to landfill. This is especially true for plastics, as there is essentially NO MARKET in the U.S. for recycled plastic: See "Recycling plastic is practically impossible — and the problem is getting worse" (2022) https://www.npr.org/2022/10/24/1131131088/recycling-plastic-is-practically-impossible-and-the-problem-is-getting-worse.</p> <p>"We had to re-educate individuals that a great deal of that material is ending up in a landfill,' Carpenter said. 'It's not going to a recycling facility and being recycled. It's going to a recycling facility and being landfilled someplace else because [you] can't do anything with that material.... Politically it's easier to just say 'Gosh, we're going to take everything and we think we can get it recycled,' and then look the other way,' Carpenter said of the other companies. 'That's greenwashing at its best.'"</p> <p>Aluminum has a good recycling rate, as does glass (because it's now collected separately and shipped directly to a glass recycler). In other words, there are markets for these materials that make them worthwhile to collect AND recycle. In short, commingled "recyclables" has been a failure in the U.S.: https://www.forbes.com/sites/jeffmahon/2021/05/22/three-reasons-recycling-is-failing/?sh=307dba0b7e09.</p> <p>No amount of "education" will fix this problem. In fact, by pretending to recycle (when we are not), we are, in effect, subsidizing the companies that generate this pollution by paying a premium to "recycle" it. Charging more for trash collection/carts will only encourage residents to add more contaminants to the recycling carts — a counterproductive move, if you really want to recycle more. As much as people complain</p>	Strongly disagree	Strongly disagree	Strongly disagree	Arlington's waste diversion targets are mirages because the county's policies and plans are not based on real-world conditions and ignore real-world constraints. In the real world, much of what is claimed to be "recycled" in the blue plastic carts isn't being recycled at all but instead winds up in landfill. Rather than debating meaningless "targets," the county should instead revamp its policies and plans to align them with the realities on the ground — such a realignment would improve outcomes and likely reduce overall disposal costs. Review what is going into the "recycling" carts and determine whether some of those materials should be disposed of differently in order to divert them from landfill. Determine whether single-stream commingling of so many types of materials is sustainable. Focus on reducing consumer demand for frequently-disposed materials for which there is little or no financial incentive to recycle or there simply is no infrastructure to utilize the recyclable materials.
Disagree	The county is carnist and speciesist. Promote plant based and stop the nonsense trying to find ways to do the wrong things better.			Strongly agree	humanemyth.org
Agree					No
Strongly agree	I often find communication from the county unclear and confusing. For example, there is no such thing as "Full Draft Plan" tab on this page. I assumed that I was supposed to look at "4. Draft Plan" tab instead. More importantly, I cannot find "19 voluntary initiatives" anywhere in the plan. As such, I am not sure how I can answer the previous question.	Neutral	Neutral	Neutral	
Agree	<p>I only count 15 initiatives. Anything that focuses on reuse and waste reduction is the most important. Recycling plastics doesn't really work as only 5-6% get recycled. We need to focus on REDUCING trash, not just managing what comes in. I disagree with the metrics you use for whether something will achieve zero waste goals. I know you focus on how much waste weight gets diverted, but you also need to think about the health of the environment and its people and focus on what you can do to reduce single-use plastics and other trash (your chart has very little diversion for all the long-term efforts, but by highly promoting these programs, you will see people changing their behavior, which will then make them think twice about throwing anything in the trash--these are the additional ways to get more diversion--it's all related. Your education efforts cannot be limited to sticking a pamphlet into the cans that blows away with the wind and most people can't be bothered to read. Arlington County Govt needs to lead by example (e.g., using reusables (providing reusable flatware, plates, etc., and/or encouraging attendees to bring their own water bottle) for meetings and at larger events like the county fair). Once people start seeing how it should be done, they are more likely to practice it. Reading a pamphlet won't get them to change. Trash cart fees should be very high and there should be an option for homeowners to request a smaller can to pay less for trash fees. Money motivates people. You CANNOT count on most people to do the right thing because it is good for the environment. But they are more likely to do it if the alternative is they have to spend more money. Most of all you need to make it EASY for people to reduce their trash and make reuse second nature.;</p> <p>I only count 15 initiatives. Anything that focuses on reuse and waste reduction is the most important. Recycling plastics doesn't really work as only 5-6% get recycled. We need to focus on REDUCING trash, not just managing what comes in. I disagree with the metrics you use for whether something will achieve zero waste goals. I know you focus on how much waste weight gets diverted, but you also need to think about the health of the environment and its people and focus on what you can do to reduce single-use plastics and other trash (your chart has very little diversion for all the long-term efforts, but by highly promoting these programs, you</p>	Strongly agree	Strongly agree	Strongly agree	My Strongly Agree answers for achieving waste diversion goals above are my belief that Arlington can make it to these goals but NOT WITH THE CURRENT PLAN that is not ambitious enough. You focus too much on recycling, which has a role to play, but to reach goals the SWMP needs to be much more aggressive in REDUCING the trash and focusing on REUSE in the household, in government, in restaurants, and in businesses.

Agree	It does seem that compliance by homeowners and multi-family dwelling operators is crucial to any plan, and that education is the best way to increase compliance. However, I am skeptical that the traditional forms of communication are sufficient. In my opinion, and based on my experience abroad, the best opportunity to communicate how to compost and recycle correctly is by refusing to empty bins that are non-compliant, and providing a clear indication of why a bin is non-compliant. In my experience living in France, I once tried to recycle something that was non-recyclable. The bin was not only not emptied, but it had a sign taped to it that indicated what I did wrong. To be sure, that was the last time I was non-compliant! I think this is the most effective method.	Strongly agree Agree	Strongly agree Agree	Strongly agree Agree	I applaud the County for setting aggressive targets and I accept the County's estimates of what is possible, but I think stronger education and enforcement is likely needed.
Strongly agree Disagree		Neutral	Neutral	Neutral	There needs to be stronger public outreach on these initiatives. For example, where can I compost unused/scrap food? I currently take my scraps to MOMs Organic Market. Are we also doing anything to penalize apartment buildings who are not participating in waste diversion programs? For example, I believe that the recycling at my apartment building (Pointe 14) is being put with the trash.
Agree Neutral	Some of these are really exciting! It's easier to envision "compliance" in single-family homes, or small units at least. Harder to imagine in large apartment/condo buildings as well as commercial buildings. And where do you even start with restaurants? Kudos to Arlington County for attempting! I want to be able to compost.	Agree	Neutral	Neutral	
Neutral	Addressing climate change is an urgent need. I feel this plan doesn't go far enough to address embedded carbon nor to reduce overall waste. Recycling is not the solution.				
Strongly agree	Greater education and understanding among residents about what can be recycled, and how/ where to do so, is crucial. I personally care deeply about this issue and make an effort to be well-informed, and still I am unclear on what and how to recycle certain items. This leads to a low efficacy for me, and my family/ friends/ peers have expressed similar feelings. There is a lot of conflicting information available (not necessarily at the county level, but more broadly) that leads to cynicism that even our recyclable items are likely just ending up in a landfill. I believe we can go a long way as a county if residents know what to do and know that our recyclable items are actually being recycled.	Agree	Neutral	Neutral	N/a
Agree Agree	It is essential that all restaurants be required to participate in the organic recycling that we private citizens do in our homes. Additionally, I'm concerned about how recycling bins are filled up at different public places. People put food waste in paper recycling bins and we need public organic waste bins. Most of all, people need to be educated as to what is recyclable and the correct way to recycle. It must be stressed how important it is for everyone to recycle otherwise people won't care to do it. Thanks.	Agree	Agree	Agree	
Strongly agree	Do any of the long-term goals encourage new buildings built to be LEED certified? This could help minimize waste associated with construction or renovation.	Strongly agree	Strongly agree	Strongly agree	
Disagree	While all of those efforts are nice, they do not take into account the 50% growth in waste that is expected over the next 20 years. Unless we can significantly reduce that overall stream, we will never be close to the target; How do we reduce consumption and its associated waste? With the imperative need to reduce GHG, waste reduction, with the biggest impact, should be a much higher priority.	Neutral	Disagree	Strongly disagree	Targets are aspirational, but the plan itself does not achieve the goals. It may work if the waste stream is limited to current amounts, but a huge effort is needed to account for future growth
Agree	Need to enforce the rule about not putting recycle materials in plastic bags, if the bags are in fact dumped in landfills. At present, I see many recycle bins stuffed with materials in plastic bags; They look good. A video showing how the recycle materials are sorted at the plant might encourage more proper disposal. in the blue bins.				
Neutral	Refuse collection charges are already too high as are property taxes. The Solid Waste Bureau needs to develop initiatives which do not include additional fees.	Disagree	Strongly disagree	Strongly disagree	

Disagree	Hard to get people to recycle correctly now. I always see inappropriate things in recycle bins. I don't see people changing.	Disagree	Disagree	Disagree	
Agree		Agree	Agree	Agree	
Strongly agree	For the citizen education and outreach, leverage the learnings from other jurisdictions and what's known about how to effectively create sustained behavior change (beyond just awareness raising).	Strongly agree	Strongly agree	Strongly agree	
Agree	The plan should consider creative ways to assist residents without a car to participate in drop-off of items at various facilities. Many times items are heavy, bulky, or unwieldy for using the bus and walking to facilities. And on drop-off days it's particularly awkward standing in a lineup of cars to wait your turn to drop off.	Neutral	Neutral	Neutral	
Strongly disagree	I don't believe this will work. I am trying zero-waste at home right now and it is super hard. Do we have a facility to safely burn non-reusable plastic?	Neutral	Strongly disagree	Strongly disagree	what is supposed to happen with all the plastic trash that cannot be recycled?
Strongly agree		Agree	Agree	Agree	
Disagree	These goals cannot be achieved through resident opting in. The initiatives must be mandatory.	Agree	Agree	Agree	Because waste is coming from businesses, you will need to work with businesses to create alternatives to wasteful items and packaging.
Neutral	I'm college-educated and deeply interested in this topic, but I can't really understand much of this presentation (partly because of the use of acronyms). I'm sure it would have been better as an in-person presentation, but I must have missed all of them, somehow. Another problem with this presentation (similar to almost all other similar Arlington presentations) is that the public is not given information on the *choices* that you made in coming up with these recommendations. For instance, there is no discussion of the different costs of reaching, say, 80 percent, 90 percent or 95 percent reduction. You are asking us to give our opinions in a total vacuum of useful information. To me, this is a kind of "pseudo-public participation."				
Strongly agree	Perhaps some program to promote/attract zero waste businesses to the County (like zero waste conscious food establishments) could be considered. And thank you for including repair and shared/reuse initiatives in the plan! They are environmentally friendly and equitable.	Agree	Agree	Agree	
Neutral		Neutral	Neutral	Neutral	
Disagree	All wastes with BTU value should be directed to the waste-to-energy plant for unless the County can make more \$ selling certain of those for alternative recycling. Energy generation from the plant avoids costlier and/or less environmentally friendly forms of electricity generation and short distance transportation. Moreover, a system that directs households and businesses to separate what can be burned for electricity vs. what can't would be simpler to understand and administer. Recycling, whether for energy recovery or otherwise, should involve the most cost effective/economically beneficial strategies.	Agree	Disagree	Strongly disagree	Goals may be achievable for wastes currently generated by the County through careful purchasing aimed at not generating wastes. Very unlikely goals if applied to wastes generated by households and businesses located in the county.

CLIMATE CHANGE, ENERGY AND ENVIRONMENT COMMISSION

**c/o Department of Environmental Services
2100 Clarendon Blvd., Suite 705
Arlington, VA 22201**

November 27, 2023

Honorable Christian Dorsey
Chair, Arlington County Board
2100 Clarendon Blvd., Suite 300
Arlington, VA 22201

Re: Draft Solid Waste Management Plan

Dear Chair Dorsey:

The Climate Change, Energy and Environment Commission (C2E2) has reviewed the draft Solid Waste Management (SWM) Plan approved for public sharing by the Solid Waste Committee on September 21, 2023. We wish to commend the Solid Waste Bureau staff on the quality of the document and the thoughtfulness with which it presents ways to expand and improve on the current waste management system as well as introduce voluntary zero waste measures. C2E2 recognizes that solid waste management is a complex challenge over which the County has limited control. Nevertheless, we have suggestions on how the document might be more forthcoming with Arlington residents about the current state of waste management and recycling within Arlington and nationally and its implications for climate and the environment and more comprehensive, focusing on reducing waste first and foremost, or at least as much as on ‘recycling right.’

C2E2 understands that the Plan is organized into two parts: one that fulfills Virginia’s regulatory requirements, and another that proposes voluntary measures to advance the County’s 2015 Zero Waste Resolution goal of 90 percent waste diversion from landfill and incineration by 2038. In establishing this scope, the Plan is responsive to State and County requirements but misses a crucial opportunity, as noted above, to address the County’s solid waste management practices in a comprehensive and ambitious fashion that better reflects Arlington residents’ desire for its community to be a climate and sustainability leader.

C2E2 has the following suggestions on how the draft Plan can be improved:

Expand the Scope to More Robustly Promote Waste Reduction

While the draft Plan effectively describes Arlington County’s current waste and recycling efforts and establishes an ambitious Zero Waste goal, it relies heavily on the fact that current efforts are already exceeding state requirements – at least according to the formula the State provides to calculate success – tonnage recycled (further on this below). For planning purposes, to meet the state mandate, projected per capita waste generation is held constant and zero waste targets focus

on improving diversion rates by “recycling right” more than by tapping into the larger potential of waste reduction.

We appreciate that among the Zero Waste measures presented, the Plan gives highest priority to public education. However, among these education efforts we suggest a relative shift in emphasis toward education on waste reduction measures as ultimately holding much greater potential than additional education on the use of current systems. The draft Plan itself acknowledges (p. 46) that waste reduction and reuse “prioritize the highest tier of the Virginia DEQ and U.S. EPA waste management hierarchy” and that “(m)any opportunities exist for waste reduction, including **material donation and reuse, which represents the most significant opportunity in solid waste management to conserve resources, reduce costs and protect the environment.** Residents and businesses must rethink their purchasing practices to shift away from disposable products to reusable and durable materials that can be donated or reused.”

Overall, the Plan forecasts a much smaller potential diversion from “Waste Reduction and Material Donation/Reuse Education Campaigns” – 3.0-3.7 percent – than for education on existing systems at 14.2-16.5 percent, but we believe this is because this enhancement is not being tackled ambitiously enough. As currently drafted, this public education effort comprises only multimedia campaigns and makes no mention of possible dialogue with key sectors like Construction (see next paragraph) as peer jurisdictions have successfully done (e.g., Seattle and King County, WA¹). The waste diversion percentage that could result from a more ambitious version of this enhancement, if it included construction and demolition waste for example, could be significantly larger.

C2E2 also endorses the Plan’s recommendations to support state and federal legislations that would shift responsibility for waste management to producers and enhance the ability of communities and consumers to reduce waste. Such legislation could include extended producer responsibility laws, bottle bills, right-to-repair laws, and greater authority for local jurisdictions to limit hard-to-recycle single use products. Such laws would address many of the waste management issues we face at their source.

Enhance Efforts to Improve Performance in Key Sectors

Across the country, **Construction and Demolition (C&D)** waste represents around a third or more of total waste streams, yet Arlington’s draft SWM plan doesn’t mention the tonnage or the share it represents as part of our waste stream. It also doesn’t mention its composition. As there are no authorized C&D disposal sites in Arlington, almost all C&D waste is disposed of outside the County and no reporting from these sites goes to Arlington. The Plan states on page 27 that: “Although commercial haulers report tonnages to the County, neither the County nor the private waste companies keep data on the C&D composition.” The SWB itself has reported that tonnage reporting can also be spotty.

While the Plan says on page 27 that “(t)he County requires that developers commit to recycling as much of their C&D waste as possible,” it is unclear to what degree this happens. The minimal

¹ City of Seattle’s [2022 Solid Waste Plan Update: Moving Upstream to Zero Waste](#), p. 4; and EcoAction Arlington Zero Waste Webinar, January 17, 2023.

discussion of C&D waste in the Plan results in something of an “out of sight, out of mind” phenomenon as regards to this significant waste source, somehow absolving the community of responsibility for its improved management. By contrast, the City of Baltimore reports in its SWM plan that C&D waste represents 35 percent of its overall waste stream, offers data on its composition, and presents options for reducing the share C&D represents of its total waste stream.²

At a minimum, Arlington County should consider assessing these tonnages periodically and requesting details from the developers about composition to determine whether they are significantly contributing to the County’s generation of waste materials. The County could glean additional data from participants in Arlington’s Green Building Incentive Program who frequently opt for LEED points for ‘diverting up to 75 percent of C&D waste from landfills.’ The County could also better measure this latter going forward.

The SWM Plan treats **Arlington Schools** as another commercial entity in its waste management policies, and APS is only mentioned in the Voluntary Enhancement section of the Plan in a weakly-worded, longer-term diversion enhancement titled “Incorporate Zero Waste Principles in County and Arlington Public School (APS) Operations.” If this were to be a truly “whole of government” effort, APS would be fully and robustly included in this Plan. Challenges faced by APS in managing food waste and recycled materials are well-known and opportunities exist for collaboration to reduce waste streams in the schools and improve diversion of recyclables and food waste.

The Plan makes clear that **Multi-family Housing** waste management and recycling performance is the poorest of the three sectors and presumably thus presents the greatest opportunity for improvement. Yet, the Plan doesn’t communicate a well-developed strategy to this effect. While the County doesn’t provide collection services to this sector – private haulers do – it needs to dedicate significantly more attention to improving the education of MFH residents and performance of the overall systems. Ideally, the Plan would state that the County will direct and resource the SWB to engage more vigorously with MFH residents and property managers and come up with ways to incentivize the sector to perform better.

The following are some actions and tools the Plan could include for these and other key sectors to strive for a truly ambitious zero waste plan that puts waste reduction at its core:

- Enhance reduction and diversion of construction waste requirements in the updated Green Building Incentive Policy
- Work with APS to shift to reusable dishes and utensils, reduce packaging of food served to students, and introduce composting in school cafeterias
- Work with multi-family housing to streamline and improve their recycling practices
- Establish policies within Arlington government operations to reduce or eliminate single-use plastics and require deconstruction and recycling of County-owned buildings, including homes purchased for stormwater relief, when being removed

² [City of Baltimore Recycling and Solid Waste Management Master Plan](#), July 28, 2020 (p. 23)

- Engage large institutions, such as hospitals and nursing homes, to use more reusable items to reduce their waste, and stores to offer refill options
- Establish an innovation fund (perhaps through a Green Bank) for entrepreneurs who wish to set up businesses that support reuse and a circular economy such as reusable carryout container services
- Encourage or require the use of reusables or compostables for large County events such as the County Fair, going beyond requiring ineffective recycling bins and signage
- When introducing the per capita waste figure, note that this larger-than-pre-pandemic figure is being used to be conservative for planning purposes, but that the Plan's aim through its enhanced waste reduction efforts is to contribute to a decrease in this figure over time, something the SWB will track

Even when it is not possible for the County to issue directives or regulations to achieve the above, the Plan should state that the SWB or other responsible office will be better resourced to dialogue with these key stakeholders – appealing to a sense of our shared obligation to the future to do so.

Fully Address Climate Implications of County's Waste Generation and Disposal

The most glaring omission perhaps in this document is the failure to highlight the serious climate and environmental impacts that our current practices of produce, consume and dispose create. To put it simply, Arlington's waste streams have a high carbon footprint and contribute to widespread environmental degradation. The following are two examples:

- Nationally, 30 percent of the food supply is wasted (fda.gov), representing about 6 percent of our total GHG emissions, a misuse of valuable land and water resources, and a portion of the pollution generated by current agricultural practices.
- Single-use plastics generate an estimated 3.4 percent of GHG emissions and pollute our air, water, and soil throughout their life cycles – including recycling, and the toxic chemicals they contain present a threat to human health, particularly of low income, marginalized populations. Despite decades of recycling campaigns, plastic pollution continues to grow.

C2E2 realizes that the GHG emissions calculated using the U.S. EPA Waste Reduction Model only includes emissions from managing solid waste as it enters the MSW system and not those embodied in the production and manufacture of products (p. 45). However, we recommend that the SWB estimate the embodied carbon in the waste stream to raise Arlingtonians' awareness about the magnitude of the cost to the environment of consuming and disposing beyond our needs.

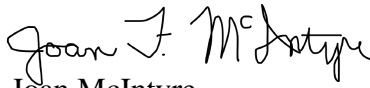
Critically Examine Arlington's Recycling Rate Against its Audit Outcomes

The draft SWM Plan suggests that Arlington's recycling rate is well above the State norm at 49 percent. However, this rate is calculated – as the State directs – based on simple tonnages that recycling contractors report, and it doesn't reflect the fact that audits show a high percentage Arlington's recycling haul like many jurisdictions is contaminated and thus much of it likely

ends up in the incinerator or landfill. Since 70 percent of Arlington residents live in multifamily housing, and as the ‘contamination’ rate of MFH recycling is the highest, Arlington’s effective recycling rate is much, much lower – something that should be very concerning to our community. The draft Plan could acknowledge this and be more transparent about how much further we, as a community, need to go to be more sustainable.

In conclusion, C2E2 commends the authors of the draft Plan for establishing a lofty goal and making a strong start toward improving Arlington County’s waste disposal systems. However, the Plan adopts a narrative that emphasizes the systems and processes that are already in place, and over which the County has direct control, at the expense of digging deeper to find areas where change is harder. We encourage the County to seize the opportunity to address this issue more comprehensively, shifting the focus to waste reduction with aspirational goals to better align with our climate and zero waste goals.

Sincerely,



Joan McIntyre

Chair, Climate Change, Energy and Environment Commission

CC:

Members, Arlington County Board

Mark Schwartz, Arlington County Manager

Bill Eger, Chief Climate Policy and Coordination Officer

Erik Grabowsky, Chief, Solid Waste Bureau



December 1, 2023

The Honorable Christian Dorsey, Chair
Arlington County Board
2100 Clarendon Boulevard, Suite 300
Arlington, VA 22201

RE: Comments on the Draft Solid Waste Management Plan

Dear Chairman Dorsey and Members of the County Board:

Thank you for the opportunity to comment on the draft Solid Waste Management Plan (SWMP). Overall, the plan lacks a focus on the environmental consequences of our waste stream and overemphasizes recycling while downplaying the need to prevent waste from being generated in the first place (i.e., reduce and reuse). Arlington's efforts to reduce its solid waste are key to our community's environmental goals and will play an important role in reducing the County's carbon footprint. Recycling alone is not sufficient. This letter relays our overarching concerns with the SWMP and offers substantive recommendations.

Climate and Environmental Costs

Arlington's waste streams are tightly connected with environmental damage and the changing climate, yet the SWMP does not make this important connection. In the US, 30 percent of the food supply is not eaten and discarded (usda.gov). Food decaying in landfills or burned in waste-to-energy facilities is a potent contributor to GHG emissions and produces other hazardous substances. Wasted food contributes to about 6 percent of our total national greenhouse gas (GHG) emissions and represents a misuse of valuable land and water resources.

Single-use plastics generate an estimated 3.4 percent of GHG emissions and pollute our air, water, and soil throughout their life cycles – including recycling. Toxic chemicals present a threat to human health, particularly for low-income communities and communities of color that are more often located near waste incineration or toxic waste sites ([Urban Institute](#), [Energy Justice Institute](#)). Despite decades of recycling campaigns, plastic pollution continues to grow. ***We strongly urge that the County estimate the embodied carbon in the waste stream to raise Arlingtonians' awareness about the magnitude of the cost to the environment by consuming and disposing beyond our needs.***

Waste Reduction Targets

Arlington's SWMP does not delineate strong goals for reducing waste. Instead, the plan focuses on recycling, which is not the silver bullet to waste reduction. After all, materials can only be recycled so many times before they become trash. While the draft SWMP mentions waste reduction on the waste hierarchy, the only forecast is for per capita waste generation to remain steady at almost 5 pounds (a conservative, business-as-usual approach to meet state planning requirements). While the plan notes that the County does not measure the source reduction efforts of private citizens, it can incorporate aspirational scenarios using waste generation in other developed countries as benchmarks. For example, according to the [Global Waste Index 2022](#), per capita waste generated in Japan was about 2 pounds per day and just under 4 pounds per day in Germany. The plan should also specify how waste reduction would be counted toward the ultimate zero waste objective of 90 percent diversion as outlined in the County's 2015 Zero Waste Resolution.

The Voluntary Program Enhancements identify a number of actions promoting reduction opportunities but focus largely on diversion of the waste stream to meet the 2038 goal. Moreover, the estimated impact of potential reduction efforts is minimal, potentially understating the impact such efforts could have if fully and broadly implemented. The SWMP rightly notes that behavioral changes are a crucial component of achieving the goals as are federal and state legislation shifting more of the burden to producers and substantial changes in how products are designed and packaged.

The plan can be enhanced by expanding on how, with encouragement and support, initiatives could potentially reduce waste within specific sectors, using examples of other jurisdictions both nationally and globally and emerging private entrepreneurship. Arlington could consider establishing an innovation fund (perhaps through a Green Bank) for entrepreneurs to set up businesses that would support reuse and a circular economy, such as for reusable carryout containers at restaurants. The County could also consider working with state initiatives such as the Virginia Green Travel Association (which certifies and promotes businesses reducing waste). EcoAction Arlington's Green Dining program is already partnered with this organization and could help to build connections.

Specific Shortcomings

Construction and Demolition Materials. The SWMP's discussion of construction and demolition materials highlights its deficiencies. The tonnage and composition of the construction and demolition waste are not included, and there are no specific targets for reducing this waste, despite teardowns and renovations being so common in Arlington. ***Arlington County should consider assessing these tonnages periodically and requesting details from the developers about composition to determine whether they are significantly contributing to the County's generation of waste materials.*** One potential source of new information is participants in Arlington's Green Building Incentive Program.

Multi-Family Residential and Commercial Institutions. We appreciate that the SWMP addresses multifamily residential (MFH) and commercial waste management

and recycling performance as key areas for improvement. However, the plan understates the extent of the challenge given that the County's audit data for MFH suggests that over 50 percent of reported recycling consists of trash or organics. Moreover, specifics about how to make improvements in these areas—beyond providing technical assistance—are lacking. The plan misses an opportunity to more directly partner with and incentivize multifamily residential and commercial institutions to recycle appropriately, reduce waste, and expand organics diversion. Along with enforcing its policies around recycling within multifamily and commercial institutions, Arlington County can consider expanding these policies to require or incentivize composting.

Arlington Public Schools (APS). Another weakness in the SWMP is its stance toward Arlington Public Schools (APS), which it treats as just another commercial entity in its waste management policies and only mentions in its Voluntary Enhancement section. Such a categorization fails to reflect the vital “whole of government” approach that guides the SWMP. ***APS has a long history of waste stream reduction problems, and focusing on schools could bear fruit by allowing Arlington to reduce its overall waste.*** Arlington County should work with APS to shift to reusable dishes and utensils, reduce the packaging of food served to students, and introduce composting in school cafeterias.

Education and Partnerships

As currently drafted, the public education effort comprises only multimedia campaigns and makes no mention of possible dialogue with key sectors like construction as peer jurisdictions have successfully done (e.g., Seattle and King County, WA¹). The waste diversion percentage that could result from a more ambitious education and partnership effort (for example, if it included construction and demolition waste) could be significantly larger. Arlington County has a “Where Does it Go” part of its website but could do more to enhance and maintain this online resource and advertise to citizens that it exists.

Moreover, other jurisdictions are using the insights from behavioral science to communicate with individuals how to “recycle right” and compost correctly. Efforts that result in lasting change need to address an individual's motivation (willingness to act), opportunity (having the tools needed to act - e.g., the bins), and ability (skills about what to do). The County can take steps to help consumers help the County in meeting its goals. For instance, EcoAction Arlington marks storm drains to remind citizens that what flows off the street drains into the Potomac River. A similar approach might be applied to directly mark County collection bins with a clear description of where materials go, as well as the related impact. This would be an opportunity to provide motivation and reinforce what to do. As a starter idea, this might include messaging (directly applied to bins) that simply states: For Black bins “Burned. Trash only. Costs you and the County”; for Blue bins: “Recycled. Some value for the planet”; for Green bins: “Composted. Better for the planet.” This combined with a campaign to promote the wasted food scale - e.g.,

¹ City of Seattle's [2022 Solid Waste Plan Update: Moving Upstream to Zero Waste](#), p. 4; and EcoAction Zero Waste Webinar, January 17, 2023.

“Eat food first; compost second” might go a long way to helping Arlingtonians and the County achieve their shared goals.

Another opportunity could be a partnership with the healthcare sector. For example, the County could engage large institutions, such as hospitals and nursing homes, to use more reusable items to reduce their waste.

County Government Buildings

Arlington County can lead by example through policies within the Arlington Government operations to reduce or eliminate single-use plastics and require deconstruction and recycling of County-owned buildings, including homes purchased for stormwater relief. The County should also encourage or require the use of reusables or compostables (along with collection stations for compostables) for large County events such as the County Fair, going beyond requiring ineffective recycling bins and signage.

In conclusion, EcoAction Arlington applauds the draft SWMP for its strong start toward improving Arlington County’s waste disposal systems. However, the plan leans heavily into erroneous assumptions and makes several large omissions that could jeopardize the County’s ability to meet its waste reduction and climate change goals. We encourage Arlington to rethink its relationship with waste and strive to be a leader in reuse and circularity by adopting the above recommendations to improve the plan and keep Arlington on track.

Sincerely

/s/

Elenor Hodges, Executive Director

Jenn Yates, Chair of the Board of Directors

cc: Mr. Matt de Ferranti, Arlington County Board
Ms. Libby Garvey, Arlington County Board
Mr. Takis Karantonis, Arlington County Board
Ms. Tannia Talento, Arlington County Board



SIERRA CLUB

POTOMAC RIVER GROUP

November 22, 2023

Christian Dorsey, Chair
Arlington County Board
2100 Clarendon Boulevard
Arlington, VA 22201

Dear Chair Dorsey and members of the County Board:

The draft Solid Waste Management Plan (SWMP) produced by County staff meets the requirements set by the state for plan updates and puts forward several laudable program enhancements that will improve solid waste services in Arlington if they are implemented. However, the plan misses an opportunity – one that only comes around every 20 years when these plans are updated – to bring Arlington closer to the forefront of environmentally responsible solid waste practices seen in progressive communities. We urge the Board to push County staff to go beyond the enhancements to current programs proposed in the draft plan to address issues such as plastic trash, construction and demolition waste, enforcement, greenhouse gas emissions, equity issues, and specific action plans of the County government and Arlington Public Schools (APS) for the next 20 years.

Goals: We would like to see the County set specific goals for the reduction of per capita waste generation rather than limiting itself to goals for the percentage of waste that is recycled. While the draft plan contains a well-written summary of the waste hierarchy in section 4, the plan's goals don't address the first two tiers of this hierarchy: waste reduction and reuse. Goals focus on recycling, but recycling is not the ultimate solution to waste management, because all materials (other than aluminum) degrade over time. They can't be recycled more than a limited number of times before they end up as trash. This fact should be used to motivate a greater emphasis on reduction and reuse. Rather than projecting no change in per capita waste production over the next 25 years (table 5), Arlington should seek to reduce waste generation per capita.

Plastics: The state of plastic recycling is probably the most glaring failure of Arlington's current solid waste collection system. This is not the fault of County staff; it's a worldwide problem (the U.S. has a plastic recycling rate of only 5–6%). Arlington can, however, improve its performance, despite the systemic problems over which it has no control. The directive that citizens recycle "plastic bottles and jugs, containers, wide-mouth plastics and rigid plastics" causes confusion for people who have been told for years to look for the numbered symbol of a triangle with chasing arrows. (Most people still assume that the symbol means its recyclable, but the symbol only describes the type of plastic as indicated by the numbers.) It would be clearer if the county could tell residents to recycle all containers of certain types of plastic, e.g., #1 (polyethylene terephthalate), #2 (high-density polyethylene) and #5 (polypropylene). If the county's current recycling contractor cannot handle a more extensive collection

of plastics, the county should either make such collection a condition in all future recycling contracts or emulate its highly successful glass recycling drop-off program by adding additional plastics drop-off sites.

Construction waste: We recognize that construction and demolition (C&D) waste isn't included in the waste covered by the SWMP. Nevertheless, given the apparent size of the C&D waste stream in Arlington, the section on such waste on pages 27–28 should recommend steps to reduce this waste. While reporting by companies that haul C&D waste is not complete, it would be useful to learn about the tonnages reported to the county by those haulers who do report. This would give us a feel for the order of magnitude of C&D waste and the greenhouse gases (GHG) embodied in it. With teardowns and renovations common in Arlington, ignoring the many dumpsters full of C&D waste reduces the utility of the information included in the SWMP. If possible, Arlington should require reporting of C&D waste volumes. While the draft plan points to incentives to reuse C&D waste under LEED standards, these incentives are rather weak and only apply to a small percentage of worksites. We support the proposal that Arlington adopt a requirement for a percentage of such waste to be diverted. We also recommend that the Board ask for a report on the current state of C&D management, emerging best practices, and recommendations for improving C&D waste management in Arlington.

Enforcement: The SWMP says almost nothing about how to deal with households and businesses that fail to comply with recycling mandates or about waste haulers, including county contractors, who do not fulfill the terms of their contracts. While the county has shown an understandable reluctance to rely on fines for households or businesses that fail to properly put out their waste and recycling, fines could be a necessary tool for dealing with contractors. Persistent reports of contractors emptying both trash and recycling carts into the same truck are sufficiently widespread to make it very unlikely that they are either anomalies or urban legends. Anecdotally, this problem is especially severe in cul-de-sacs that are hard for large trucks to access. Nothing is more likely to dampen citizen efforts to properly recycle than to see their efforts thwarted as blue and black bins are commingled in the same collection truck. The County should take all such reports seriously and devote staff time to policing this behavior, with fines large enough to be meaningful in any case in which contractor misbehavior is observed.

Greenhouse gases: Currently, estimates of the effects of new initiatives on GHG appear to look only at effects on the waste management system, ignoring GHG embedded in what is thrown out. Our waste has a high carbon footprint and contributes to widespread environmental degradation. For example, food waste accounts for about 6 percent of total GHG emissions, the misuse of valuable land and water resources, and a portion of the pollution generated by current agricultural practices. Single-use plastics generate an estimated 3.4 percent of GHG emissions. They pollute our air, water, and soil throughout their life cycle, including during recycling. Incineration of plastics presents a threat to human health, with low income, marginalized populations at most risk. Even if the SWMP doesn't address solutions to systemic issues, it should highlight the serious climate and environmental effects from our current methods of production, consumption, and disposal and estimate the total effect on GHG of our current solid waste system.

Equity issues: The SWMP should state how the county will ensure that any new waste-handling facilities are sited so as not to raise concerns about environmental injustice and to provide adequate buffers for

neighbors. All racial, ethnic, and socioeconomic groups should benefit more than they are burdened as the County moves to a more circular and zero-waste economy.

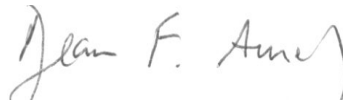
County leadership: The County Board zero-waste resolution says that county government will “lead by example,” but there’s very little discussion of government actions toward reuse and circularity in the draft plan, with one short paragraph on page 25 stating that County and APS facilities will be treated like any other commercial establishment when it comes to recycling. In section 4, a commitment should be made to source reduction and reuse efforts at County and school facilities that would serve as an exemplar for the private sector. In section 6, the action steps for goals A, B, and C should all include actions to which the county and APS commit. The current draft touches on this topic on page 51, but only as part of a long-term initiative. These efforts should be started now for both county properties and for schools!

Overall, County staff has produced an operational guide for solid waste services for the next 20 years that includes many admirable but limited initiatives. However, if the plan is to aid Arlington’s efforts to address the climate crisis and other environmental challenges, it should be modified to include some of the initiatives we have outlined in this letter. Arlington should rethink its relationship with waste and strive to be a leader in reuse and circularity to reduce waste instead of just continuing to manage the problem.

Sincerely,



John Bloom, Chair
Sierra Club – Potomac River Group



Dean Amel, Solid Waste Issues Chair
Sierra Club – Potomac River Group