City of Manassas Park

Comprehensive Solid Waste Management Plan

PREPARED FOR:

The City of Manassas Park
Manassas Park, Virginia

SUBMITTED TO:

Virginia Department of Environmental Quality
Central Office

PREPARED BY:

TRC Engineers, Inc.
Richmond, Virginia

(2007 Plan Approved by DEQ 10/27/2009)
Revised January 2015
Updated August 2019
Updated October 23, 2024
DEQ Submittal

TRC Project No. 624614

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PLAN SUMMARY

The City of Manassas Park is considered a solid waste planning unit (or Region) under the DEQ Solid Waste and Planning regulations. The original Comprehensive Solid Waste Management Plan (the Plan or SWMP) for the City of Manassas Park (City) was adopted in 1991 and then revised and submitted to DEQ in 2007 under newly promulgated regulations and guidance. DEQ approval for this submittal was received on October 27, 2009. Based on this approval date (and current regulations) plan updates would be due every 5 years on or before October 27th. (e.g. 2014, 2019, 2024 etc.).

The approved 2009 plan was updated and submitted to DEQ as required in 2014 and 2019. DEQ provided comments on the 2019 submittal on August 6, 2024 indicating that the response to these comments could be addressed in the 2024 update.

The purpose of this document is to provide DEQ with the 2024 update and to incorporate a minor amendment for reference to a new transfer station operating in the general region and accepting waste from the City of Manassas Park. (PBR 639, Dominion Transfer Station, approved October 21, 2021.) The document being submitted is based on the 2019 plan submittal including responses to DEQ August 6, 2024 comments and otherwise updated as appropriate for the new planning period.

The planning period for this update spans 2024 through 2044.

All figures referenced in this document are included in **APPENDIX 1**.

Solid Waste Collection Programs

The City contracted in June 2022 with Patriot Disposal Services, Inc. located in Manassas, VA, to provide residential solid waste collection and disposal, bulk waste collection and disposal and residential recyclables collection for the City. **APPENDIX 2** includes a copy of the agreement. The contract term is for one-year with four additional 1-year periods available. This program allows residents of Manassas Park the opportunity to dispose of household trash, large waste products from around their homes, including white goods, mattresses, furniture, and brush. Additionally, the City conducts multiple annual household hazardous waste events for collection of paints, pesticides, batteries, and other household hazardous waste materials.

Solid Waste Disposal

The City does not have any waste disposal facilities located in the City limits. Waste in the City is collected by Patriot Disposal and transported to the Dominion Transfer Station (PBR 639 – approved by DEQ October 21, 2021. **APPENDIX 3** includes the permit for this facility.

Currently waste from this transfer station is taken to the Battle Creek Landfill (SWP 579) in Luray, VA. Note that the contract with Patriot Disposal does not require identification of the final disposal facility. With that said other options for disposal which have been used in the past and which could be potentially available are the Prince William Landfill (SWP 029) and ReWorld Fairfax LLC Energy facility (formerly COVANTA Fairfax (PBR 545).

For CY 2023, the Battle Creek Landfill (SWP 579) reported a remaining capacity of 2,110,185 tons (converted from cubic yards to tons by DEQ assuming 1,000 pounds per cubic yard), and a remaining life of 23.9 years at their current usage. In 2023, the Battle Creek Landfill reported receiving 102,160 tons for disposal. **APPENDIX 4** includes the permit for this facility.

The Prince William County Landfill (SWP 029), which is located on Dumfries Road in Manassas, VA, is currently not available for use by Manassas Park but can be used by Patriot Disposal for commercial waste from the Dominion Transfer station. Patriot Disposal cannot deliver more than 40 tons per day of commercial waste to the landfill. For Calendar Year 2023, the landfill reported a remaining capacity of 3,102,617 tons (converted from cubic yards to tons by DEQ assuming 1,000 pounds per cubic yard), and a remaining life of 10.4 years.

The closest private landfill disposal facility to Manassas Park is the King George Landfill (SWP 586) operated by Waste Management. While this landfill is not referenced in the agreement with Patriot Disposal or previous solid waste plans, it would be available if needed. The facility is approximately 60 miles from the City. For Calendar Year 2023, the landfill reported a remaining capacity of 13,726,936 tons (converted from cubic yards to tons by DEQ assuming 1,000 pounds per cubic yard), and a remaining life of 22.0 years.

There are two public landfills in the general vicinity of the City:

- Loudoun County (SWP001) located approximately 30 miles away with a reported life of 66 years, and
- The Rappahannock Regional Solid Waste Management Board (R-Board) landfill (SWP 589) located approximately 40 miles away located in Stafford County with a reported life o 18.6 years.

However, use of these landfills may be precluded by local ordinances (for instance the R-Board region including Stafford County, and the City of Fredericksburg operate under flow control ordinances). Usage of these public landfills would require an agreement with either Loudoun County or the R-Board which could require approval by elected officials.

The City may also have access to the I-95 Energy Resource and Recovery Facility located at the Fairfax County I-95 Solid Waste Management Complex in Lorton, VA. It is permitted as PBR 545 which has a permitted process rate of 3,000 tons per day. Currently, ReWorld Fairfax, Inc owns and operates the facility. ReWorld was previously Covanta. ReWorld is

maintaining the same operations and customers as operation under Covanta. **APPENDIX 5** includes the permit for this facility. Future use of this facility by the City would be via the Dominion Transfer Station and contract with Patriot Disposal or other private hauler.

Recycling and Waste Stream Reduction

The City implements a waste reduction program that reduces the amount of material entering the solid waste stream. This is accomplished through the City's recycling and litter control program. The recycling program for the City consists of several elements, including comingled curbside collection of recyclables (by private contractor), yard waste composting, commercial recycling (by businesses) and City supported recycling programs.

The commingled curbside collection program (currently contracted with Patriot Disposal) is available to single-family homes and townhome communities with curbside trash collection. The curbside program collects aluminum, plastics, cardboard, newspaper, and steel cans. Glass is no longer allowed in the curbside recycling stream. Residents can either drop off glass using the Purple Can Program (See **APPENDIX 6** for more information) or place in their trash. An additional cardboard drop-off site is also available for resident usage.

Additional materials will be added as markets are identified.

Per information included in the Patriot Disposal bid dated May 5, 2022, costs for collection assume curbside collection to approximately 3,915 residential units (homes) and 1,551 units (townhomes, apartments and other) plus various City facilities.

Household Hazardous Waste (HHW) Collection Program

The City regularly conducts scheduled household hazardous waste collection days for the residents of Manassas Park at the City's Department of Public Works (331 Manassas Dr., Manassas Park VA). The event is sponsored for residential use only. Electronics are not collected at these events. See **APPENDIX 7** for more information on this program.

Solid Waste Management Funding

The long-term funding and financing of the City's solid waste management and recycling programs are provided through revenue generated from the City's Solid Waste Enterprise Fund. Fees for the program pay for the operations. Funding includes the refuse and recycling fee assessed residents, funding from the host fee for the transfer station, reserve funding and the litter control grant. If insufficient funding is received from these sources the general fund or other funds fund the deficit.

Below is information for FY 2024 and FY 2025 budget years:

- FY 2024 budget was $1,625,418 of which $1,320,499 was contract services and

$55,000 was for HHW.

- FY 2025 budget was approved for $1,726,881 of which $1,398,214 was designated for contract services and $58,000 is HHW

APPENDIX 8 includes a summary of the FY 2024 budget.

1.0 INTRODUCTION

1.1 Purpose of Plan

Effective July 1, 1989, the Virginia General Assembly enacted Section 10.1-1411 of the Virginia Waste Management Act that mandated the development and implementation of local solid waste management plans. These regulations required each local government to recycle 10 percent (10%) of the solid waste stream by December 31, 1991; 15 percent (15%) by the end of 1993; and 25 percent (25%) by the end of 1995. This legislation had the most significant impact on diverting waste from landfills. Pursuant to this legislative action, the Virginia Department of Waste Management (now the Virginia Department of Environmental Quality) adopted regulations specifying waste management program and plan requirements.

The Virginia Waste Management Board ultimately amended the earlier Regulations for Solid Waste Management Planning approving 9VAC20-130 et seq**,** (now referred to as "Chapter 130, Solid Waste Planning and Recycling Regulations) to require additional plan items such as consideration of the Waste Management Hierarchy, updated recycling program activities, and a methodology to monitor the amount of solid waste of each type produced and recycled within the area of the Solid Waste Management Plan. All local governments under these regulations were required to recycle 25 percent (25%) of the solid waste stream.

According to the Virginia Department of Environmental Quality (DEQ) web site, the statutory recycling rate of 25 percent continues today for many Virginia localities, but legislation introduced in 2006 provides for a two-tiered recycling mandate - fifteen percent (15%) and twenty-five percent (25%). (See 9VAC20-130.125.A). Localities or regions (called Solid Waste Planning Units or SWPUs) with population densities less than 100 persons per square mile or with an unemployment rate fifty percent (50%) higher than the statewide average now qualify for a fifteen percent (15%) mandated recycling level, with all others remaining at the twenty-five percent (25%) recycling mandated level.

The population of Manassas Park, as of the U.S Census Bureau's 2020 census was 17,219. The City is reported to have an area of 3.03 square miles, so the density is 5,683 persons/square mile. The unemployment rate, as of 2023 (Community Profile, **APPENDIX 9**) was 2.6%, just below the statewide unemployment rate of 2.9%. Therefore, the City is required to meet the twenty-five percent (25%) mandated recycling level for SWPUs. These mandated recycling rates are the minimum to be achieved, with SWPUs encouraged to maximize their recycling levels and establish recycling goals beyond these mandated rates.

In addition, under 9VAC20-130.165.B, planning units with a population of 100,000 or less according to the most recent United States census must prepare and submit a recycling survey report to the department once every four years (localities with a larger population must report annually). Thus, the City can report every four years but is required to keep an annual tally of recycling efforts. The City can also report annually if they so choose.

1.2 Planning Process and Planning Period

During preparation of the original 2007 Plan, one of the first steps in the planning process was to identify goals and objectives for solid waste management in the City with subsequent updates required to review and modify the goals and objectives as appropriate.

Based on discussions and input since the original plan was prepared, the general framework for planning efforts can be summarized as follows:

1. Comply with regulations of the Virginia Waste Management Board.
2. Establish a program for management of waste according to the State hierarchy.
3. Meet Virginia's recycling goals.
4. Manage waste in a fashion that balances cost-effectiveness with conserving resources and protecting the environment.
5. Provide the public with desired services at the appropriate services levels.
6. Involve the private sector in implementing waste management services wherever practical.
7. Implement effective short-range programs.
8. Establish the framework for effective long-range programs
9. Participate in regional efforts.
10. Take a creative, as opposed to traditional, approach.

The general framework above has been used throughout the later planning efforts. The overall goal of the City is to assure that all solid waste management facilities and programs are designed and operated to meet or exceed the requirements specified in all federal, state, and local environmental regulations as well as those specified in the City's building, zoning, and all other applicable codes.

Sections 1.5 and 6.0 provide additional details on the City's plans and objectives for the 2024 plan. The City continues to evaluate available waste management alternatives and assess their appropriateness for implementation.

The planning period for the 2024 update is 2024 through 2044.

1.3 Department of Public Works and Division of Solid Waste Management

The oversight of solid waste management is coordinated through the City's Department of Public Works under the Division of Solid Waste Management. Key Personnel directly involved in solid waste management include the Director of Public Works and the Solid Waste Program Manager. In addition, the City Manager is kept informed of the program activities.

The Contact list for this Solid Waste Management Plan is as follows:

NAME	TITLE	PHONE	EMAIL
Keith Nguyen	City Manager	703-361-2248	
Calvin E. O'Dell	Director of Public Works	703-335-0019	c.odell@manassasparkva.gov
Laura Coughanour	Solid Waste Program Manager	703-393-0881	l.coughanour@manassasparkva.gov

The Division of Solid Waste Management under the Department of Public Works is responsible for implementation of this Plan with input required from the City Manager and elected officials.

1.4 Public Hearing and Plan Approval Process

A public hearing was held at Manassas Park City Hall on May 21, 1991 for citizen input and comment on the original Solid Waste Management Plan **(APPENDIX 10)** A resolution to adopt The City's Comprehensive Solid Waste Management Plan was approved by the City on June 4, 1991 **(APPENDIX 10)** in compliance with Section 10.1-1411 of the Virginia Waste Management Act.

A public hearing was held at Manassas Park City Hall on February 19, 2008 for citizen input and comment on the 2007 Solid Waste Management Plan **(APPENDIX 10**). The City's Solid Waste Management Plan was approved by the City Council on March 18, 2008 **(APPENDIX 10**).

Public input and approval by the City Council was not required for the 2014, 2019 and 2024 updates as none of these updates included a major amendment as outlined in 9VAC20-130-175.

1.5 Manassas Park Solid Waste Management Goals

The City will operate and maintain a solid waste management system with the objective of providing cost-effective trash collection services that take advantage of recycling opportunities, providing hazardous waste collection opportunities and participating in ways to reduce the quantity of trash. Strategies to accomplish this objective include:

- Provide economical trash and recycled waste pickup for all City residents at least one time per week by closely monitoring, controlling, and, if necessary, replacing the contractor providing such services.
- Continue source reduction/reuse program.
- Provide opportunities for dropping off recyclable materials in public areas, City facilities and at all City functions.

- Increase the current level of recycling in the City above the State-Mandated level of 25% through outreach and incentives.
- Continue the hazardous waste collection program where individual residents can properly dispose of small quantities of special waste.
- Continue the existing program of providing cost effective curbside collection of leaves.
- Continue to encourage citizens and businesses to participate in all recycling and hazardous waste collection programs by instituting an effective outreach program.
- Collect data and monitor waste collection and recycling in the private sector through enforcement of the Recycling Ordinance.

2.0 BACKGROUND

2.1 Description of Manassas Park

The City is an independent jurisdiction encompassing 3.03 square miles in Northern Virginia and is located approximately 26 miles west of Washington, D.C. Manassas Park borders Prince William County and the City of Manassas Figures 1 and 2 in **APPENDIX 1**, illustrate the location of the City regarding the state and the region.

The following tables summarize the City's estimated population by decade as well as the projections, taken from information on the Weldon Cooper Center for Public Service, Demographics Research Group website.

TABLE 1
POPULATION ESTIMATES BY DECADE
CITY OF MANASSAS PARK AND VIRGINIA

YEAR	CITY		VIRGINIA	
	CENSUS POPULATION	% Change	CENSUS POPULATION	% Change
1990	6,734		6,187,358	
2000	10,290	34.6%	7,079,030	12.6%
2010	14,273	27.9%	8,001,024	11.5%
2020	17,216	17.1%	8,646,905	7.5%

TABLE 2
POPULATION PROJECTIONS BY DECADE
CITY OF MANASSAS PARK AND VIRGINIA

YEAR	CITY		VIRGINIA	
	CENSUS POPULATION	% Change	CENSUS POPULATION	% Change
2030	19,876	13.4%	9,129,002	5.3%
2035	21,436	7.3%	9,444,186	3.3%
2040	22,996	6.8%	9,759,371	3.2%
2045	24,729	7.0%	10,147,590	3.8%

Population growth projections for Manassas Park are higher than Virginia's projections on a percentage basis. Population over the planning period from 2024 to 2044 will grow approximately 30% based on the Weldon Cooper information.

APPENDIX 9, contains additional information in an excerpt from the "Virginia Community Profile, Manassas Park City, prepared by Virginia Works – Economic Information and Analytics Division, Richmond VA. Information was dated September 12, 2024.

2.2 History of Manassas Park

Manassas Park began in 1955, when the first homes were built as a subdivision in Prince William County. Shortly thereafter, in 1956, a group of citizens founded a Civic Association. In 1957, the courts were petitioned, and Manassas Park achieved Town status in Prince William County. The Park, as the City was then called, was governed by a Mayor and a Town Council.

In 1975, the City incorporated as an independent city. It was the last town in the Commonwealth of Virginia to become a City before the Virginia General Assembly enacted a moratorium on such actions. A school division was established, and schools were built. Police and Fire Departments were upgraded, and the Departments of Public Works and Social Services were created.

2.3 Suburban Growth

Following the annexation of approximately 600 acres of land in 1974, the Town doubled in size of its previous boundaries **(APPENDIX 1, Figure 3).** This action provided the City with vacant, undeveloped land for a variety of land uses. The additional land has now been developed for multi-family residences, recreational use, and various commercial and light industrial uses such as the Conner Center Industrial and Business Park. Further development of these areas, as well as continued development adjacent to Virginia Route 28, provides Manassas Park with an excellent land use development balance between commercial, industrial and residential land use.

The City continued this progress with the 1990 acquisition of an additional 463 acres of vacant land east of the Southern Railroad through an annexation agreement with Prince William County. This annexation provided further opportunities for residential development and expansion of the City's commercial tax base.

2.4 Manassas Park Today

The City offers its citizens an established community along with the dynamic prospect of significant future residential and commercial development while retaining desirable living features such as neighborliness and community pride in a small, progressive city environment.

Figure 5 in **APPENDIX 1**, illustrates future land use patterns based on information provided by the City.

The City is approximately 3.03 square miles in area with a population in the 2020 census of 17,216. The United States Census Bureau published the following information for Manassas Park based on data from the 2020 census or other sources as noted below:

https://data.census.gov/profile/Manassas_Park_city,_Virginia?g=050XX00US51685

TABLE 3
SUMMARY
US CENSUS BUREAU – DATA – 2020 CENSUS OR OTHER AS NOTED
CITY OF MANASSAS PARK

SECTOR	DATA	SOURCE
Total Population	17,216	2020 Decennial Census
Median Household Income	$91,673	2022 ACS 5-year estimates
Total Housing Units	5,525	2020 Decennial Census
Total Households	5,221	2022 ACS 5-year estimates
Employment Rate	74.3%	2022 ACS 5-year estimates
Total Employer Establishments	334	2021 Economic Surveys – Business Patterns

APPENDIX 9, contains additional information in an excerpt from the "Virginia Community Profile, Manassas Park City, prepared by Virginia Works – Economic Information and Analytics Division, Richmond Virginia Information was dated September 12, 2024.

2.5 Transportation

The City's transportation infrastructure is well developed for moving freight into and out of the city. From a waste management perspective, this is particularly advantageous for transporting recyclables to outlying markets. A wide variety of transportation networks serve the City directly or indirectly . The City street system serves all residential, commercial and industrial users and is linked to an extensive regional and nationwide highway system **(APPENDIX 1 - Figure 4)**. The City has significantly improved its street network and continues to upgrade local streets to modem standards.

With the cooperation and support of the Virginia Department of Transportation (VDOT), major improvements have been made to improve traffic flow and safety throughout the City.

Major airports in the Manassas Park region include Washington Dulles International, Ronald Reagan Washington National Airport, and Baltimore Washington International. Manassas Regional Airport provides access for smaller aircraft.

The Virginia Railway Express (VRE), which began service in the fall of 1991, provides weekday commuter rail service from Manassas Park to Washington, D.C. and the suburbs of Burke, Springfield, Alexandria, and Arlington. The VRE Station is located on Manassas Drive and is approximately V4 mile east of the intersection of Manassas Drive and Euclid Avenue.

Nearby MetroRail service can be utilized to reach numerous locations in the Northern Virginia and D.C. metropolitan area. Only minutes and approximately 18 miles from Manassas Park, the MetroRail station can be reached by taking Route 28 North to Interstate 66 East. Information on fares and scheduling can be obtained by calling 1-800-637-7000.

Nationwide AMTRAK service is also available from the Manassas train station. Information on AMTRAK fares, scheduling and national accessibility can be obtained by calling 1-800-872-7245.

The VRE links to other passenger transportation systems in the Washington, D.C. metropolitan area including Metrobus, Ronald Reagan Washington National Airport, MARC Train Service to Maryland, and regional/national bus services such as the Fairfax Connector, Arlington ART Bus, DASH/Alexandria Transit Company; and the Greyhound and Trailways bus system. Access to commercial waterways is available in nearby Washington, D.C. as well as Annapolis and Baltimore in Maryland.

3.0 SOLID WASTE CHARACTERIZATION

3.1 Waste Composition

Manassas Park does not control its waste disposal as it privatizes collections. Commercial and industrial sectors also privatize collection. Thus, there is no method to track the waste as it is collected and ultimately disposed of within the Region. However, the US EPA does provide some generalized background information that can be applied to Manassas Park to consider theoretical tonnage generation and waste composition. The following discussion leans on the document entitled: *"Advancing Sustainable Materials Management: 2018 Fact Sheet"* published by United States Environmental Protection Agency (EPA) in December 2020. Excerpts of this report have been included in **APPENDIX 11**.

It should be noted that as used by the EPA, the term municipal solid waste (MSW) consists of "everyday" items such as product packaging, grass clippings, furniture, clothing, food scraps, newspapers, appliances, and batteries. It does not include materials that may also be landfilled but are not generally considered MSW, such as construction and demolition debris, sludge, and non-hazardous industrial wastes. Virginia's definition is similar defining MSW as waste that is normally composed of residential (household), commercial (businesses other than manufacturing or construction) and institutional solid waste. However, record keeping of localities may not segregate the waste materials in a similar way. Thus, when comparing the information in this section with the data in the Plan, care must be given to the term MSW.

For 2018, EPA estimates theoretical waste generation as 4.9 pounds per person per day of which it estimates that theoretically 55% - 65% is residential and that 45% - 35% is commercial. EPA does not include construction and demolition materials in the generation rate above. Working with their data in the 2018 report, CDD generation would theoretically average 1.8 tons per person per year.

Using the 2020 census population of 17,216 persons and a generation rate of 4.9 pounds per person per day (EPA 2018), Manassas Park could theoretically generate 15,395 tons per year. Based on the EPA percentages, this theoretical generation could be broken down to 8,467 tons for residential (55%) and 6,928 tons for commercial (45%). For CY 2023, Patriot Disposal reported collecting 8,067 tons of residential and commercial waste and 1,196 tons of single stream recyclables for a total of 9,263 tons or 60% of the theoretical generation.

If generation is considered based on the population and the tonnage reported submitted by Patriot Disposal for CY 2023, the base generation rate would be 2.9 pounds per person per day (residential only).

Manassas Park does not appear to generate significant quantities of unusual or special wastes or industrial wastes (based on their collection records). Therefore, the general composition of the collected waste stream would be assumed to be similar to the national estimates discussed in the EPA report. The following table summarizes the expected waste compositions by material type utilizing the percentages developed by EPA from their 2018 data and the MSW tonnage from 2023, as reported by Patriot Disposal:

TABLE 4
THEORETICAL COMPOSITION OF WASTE BY MATERIAL TYPE
BASED ON INFORMATION EPA REPORT

MATERIAL	2018 EPA % MSW	ESTIMATED TONNAGE (CY 2023 – by Patriot Disposal)
Paper	23.1%	2,140
Glass	4.2%	389
Metals	8.8%	815
Plastics	12.2%	1,130
Rubber, Leather, & Textiles	8.9%	824
Wood	6.2%	574
Yard Trimmings	12.1%	1,121
Food Scraps	21.6%	2,001
Other	2.9%	269
TOTAL	**100.0%**	**9,263**

This information can be generally helpful when considering solid waste programming.

Annually, Manassas Park also sends out reporting forms to commercial haulers and their businesses to capture information about waste and recycling in the commercial sector. This program is voluntary, and the data has not been incorporated into the above discussion. Data collected from these reports is included when preparing the DEQ Form 50-30.

3.2 Hazardous Waste

The City conducts regularly scheduled household hazardous waste collection days for the residents of Manassas Park at the City's Department of Public Works (331 Manassas Dr., Manassas Park VA). The event is sponsored for residential use only. Electronics are not collected at these events. See **APPENDIX 7** for more information on this program including acceptable materials.

3.3 Estimated Waste Quantities

Projected waste quantities generated in Manassas Park are shown in a table in **APPENDIX 12** for 2020 through 2045. Two methodologies were used to project waste quantities. The first used the 2020 census data and the total tonnage of waste and recyclables collected by Patriot Disposal as reported for 2023. Using this data a generation rate of 2.95 pounds per person per day was calculated. The second method utilized the 2018 EPA published generation rate of 4.9 pounds per person per day (exclusive of CDD).

Other assumptions used to develop the table in **APPENDIX 12** included the following:

- Residential waste was estimated at 55% of the total waste calculated. (EPA 2018)
- Commercial waste was estimated at 45% of the total waste calculated. (EPA 2018)
- Construction debris was estimated at 1.8 tons per person per year (EPA 2018)
- Household hazardous waste was taken from the previous SWMP and assumed to be generated at a rate of 20 pounds per household per year with a household including 3.3 persons.
- Recycling was assumed to be a minimum of 25% of the total waste calculated.

Based on this evaluation, theoretical total tonnage generated (Method 1) will increase from an estimated generation of 9,269 tons in 2020 to 13,313 tons in 2045; theoretical total tonnage generated (Method 2) will increase from an estimated generation of 15,395 in 2020 to 22,114 tons in 2045.

3.4 Open Burning

Open burning within the City is strictly prohibited unless approved in accordance with the Commonwealth of Virginia State Air Pollution Control Board's Regulations Concerning Emissions Standards for Open Burning, and Virginia Forestry Laws. Utilization of open burning for waste disposal purposes is not permitted under City Ordinance 04-1700-743, 3-16-04. This ordinance does not apply to the use of charcoal/gas grills for food preparation.

4.0 EXISTING COLLECTION AND DISPOSAL PRACTICES

4.1 Residential

The City contracted in June 2022 with Patriot Disposal Services, Inc. located in Manassas, VA, to provide residential solid waste collection and disposal, bulk waste collection and disposal and residential recyclables collection for the City. The contract term is for one-year with four additional 1-year periods available. This program allows residents of Manassas Park the opportunity to dispose of household trash, large waste products from around their homes, including white goods, mattresses, furniture, and brush. The City's contract with Patriot Disposal is included in **APPENDIX 2**.

Solid waste and recyclable materials are collected curbside on Wednesday of each week by Patriot Disposal. All of the mixed municipal solid waste generated in the City and collected by Patriot Disposal are delivered to the Dominion Transfer Station where it is transported to a permitted disposal facility. The City's contract does not bind Patriot Disposal to a specific disposal facility. Historically, the City's waste has been taken to the I-95 Waste to Energy Facility in Fairfax, the Prince William County landfill, and the Battle Creek Landfill in Luray VA (current disposal facility).

In addition, special bulky waste is picked up during normal collection days. Residents with white goods to discard, such as stoves, refrigerators, water heaters, washers and dryers must contact the contracted waste hauler in advance to schedule pickups.

For CY 2023, Patriot Disposal reported collecting the following materials:

- Single Stream Recyclables – 1,196 tons delivered to America Recycling
- Construction and Demolition Debris – 419.89 tons delivered to the Dominion Transfer Station
- Residential – 6,598.77 tons delivered to the Dominion Transfer Station
- Commercial – 1,468.14 tons delivered to the Dominion Transfer Station

The Patriot Disposal contract indicates that there are an estimated 3,915 curbside units, and 1,551 townhome/apartment units plus various other facilities for collection. The 2020 census identifies 5,525 housing units so, if a housing unit includes houses, townhomes and apartments, Patriot Disposal is collecting approximately 99% of the housing units.

4.2 Commercial and Industrial

Private waste collection services are contracted by individual waste generators to provide waste collection for businesses and industrial sites. Quantities generated and recycled are voluntarily reported to the City annually.

4.3 Litter Control

Street Sweeping: Additionally, the City owns and operates its own street sweeping vehicle, and street cleaning is conducted daily on all public City streets.

Leaf Pickup: The City conducts leaf pick-up and composting for residents between September and December of each year. Residents move leaves to the street either loos where specially equipped City vehicles stop by and vacuum up the leaves or in special bags.

Prohibition of Trash on Property: The City Code of Manassas Park, Section 17-48 prohibits the accumulation of trash, garbage, refuse, litter, noxious, unsanitary, offensive matter or substances to be accumulated on the property, which might endanger the health or safety of other residents of the City. This section of the City Code is enforced by the Code Enforcement Branch of the Police Department through issuance of violation letters and legal action when necessary.

4.4 Disposal Facilities

The City does not have any waste disposal facilities located in the City limits. Waste in the City is collected by Patriot Disposal and transported to the Dominion Transfer Station. Waste in the City is collected by Patriot Disposal and transported to the Dominion Transfer Station (PBR 639 – approved by DEQ October 21, 2021. **APPENDIX 3** includes the permit for this facility.

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The closest private landfill disposal facility to Manassas Park is the King George Landfill (SWP

586) operated by Waste Management. While this landfill is not referenced in the agreement with Patriot Disposal or previous solid waste plans, it would be available if needed. The facility is approximately 60 miles from the City. For Calendar Year 2023, the landfill reported a remaining capacity of 13,726,936 tons (converted from cubic yards to tons by DEQ assuming 1,000 pounds per cubic yard), and a remaining life of 22.0 years.

There are two public landfills in the general vicinity of the City:

- Loudoun County (SWP001) located approximately 30 miles away with a reported life of 66 years, and
- The Rappahannock Regional Solid Waste Management Board (R-Board) landfill (SWP 589) located approximately 40 miles away located in Stafford County with a reported life o 18.6 years.

However, use of these landfills may be precluded by local ordinances (for instance the R-Board region including Stafford County, and the City of Fredericksburg operate under flow control ordinances). Usage of these public landfills would require an agreement with either Loudoun County or the R-Board which could require approval by elected officials.

The City may also have access to the I-95 Energy Resource and Recovery Facility located at the Fairfax County I-95 Solid Waste Management Complex in Lorton, VA. It is permitted as PBR 545 which has a permitted process rate of 3,000 tons per day. Currently, ReWorld Fairfax, Inc owns and operates the facility. ReWorld was previously Covanta. ReWorld is maintaining the same operations and customers as operation under Covanta. **APPENDIX 5** includes the permit for this facility. Future use of this facility by the City would be via the Dominion Transfer Station and contract with Patriot Disposal (or other private hauler).

5.0 RECYCLING AND WASTE REDUCTION

5.1 History of Recycling Program

The City implemented a recycling program in 1991 to achieve a minimum goal of ten percent (10%) removal of recyclables from the waste stream by the end of 1991, fifteen percent (15%) by the end of 1993, and twenty-five percent (25%) material recovery by the end of 1995. The work from 1990 through 2007 formed the basis for future planning.

5.2 Recycling Program

The recycling program for the City consists of several elements, including comingled curbside collection of recyclables (by private contractor), yard waste composting, commercial recycling (by businesses) and City supported recycling programs. The commingled curbside collection program (currently contracted with Patriot Disposal) is available to single-family homes and townhome communities with curbside trash collection. The curbside program collects aluminum, plastics, cardboard, newspaper, and steel cans. Glass is no longer allowed in the curbside recycling stream. Residents can either drop off glass using the Purple Can Program (See **APPENDIX 6** for more information) or place in their trash. An additional cardboard drop-off site is also available for resident usage.

Commercial recycling is voluntary and handled directly by businesses, industries and institutions. Annually, the City sends out reporting forms to private waste haulers and the commercial sector to try to capture commercial recycling. Completion of these forms is voluntary.

Under the Virginia Solid Waste Management and Recycling Regulations (9VAC20-131 et seq), the City is required to meet a 25% recycling rate and to report to DEQ every 4 years beginning in 2012 (2012, 2016, 2020, 2024) or more frequently if desired. The table below summarizes the City's recycling rates as reported to DEQ:

TABLE 5
CITY OF MANASSAS PARK
RECYCLING RATES AS REPORTED TO DEQ

YEAR	RECYCLED MATERIALS (Tonnage)	WASTE COLLECTED AND DISPOSED (Tonnage)	RECYCLING RATE (Per DEQ calculation methodology*)
2012	2,452 (including credits)	7,001	25.9% (including credits)
2016	5,021 (including credits)	10,645	28.2% (including credits)
2020	3,531 (including credits)	8,925	30.3% (including credits)

*DEQ methodology is set forth under 9VAC20-130-125.C.

APPENDIX 13 includes a comparison table for these three reporting periods by materials collected.

Should the City fail to meet its recycling goal, then it must submit a Recycling Action Plan as required under 9VAC130-120.I:

A planning unit that does not meet the requirements of these regulations shall submit an action plan, by mail or electronic mail, for approval by the department. Such action plans shall include:

> *1. A description of the deficiency that requires the development of the action plan.*
>
> *2. A time schedule to resolve the deficiency associated with the planning unit's failure to meet the requirements of the approved solid waste management plan.*
>
> *3. A reporting requirement to the department of a minimum of once every six months, including activities or updates documenting how the action plan requirements are being met.*
>
> *4. Plans and all subsequent reports and submittals shall be reviewed by the department within 30 days of receipt by the department.*
>
> *5. All the department's requests for further information or responses shall be provided within 30 days of receipt at the planning unit. The department may grant reasonable extensions to these deadlines on a case-by-case basis.*

Recycling Action Plans are considered a major amendment to the Plan as required under 9VAC20-130.175.B.d. Major amendments require the same public participation as detailed in 9VAC20-130-130.B before being submitted to the department for approval prior to implementation.

The City of Manassas Solid Waste Division will be responsible for adhering to the regulations and for reporting to DEQ.

The City reports to DEQ every four years using Form 50-30. Other localities must report annually. Annually, DEQ compiles the information received into the Virginia Annual Recycling Rate Report. For CY 2022, DEQ reported an overall recycling rate of 43.1% for SWPUs with populations above 100,000.

APPENDIX 13 includes a summary table of the DEQ 50-30 recycling reports for 2012, 2016 and 2020. The City meets their goals.

5.3 Curbside Recycling

Curbside collection is the most convenient and, therefore, the most effective method of achieving the greatest residential participation in recycling. The implementation of voluntary curbside recycling in Manassas Park began on July 11, 1990, when the City provided

recycling collection to the residential community throughout Manassas Park. Under the 2022 agreement with Patriot Disposal (the contractor), the curbside recycling program in Manassas Park is anticipated to directly serve 3,915 residential units and seven developments (consisting of a total 1,551 units) as well as other facilities.

Comingled collection of aluminum, cardboard, newspaper, and steel cans is included. Once collected, these recyclables are transported to various commercial recycling centers identified by Patriot Disposal.

Glass is no longer accepted in the curbside recycling program as it was contaminating the other materials. The City now participates in the Purple Can Program where citizens can drop off glass recyclables. Otherwise, glass must be thrown out in the trash.

The City also has an additional cardboard recycling drop-off center.

Additional materials will be added as markets are identified and agreed to by the contractor. Provisions are included in the Patriot Disposal agreement to expand these services as new subdivisions or developments are constructed. The City pays the contractor monthly for services rendered.

See **APPENDIX 6** for more recycling information.

5.4 Internal Recycling

Internal recycling programs have been implemented in Manassas Park; particularly paper recycling for the City and all City Government offices and departments. Resolution 90-1000-657 established an internal recycling and recycled materials procurement policy for the Manassas Park Government and was approved by the City Council on November 6, 1990 **(See APPENDIX 10)**.

5.5 Waste Reduction

Recycling and waste reduction programs are feasible and essential elements of the City of Manassas Park solid waste management system, although they cannot be the sole solutions. Manassas Park implements a waste reduction program which reduces the amount of material entering the solid waste stream. This is accomplished through the recycling and litter control program. Recycling and waste reduction will require a combined effort by citizens, businesses and City government.

The Manassas Park City Council, working with and through state and federal legislators, promotes legislation to assist in waste stream reduction. Legislation such as alternative packaging and bottle deposit bills will be considered. Separating recyclable materials from the waste stream provides the opportunity to recycle the greatest percentage of material and is, therefore, the most frequently used recycling method in the United States. Materials most commonly recycled include paper products, metals, glass and yard waste. The

recyclable materials that have been separated are taken to recycling points by the generator or collected through Manassas Park's curbside collection program.

Waste reduction programs consist of two primary elements: state and federal bans and public education programs. Bans consist of such elements as beverage container deposit laws. Public education programs aimed at waste reduction would address elements such as reuse of materials, backyard composting, purchase of products with minimum packaging waste and reusable items, purchase of products in recyclable containers, and containers made of recycled materials and purchasing products made of recycled materials.

The City conducts leaf pick-up and composting for residents between September and December each year. Residents move leaves to the street where specially equipped City vehicles vacuum up the leaves or collect leaves collected in special bags.

The City conducts a public education and information program to encourage waste reduction. The City also works with the public schools to help develop a waste reduction attitude at an early age.

5.6 Recycling Calculation Methodology

The calculation for recycling for the DEQ report is prescribed under 9VAC20-130-125.C. **APPENDIX 13** includes the 2020 Form 50-30 submitted by the City that illustrates the calculations.

6.0 SOLID WASTE MANAGEMENT PLAN AND OBJECTIVES

6.1 Overview

This chapter presents Manassas Park's comprehensive and integrated plan for the Solid Waste Management system for the next 20 years as required under 9VAC20-130-173 which states:

A. Solid waste management planning units are required to maintain current solid waste management plans containing a 20-year planning window.

B. On or before each five-year anniversary of the department's plan approval date, the planning unit shall submit a letter to the department, by mail or electronic mail, certifying that the following plan elements listed in 9VAC20-130-120 C have been maintained and updated:

1. Waste generation estimates are current (9VAC20-130-120 C 3);

2. The schedule increments have been met (9VAC20-130-120 C 5); and

3. A projected 20-year waste management capacity remains available or projects otherwise are on schedule to meet the planning unit's solid waste needs (9VAC20-130-120 C 9).

C. The letter of certification submitted in accordance with subsection B of this section shall be used in the department's assessment of whether any plan amendments are necessary and to ensure compliance with 9VAC20-130-110 E.

D. If revisions to the plan are needed, solid waste management planning units shall amend the plan as described in 9VAC20-130-175.

Key to the update is to address Items B.1, B.2, and B.3 and any other aspects of the operations that require update or discussion. Discussion should also focus on the hierarchy.

The following discussions in Sections 6.0 and 7.0 provide a summary of the proposed actions relative to the City's solid waste management program over the 20-year planning period (2024 through 2044). The actions are divided into four sections:

- Source reduction and reuse (See Sections 6.3 and 7.1)
- Recycling (See Sections 6.4 and 7.2)
- Collection (See Sections 6.5 and 7.3)
- Disposal (See Sections 6.6 and 7.4)

Information under Section 6.0 describes the proposed actions while information under Section 7.0 provides an implementation plan.

6.2 Legal/Regulatory

Effective July 1, 1989, the Virginia General Assembly enacted Section 10.1-1411 of the Virginia Waste Management Act requiring local governments to develop a comprehensive and integrated Solid Waste Management Plan (SWMP). The City submitted its original SWMP in 1991.

Effective August 1, 2001 with subsequent revisions, the Virginia Waste Management Board amended the Regulations for Solid Waste Management Planning (now called the Solid Waste Planning and Recycling Regulations (9VAC20-130et seq.)) to include specific planning requirements under 9VAC20-130-120 and specific recycling requirements under 9VAC20-130-125 as well as to address major and minor amendments to the plan.

The current regulations also require planning units under Section 9 VAC 20-130- 30 to address the following hierarchy (based on the US EPA hierarchy):

- Source Reduction;
- Reuse;
- Recycling;
- Resource recover (waste to energy);
- Incineration; and
- Landfilling

Because of the additional planning, recycling and reporting requirements, DEQ and the planning units began to recognize that there was a need for solid waste facilities (i.e. landfills, waste to energy facilities, transfer stations, compost facilities and material recovery facilities) to report waste received and handled on a routine basis to DEQ. This reporting (Solid Waste Information and Assessment (SWIA) Program) was developed and regulated under 9VAC20-81-80. SWIA reporting plays a major role in capturing information for the SWMPs.

6.3 Source Reduction and Reuse Actions

Source reduction is the practice of designing, manufacturing, purchasing or using materials (such as products and packaging) in ways that reduce the amount or toxicity of waste generated. A side benefit is a decrease in resources used.

1. Improve public outreach and education to promote source reduction and reuse (in coordination with "green" programs)
    - Public education and outreach are effective and efficient techniques for increasing source reduction and reuse in the City. Increasing knowledge of source reduction and reuse activities, like reusing material and minimizing

packaging, are crucial to successful source reduction and reuse programs.

- One of the challenges in implementing source reduction and reuse initiatives is influencing the way people purchase and use products.
- Encouraging residents to buy products with minimal packaging, thereby sending messages to product manufacturers and purchasing durable, long lasting goods that can be repaired are two important messages in a public outreach campaign.

2. Promote source reduction and reuse within the business community
    - Promoting private sector source reduction and reuse programs enables the City to publicize and support the efforts of private partners in source reduction.
    - The City of Manassas Park works in cooperation with the efforts of the Northern Virginia Regional Commission (NVRC) to encourage electronics manufacturers to develop a product stewardship program (extended producer responsibility program) for electronics, for example.
    - The City publicizes the efforts of the private sector within the City.
3. Implement City internal source reduction and reuse programs
    - The City of Manassas Park can reduce the waste stream from internal operations by reemphasizing its source reduction and reuse efforts.
    - The City can prioritize source reduction and reuse in its purchase and procurement of products and packaging and day-to- day operations.
    - An important component of internal source reduction is publicity within the organization about how to reduce waste.

6.4 Recycling Actions

Recycling involves processes in which materials destined for disposal are separated, collected prepared and remanufactured into usable products.

1. Adopt a mandatory Commercial Recycling Ordinance
    - The purpose of this ordinance would be to encourage the commercial sector to recycle.
    - Most importantly, the ordinance would require annual reporting by the commercial sector (mandatory reporting linked to business licensing).
    - Commercial sector to be defined by the current ordinance as follows*: Commercial solid waste means solid waste generated by establishments engaged in business operations other than manufacturing or construction. "Commercial waste" includes, but is not limited to, solid waste resulting from*

the operation of stores, markets, office buildings, restaurants, and shopping centers.

2. Oversee Commercial Recycling Ordinance
    - To administer the Commercial Recycling Ordinance, a procedure manual with example plans, forms and programs could be developed.
    - Staff could launch an education campaign to alert businesses of the requirements of the program and set up reporting mechanisms.
    - For the first few months of the program, a business recycling support center could be set up to facilitate the transition into mandatory recycling and reporting.
3. Enhance recycling opportunities
    - Expand recycling collection at municipal buildings

      Recycling at municipal buildings currently includes comingled recyclable materials. An example of a potential program might be a 911 Program for recycling cell phones in which recycled cell phones can be used by residents of limited means for emergency purposes.
    - Encourage increased recycling in schools

      Joint discussions with Manassas Park City Schools and the Department of Public Works are ongoing concerning increasing recycling, and recycling awareness within the school system, by students and staff.
    - Enhance recycling in residential multi-unit buildings

      Multi-unit buildings, which include condos and apartments, are a challenge to cost- effective and convenient recycling services. Currently, Patriot Disposal's collection contract includes some recycling collection from multi-unit buildings. Staff will explore expansion of collection, education of residents and other efforts to enhance recycling from these buildings. Discussion will be given to including these buildings in the Commercial Recycling Ordinance if enacted.
    - Explore regional initiatives

      The City of Manassas Park participates in the Northern Virginia Waste Management Board, sponsored by the NVRC, to promote regional approaches and solutions to recycling and waste management issues in Northern Virginia. The NVRC includes the Counties of Arlington, Fairfax, Loudoun, Prince William, the cities of Alexandria, Fairfax, Falls Church, Manassas, Manassas Park, the incorporated towns of Dumfries, Herndon, Leesburg, and Vienna. The Board publishes a biennial report which provides trends and data on waste and recycling services, rates, requirements, tonnages and special waste handling data for the region. The most recent

report entitled, "*2021 – Public Solid Waste Services in Northern Virginia and District of Columbia*" was released on June 2022. A copy of the Executive Summary is provided in **APPENDIX 14**.

6.5 Collection Actions

1. Continue contracted weekly curbside residential waste and recyclables collection; this includes multi-unit buildings.

   The weekly curbside residential waste and recyclables collection program will be continued for residents of Manassas Park. Patriot Disposal's contract runs through 2027 if all the annual renewals are enacted.

2. Continue Drop Off program for glass and cardboard for residents

   The City has a cardboard collection drop off site and Purple Can sites for glass.

3. Continue Curbside Bulk Waste Collection by Private Contractor

   Spring and Fall Clean-up opportunities were discontinued once the bulk waste collection program was implemented. A private contractor collects as part of the overall waste collection program.

4. Continue HHW collection events at Public Works.

5. Continue curbside leaf collection

   Fall curbside leaf collection will continue. Loose leaves are vacuum collected by the City and transported to a farm for composting. Bagged leaves are transported to a composting facility in Prince William County.

6. Continue street sweeping program

   The current street sweeping program in the Department of Public Works will continue to be implemented. The amount of material collected is recorded.

6.6 Disposal Actions

1. Disposal is through the Dominion Transfer Station. The City will continue to monitor the permitted disposal facilities used by Patriot Disposal (or subsequent contractor) to assure that there is sufficient disposal capacity for the 20-year planning period. Currently, waste is transported to the Battle Creek Landfill in Luray, VA which reported a remaining life of 23.9 years as of December 31, 2023. Life is estimated at the current disposal rate. In CY 2023, the facility received 102,160 tons of waste.

2. Foster and improve relationships with surrounding jurisdictions for regional solutions (Fairfax County, Prince William County, City of Manassas). Discussions will continue with Northern Virginia Waste Management Board, sponsored by the NVRC to provide continued solid waste collection and disposal services, as well as recycling services, in regionally cost effective and efficient ways.

7.0 IMPLEMENTATION OF SOLID WASTE ACTION PLAN

This section presents the City of Manassas Park's implementation plan of the SWMP actions described in Section 6.0. This implementation plan discusses the implementation steps, responsible party and the proposed timeframe for implementation. Implementation parameters will likely change over the SWMP planning period.

7.1 Implementation of Source Reduction and Reuse Actions

1. Improve public outreach and education to promote source reduction and reuse (in coordination with "green" programs)

   Steps:

   - Continually evaluate source reduction and reuse messages
   - As opportunities arise, communicate the messages to the public. The messages are promoted at all city events.
   - Identify additional outlets for messages Include in website

   Responsible Party: Department of Public Works

   Timeframe: On-going as budget and interest dictates

2. Promote source reduction and reuse within the business community

   Steps:

   - Continue work with NVRC on product stewardship initiative
   - Continue to publicize private sector source reduction/reuse campaigns

   Responsible Party: Department of Public Works

   Timeframe: On-going as budget and interest dictates

3. Implement city internal source reduction and reuse programs

   Steps:

   - Provide ongoing effort to incorporate source reduction and reuse in city operations Provide staff awareness reminders of source reduction efforts
   - Review performance of reduction and reuse program

   Responsible Party: Department of Public Works

   Timeframe: On-going as budget and interest dictates

7.2 Implementation of Recycling Actions

1. Adopt a mandatory Commercial Recycling Ordinance

   Steps:

   - Develop draft ordinance
   - Conduct governing body work sessions
   - Conduct public hearings
   - Prepare final ordinance
   - Adopt ordinance

   Responsible Party: Department of Public Works, City Attorney

   Timeframe:

   - Develop draft ordinance: To be determined
   - Public Hearings: As required
   - Adoption of Ordinance: To be determined

2. Oversee Commercial Recycling Ordinance

   Steps (potential):

   - Develop procedures for notification and reporting Develop sample plans
   - Develop database to gather data
   - Set up "Business Support Center" to assist in initial interaction with businesses
   - Gather data
   - Report data in Recycling Report
   - Review first year on mandatory recycling Refine program

   Responsible Party: Department of Public Works

   Timeframe:

   - Develop procedures and reporting requirements: Within 6 - 9 months of adoption of ordinance
   - Develop sample plans: Within 6 - 9 months of adoption of ordinance
   - Develop database: Within 6 - 9 months of adoption of ordinance
   - Recycling Report: Annually
   - Review Program: After report submitted
   - Program continues ongoing as budget and interest dictates

3. Enhance recycling opportunities

    - Consider providing additional recycling drop-off areas throughout the City for all residents including commercial entities.
    - Consider expanding recycling collection at municipal buildings

    Steps:

    - Implement programs as they become available

    Responsible Party: Department of Public Works

    Timeframe: On-going as budget and interest dictates

    - Encourage increased recycling in schools

    Steps: Reinvigorate discussions between Manassas Park City Schools and Department of Public Works

    Responsible Party: Department of Public Works, Manassas Park City Schools
    Timeframe: On-going and as budget and interest dictates

4. Enhance recycling in multi-unit buildings

    Steps:

    Consider inclusion in Commercial Recycling Ordinance if enacted

    Consider inclusion of Solid Waste Director in review of site plans to assure sufficient capacity to handle waste and recyclables

    Responsible Party: Department of Public Works

    Timeframe: To be determined

5. Explore regional initiatives

    Responsible Party: Department of Public Works

    Timeframe: Ongoing dialogue

7.3 Implementation of Collection Actions

1. Continue contracted weekly curbside residential waste and recyclables collection
    Responsible Party: Department of Public Works

    Timeframe: Ongoing
2. Continue Glass and Cardboard Drop Off programs

    Responsible Party: Department of Public Works

    Timeframe: Ongoing as budget and interest dictates
3. Continue Curbside Bulk Collection

Responsible Party: Department of Public Works

Timeframe: Ongoing as budget and interest dictates

4. Continue HHW collection

   Responsible Party: Department of Public Works

   Timeframe: Ongoing as budget and interest dictates

5. Continue curbside leaf collection

   Responsible Party: Department of Public Works

   Timeframe: Ongoing as budget and interest dictates

6. Continue street sweeping program

   Responsible Party: Department of Public Works

   Timeframe: Ongoing as budget and interest dictates

7.4 Implementation of Disposal Actions

1. Continue utilizing the Dominion Transfer Station through Patriot Disposal or other facilities through other private contractors as may be procured during the planning period

   Steps:

   - Monitor disposal facilities being used by private contractor(s) to assure sufficient capacity over 20-year planning period.
   - Procurement of private collection contractor as dictated by contract

   Responsible Party: Department of Public Works

   Timeframe: Contract Renewal, as dictated by contract

2. Foster and improve relationships with surrounding jurisdictions for regional solutions (Fairfax County, Prince William County, City of Manassas)

   Steps:

   - Participate in regional activities

   Responsible Party: Department of Public Works

   Timeframe: Ongoing as budget and interest dictates

8.0 GLOSSARY

Definitions as may be relevant to this solid waste management plan can be found in the following sources:

City of Manassas Park – *Ordinance No. 22-1700-1078; Chapter 13; Section 13.2*

VDEQ – Title 9 Environment; Agency 20 Virginia Waste Management Board, Chapter 130 *Solid Waste Planning and Recycling Regulations*, Section 9VAC20-130-10

VDEQ – Title 9 Environment; Agency 20 Virginia Waste Management Board, Chapter 81 *Solid Waste Management Regulations*, Section 9VAC20-81-10

REFERENCES

City of Manassas Park Code of Ordinances

US Census Bureau Web Site

US Environmental Protection Agency – Solid Waste and Sustainability

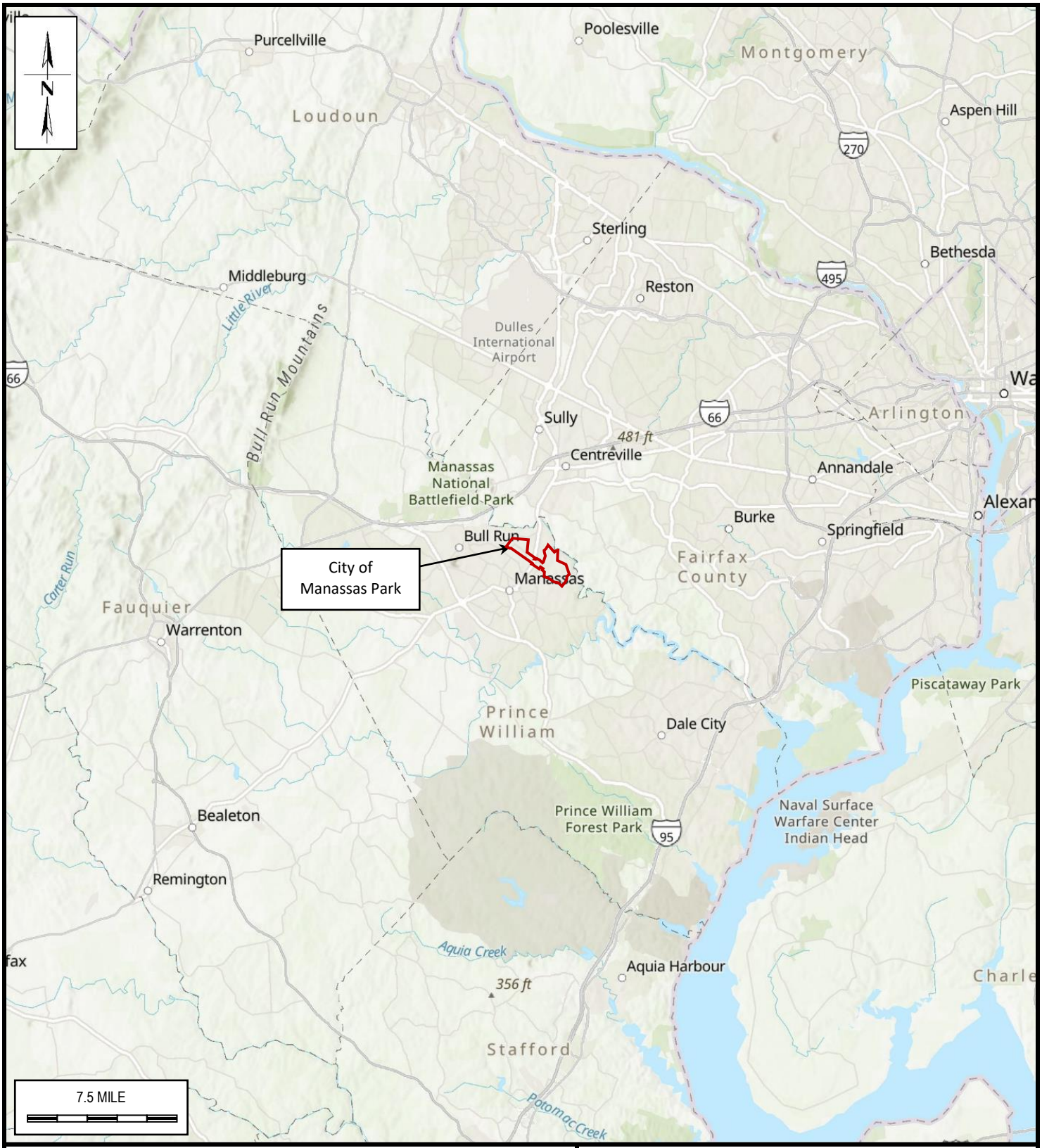
VA Works – Economic Information and Analytics Division

Virginia Department of Environmental Quality

Weldon Cooper Center for Public Service, Demographics Research Group website.

APPENDIX 1

FIGURES



Regional Vicinity Map

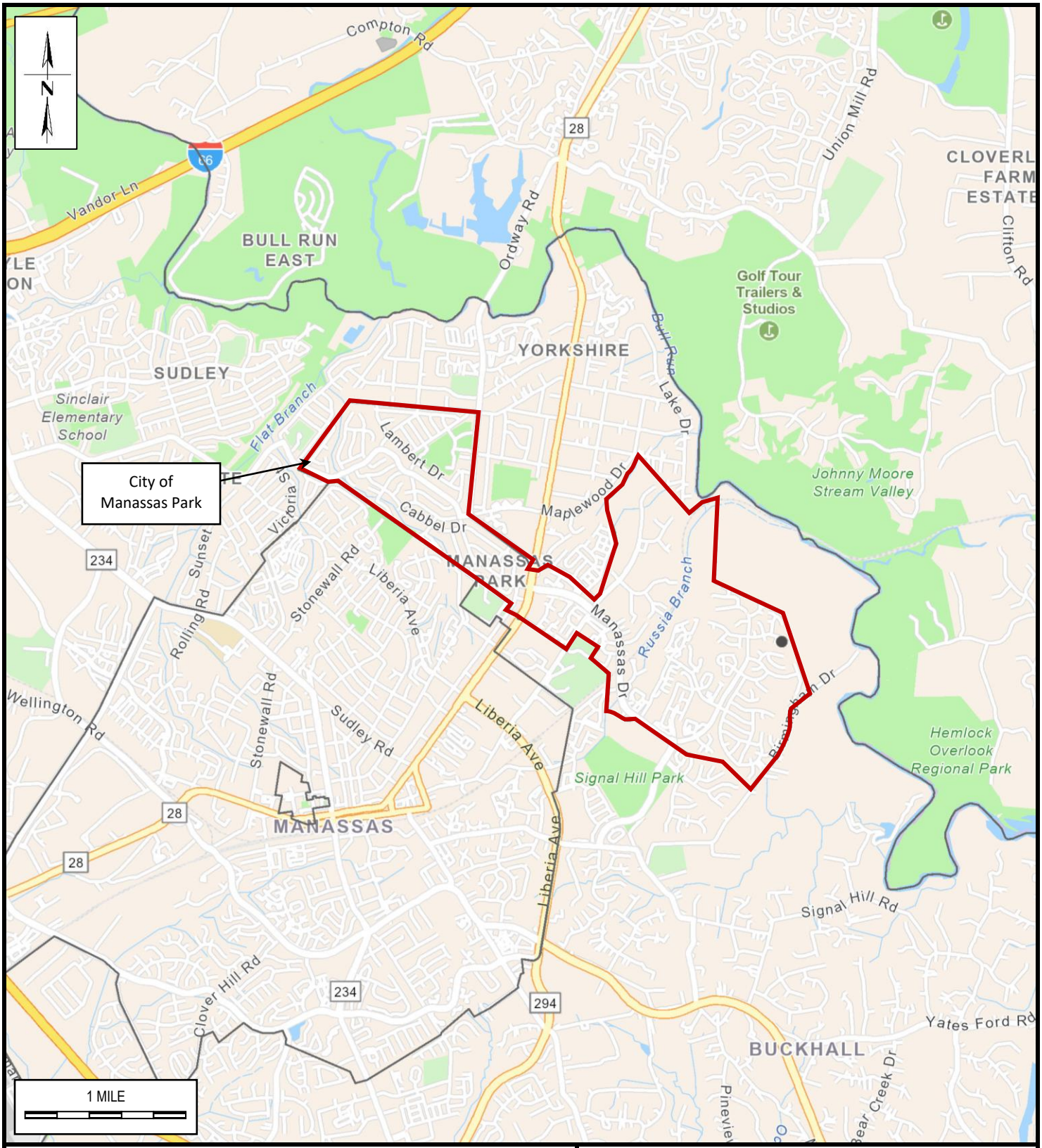
Facility: City of Manassas Park
Location: Manassas Park, Virginia
Project: Solid Waste Management Plan

SOURCE: Virginia Department of Environmental Quality

SCALE: As shown
PROJECT NO.: 624614

DESIGNED: BHH
DRAWN: BHH
CHECKED: LPK
DATE: 10/16/2024

FIGURE
1



Local Vicinity Map

Facility: City of Manassas Park
Location: Manassas Park, Virginia
Project: Solid Waste Management Plan

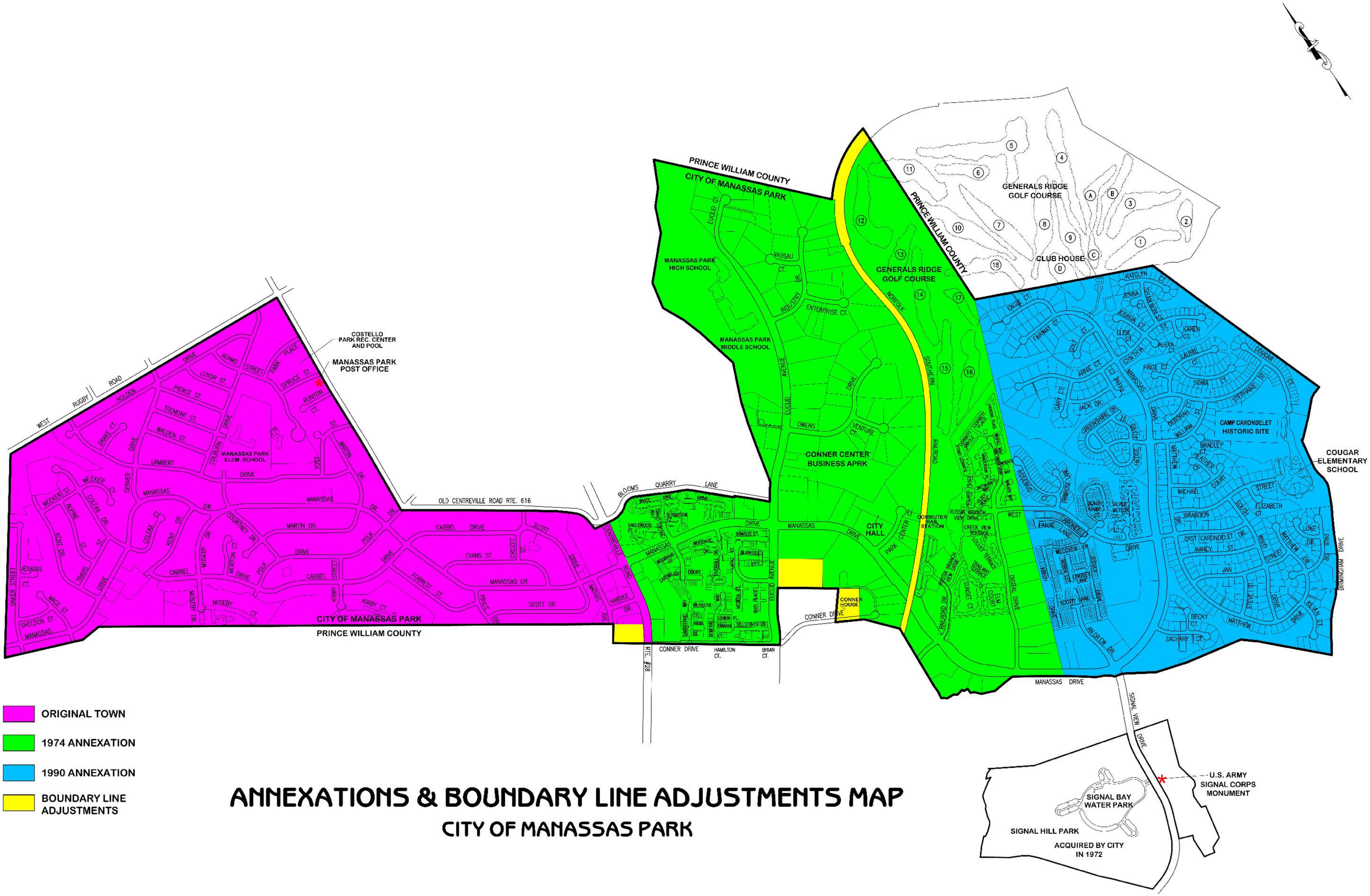
SOURCE: Virginia Department of Environmental Quality

SCALE: As shown
PROJECT NO.: 624614

TRC

DESIGNED: BHH
DRAWN: BHH
CHECKED: LPK
DATE: 10/16/2024

FIGURE
2



ANNEXATIONS & BOUNDARY LINE ADJUSTMENTS MAP

CITY OF MANASSAS PARK

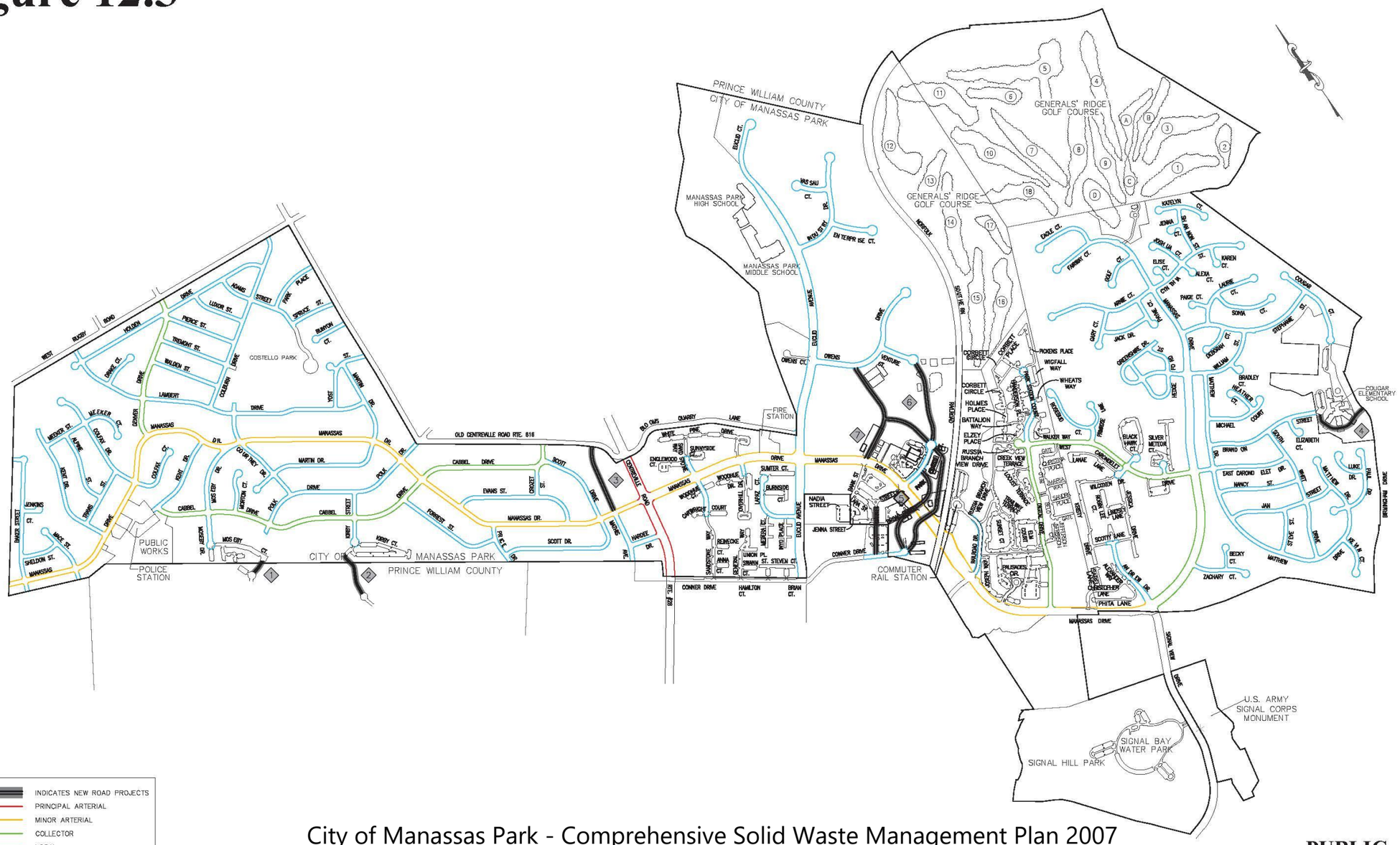
500 0 500 1,000 1,500

City of Manassas Park - Comprehensive Solid Waste Management Plan 2007

BARNES & JOHNSON, INC.
8503 EUCLID AVE. SUITE ONE
MANASSAS PARK VIRGINIA
(703) 330-8300 fax (703) 330-8357

Figure 12.3 City of Manassas Park Street System

Figure 12.3



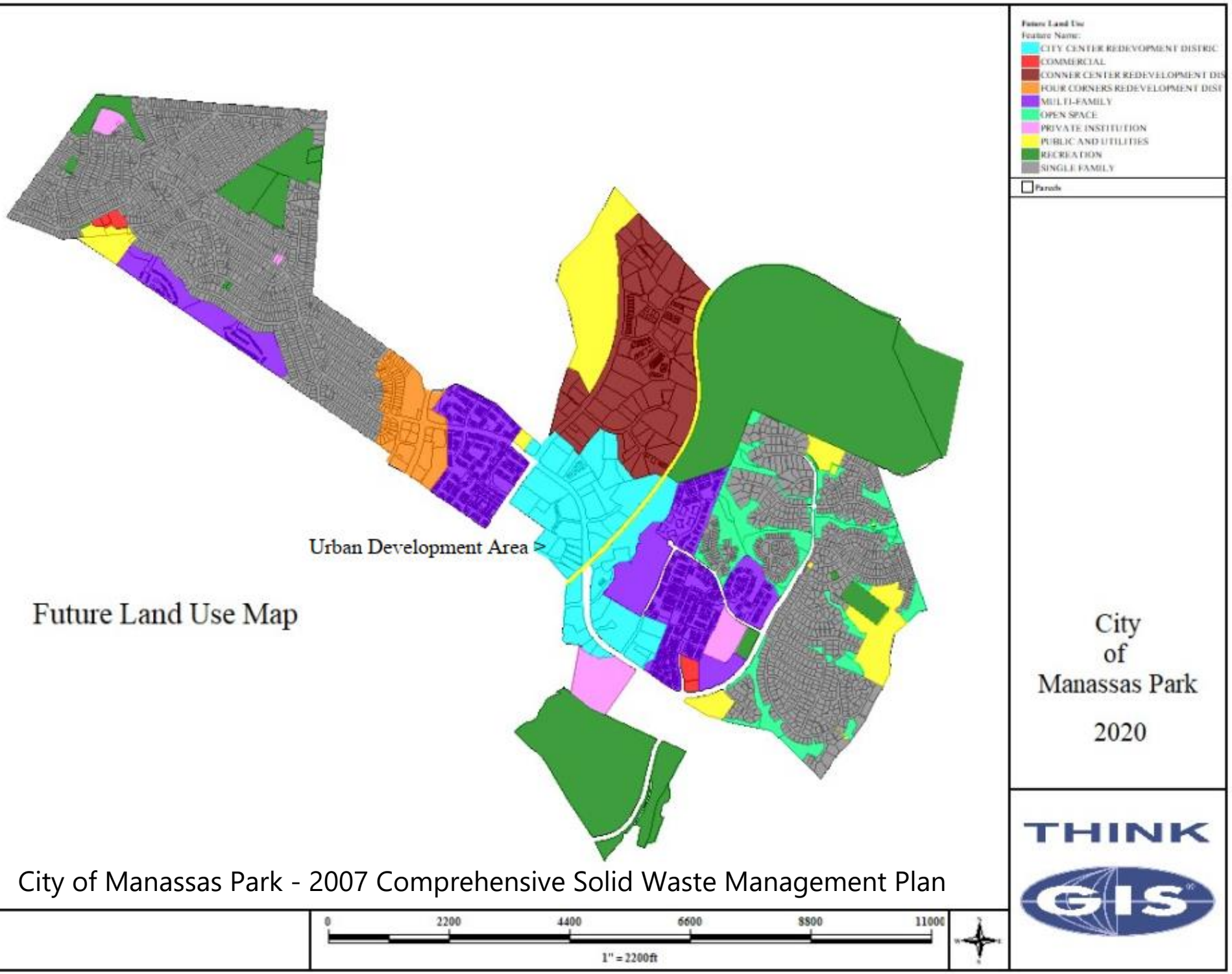
City of Manassas Park - Comprehensive Solid Waste Management Plan 2007

STREET SYSTEM
CITY OF MANASSAS PARK

600 0 600 1200 1800
Scale 1" = 600'

Bowman CONSULTING

PUBLIC WORKS DEPARTMENT MAPPING
DECEMBER 27, 2011
REVISED JANUARY 8, 2015



City of Manassas Park - 2007 Comprehensive Solid Waste Management Plan

APPENDIX 2

PATRIOT DISPOSAL AGREEMENT

AMENDED SOLID WASTE COLLECTION AND DISPOSAL SERVICES AGREEMENT

THIS AMENDED SOLID WASTE COLLECTION AND DISPOSAL SERVICES AGREEMENT (this "Agreement") is made and entered into this 17th day of June, 2022, by and between THE CITY OF MANASSAS PARK, a Virginia municipal corporation, its successors and assigns (collectively, the "City"), and Patriot Disposal, Inc., a Virginia corporation, its successors and assigns (collectively, the "Contractor").

WITNESSETH:

WHEREAS, the City desires to contract for residential and municipal solid waste collection and disposal services; and

WHEREAS, the City has advertised an invitation for bids dated April 15, 2022 (the "IFB"), which IFB is attached to this Agreement as Exhibit A and incorporated herein by this reference; and]

WHEREAS, in response to the IFB, the Contractor has submitted a bid for the Project entitled "Solid Waste Collection and Disposal for the City of Manassas Park" and dated May 5, 2022 (the "Bid"), which Bid is attached to this Agreement as Exhibit B and incorporated herein by this reference; and

WHEREAS, the City has determined that the Contractor's Bid is responsive to the IFB and meets the needs of the City, and that the Contractor is responsible, qualified and possesses sufficient skills and the necessary capabilities, including technical and professional expertise, where required, to perform the services and tasks set forth in this Agreement, and therefore desires to contract with the Contractor in accordance with the terms and conditions of the Bid, the IFB, and the Virginia Public Procurement Act.

NOW, THEREFORE, in consideration of the foregoing recitals, each of which is hereby incorporated herein by this reference, and the terms, conditions, covenants, and obligations contained herein, the parties hereto agree as follows:

1. **SCOPE OF SERVICES**.

The Contractor shall perform such services and accomplish such tasks, including the furnishing of all materials and equipment necessary for full performance thereof, as are set forth in the Bid (the "Scope of Services"). The work performed will be bound by the specifications according to this Agreement and the following documents, which documents are incorporated herein by this reference:

A. The IFB (Exhibit A)
B. The Bid (Exhibit B)
C. Insurance Certificates

2. TERM.

The initial term of this Agreement (the "Initial Term") shall commence on the date of execution of this Agreement (the "Effective Date") and shall terminate on the date that is one (1) year following the Effective Date. The term of this Agreement shall automatically extend for up to four (4) additional 1-year periods (each, an "Additional Term" and, together with the Initial Term, individually referred to as the "Term"), unless the City or the Contractor has notified the other party at least six (6) months prior to the then-current Term that it will not renew this Agreement for an Additional Term. This Agreement shall be deemed to have been terminated as of the date of the expiration of the then-current Term at the time a party provides such notification of non-renewal to the other party and shall thereafter have no further force or and/or effect, except for those provisions that by definition necessarily survive the termination of this Agreement (e.g., liability).

3. COMPENSATION AND METHOD OF PAYMENT.

A. Payments for services included in the Scope of Services shall be made monthly following the performance of such services in accordance with the fee schedule included in the Bid.

B. No payment shall be made for any service rendered by the Contractor except for services identified and set forth in this Agreement.

C. The Contractor shall submit to the City's city manager (the "City Manager") or his designee, on a form approved by the City Manager, an invoice for services rendered during the prior month. The City shall make payment to the Contractor within thirty (30) days following receipt thereof. Requests for more rapid payment will be considered if a discount is offered for early payment.

D. For all work outside the Scope of Services, the Contractor shall submit a task bid based on direction by the City. The City shall pay the Contractor for such work in accordance with the Bid.

4. MAINTENANCE OF RECORDS; REPORTS AND INSPECTIONS.

A. The Contractor, at such times and in such forms as the City may require, shall furnish the City such statements, records, reports, data, and information as the City may request pertaining to matters covered by this Agreement.

B. The Contractor shall retain all books, records, documents, data and other material relevant to all matters covered, directly or indirectly, by this Agreement for a period of two (2) years after the expiration of this Agreement. The Contractor shall at all reasonable times during any Term and said 2-year period, and as often as the City may deem necessary in its sole discretion, make available for examination and permit the City or its designated authorized representative to audit and inspect all such books, records, documents, data and other material.

C. The City Manager or his designee shall have full access and right to examine any of said books, records, documents and other materials at all reasonable times during any Term and said 2-year period.

5. INDEPENDENT CONTRACTOR RELATIONSHIP.

A. The parties intend that an independent Contractor/City relationship will be created by this Agreement. No employee, agent, or representative of the Contractor shall be deemed to be an employee, agent, or representative of the City for any purpose, and the employees, agents, and representatives of the Contractor are not entitled to any of the benefits the City provides for its employees. The Contractor will be solely and entirely responsible for its acts and for the acts of its employees, agents, representatives, and subcontractors during the performance of work contemplated by this Agreement.

B. In the performance of the work contemplated herein, the Contractor shall be an independent contractor with the authority to control and direct the performance of the details of the work; provided, however, that the results of the work contemplated herein must meet the approval of the City and shall be subject to the City's general rights of inspection and review to secure the satisfactory completion thereof.

6. CONTRACTOR'S EMPLOYEE/AGENTS/REPRESENTATIVES.

The City may at its sole discretion require the Contractor to remove any employee(s), agent(s), or representative(s) from employment on City projects. The Contractor may, however, employ such individuals(s) on other projects not related to City projects.

7. INSURANCE.

A. The Contractor shall procure and maintain, for the duration of this Agreement, insurance against claims for injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the Contractor, its agents, representatives, employees, or subcontractors. The Contractor shall provide a certificate of insurance from its insurance company (a "Certificate of Insurance") evidencing insurance coverage required by Section 11.00 of the General Specifications included in the IFB.

B. The City shall be named as an additional insured on all liability insurance policies, including any umbrella insurance policy used to meet the required coverage listed above, with respect to work performed by or on behalf of the Contractor, and a copy of the endorsement naming the City as an additional insured shall be attached to each Certificate of Insurance. Each Certificate of Insurance shall warrant that the City shall receive thirty (30) days advance notice of cancellation of the relevant insurance policy. The City reserves the right to request certified copies of any required insurance policies.

C. The Contractor's insurance shall contain a clause stating that coverage shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

8. HOLD HARMLESS; INDEMNIFICATION.

A. The Contractor shall indemnify and hold the City and its agents, employees, and officers harmless from, and shall process and defend at its own expense, any and all claims, demands,

suits, at law or equity, actions, penalties, losses, damages, or costs, of whatsoever kind or nature, brought against the City and/or its agents, employees, and/or officers arising out of, in connection with, or incident to the execution of this Agreement and/or the Contractor's defective performance or failure to perform any aspect of this Agreement; provided, however, that if such claims are caused by or result from the gross negligence of the City, its agents, employees, and/or officers, this indemnity provision shall be valid and enforceable only to the extent of the negligence of the Contractor, its agents, representatives, employees, and subcontractors; and provided further, that nothing herein shall require the Contractor to hold harmless or defend the City, its agents, employees and/or officers from any claims arising from the sole negligence of the City, its agents, employees, and/or officers. The provisions of this section shall survive the expiration or termination of this Agreement.

B. No liability shall attach to the City by reason of entering into this Agreement except as expressly provided herein.

9. CONTRACTOR CERTIFICATIONS.

A. The Contractor certifies that:

1) The Contractor and all its subcontractors and agents used in conjunction with the performance of this Agreement are and shall remain authorized to transact business in the Commonwealth of Virginia as either a domestic or foreign business entity.

2) Neither the Contractor nor any of its subcontractors or agents used in conjunction with the performance of this Agreement has been debarred from contracting for goods or services by the Commonwealth of Virginia or any Virginia public body.

B. The City may void this Agreement if the Contractor fails to comply with the requirements of this Section.

10. TREATMENT OF ASSETS.

Title to all property furnished by the City shall remain in the name of the City and the City shall become the owner of the work product and other documents, if any, prepared by the Contractor pursuant to this Agreement.

11. COMPLIANCE WITH LAWS.

A. The Contractor, in the performance of this Agreement, shall comply with all applicable federal, state, and local laws and ordinances, including regulations for licensing, certification and operation of facilities, programs and accreditation, and licensing of individuals, and any other standards or criteria as described in this Agreement to assure quality of services.

B. The Contractor specifically agrees to pay any applicable fees or charges which may be due on account of this Agreement.

12. ASSIGNMENTS/SUBCONTRACTING.

A. The Contractor shall not assign or delegate its rights or obligations under this Agreement or any portion of this Agreement without the written consent of the City Manager or his designee. Any such consent must be sought in writing by the Contractor not less than thirty (30) days prior to the date of any proposed assignment or delegation. The City Manager or his designee reserves the right to reject without cause any such assignment or delegation. Notwithstanding the foregoing, claims for compensation due or to become due the Contractor from the City under this Agreement may be assigned to a bank, trust company, or other financial institution without such approval. Written notice of any such assignment shall be promptly furnished to the City Manager.

B. Any rights, work or services assigned or delegated hereunder and any subcontract or sub-subcontract shall be subject to procurement procedures where applicable as set forth in local, state and/or federal statutes, ordinances, regulations and guidelines as well as each provision of this Agreement, which must be acknowledged and agreed to in writing by each such assignee, delegatee, subcontractor, and sub-subcontractor.

C. Any subcontract and sub-subcontract not listed in this Agreement must have express advance written approval by the City. Every approved subcontractor and sub-subcontractor must provide its federal tax identification number (*i.e.*, Social Security Number for an individual; Employer Identification Number for all others).

13. PAYMENT TO SUBCONTRACTORS; MATERIELMEN; LABORERS.

A. Within seven (7) days following receipt of payments made pursuant to this Agreement, the Contractor shall take one of the following actions with regard to subcontractors:

1) Pay the subcontractor its proportionate share of the total payment received from the City for the work performed by the subcontractor; or

2) Notify the City Manager and the subcontractor, in writing, of the Contractor's intention to withhold all or a part of the subcontractor's proportionate share of the payment from the City and the reason(s) for nonpayment.

B. The Contractor shall pay interest to all subcontractors on all amounts owed by the Contractor to subcontractors that remains unpaid after seven (7) days following receipt by the Contractor of a payment made pursuant to this Agreement by the City. The interest required by this Subsection will accrue at the rate of one percent (1%) per month. The interest requirement set forth in this Subparagraph shall not be construed to be an obligation of the City and this Agreement shall not be amended or modified for the purpose of providing reimbursement for such interest charges.

C. The Contractor shall include in each of its subcontracts a requirement that each subcontractor include or otherwise be subject to the payment and interest requirements of this Section with respect to sub-subcontracts.

14. CHANGES.

Either party may request changes or additions to the Scope of Services and performance to be provided hereunder; provided, however, that no change or addition to this Agreement shall be valid

or binding upon either party unless such change or addition be in writing and signed by both parties. Any such change or addition shall be attached to and made part of this Agreement as an amendment.

15. PROHIBITED INTEREST.

No officer or employee of the City shall have any interest, direct or indirect, in this Agreement or the proceeds hereof.

16. MODIFICATIONS TO TASKS AND MISCELLANEOUS PROVISIONS.

A. All work proposed by the Contractor is based on current government ordinances and fees in effect as of the date of this Agreement.

B. Any changes to the scope or cost of the goods or services covered by this Agreement that results from a change to current government ordinances and/or fees may, at the sole option of the City, be treated as work outside the Scope of Services pursuant to Subsection 3D above or deleted from the Scope of Services.

C. The City shall make provision for access to the property and/or project and adjacent properties as necessary for performing the services contemplated herein.

17. TERMINATION; DEFAULT AND REMEDY.

A. If funds are not appropriated by the City's Governing Body for the purposes of this Agreement for any fiscal year (from and including July 1 through and including the following June 30) subsequent to the fiscal year in which this Agreement is entered into, then the City may terminate this Agreement by providing at least thirty (30) days' advance written notice to the Contractor.

B. In addition to any other reason provided in this Agreement, the City may terminate this Agreement and any work or delivery required hereunder, from time to time either in whole or in part, for any of the following reasons.

1) If the Contractor or any subcontractor substantially violates any of the provisions of this Agreement;

2) If the Contractor substantially fails to perform any part of this Agreement;

3) If the Contractor repeatedly fails or becomes unable to perform the services under this Agreement as required herein, or fails to provide services under this Agreement for a period of seventy-two (72) hours;

4) If the Contractor (i) becomes insolvent in a bankruptcy sense; (ii) is generally not paying its debts as they become due, or within a reasonable time thereafter; (iii) suffers, voluntarily or involuntarily, the entry of an order by any court or governmental authority authorizing the appointment of or appointing of a custodian, receiver, trustee, or other officer with similar powers with respect to it or any portion of its property which remains undismissed for a period of ninety (90) days; (iv) suffers, voluntarily or involuntarily, with or without judicial or governmental authorization, any such custodian, receiver, trustee, or other officer with similar powers to take possession of any part of its property which third party remains in possession for an excess of ninety (90) days; (v)

suffers, voluntarily or involuntarily, the filing of a petition respecting an assignment for the benefit of creditors which is not dismissed for a period of ninety (90) days; (vi) be dissolved; (vii) becomes the subject of any proceeding, suit, or action at law or in equity under or relating to any bankruptcy, reorganization or arrangement of debt, insolvency, readjustment of debt, receivership, liquidation, or dissolution law or statute or amendments thereto to be commenced by or against it or against any of its property which remains undismissed for a period of ninety (90) days; (viii) voluntarily suspends substantially all of its business operations; (ix) is merged with, acquired by, or otherwise absorbed by any individual, corporation, or other business entity or organization of any kind except for any individual corporation or other business entity or organization which is controlled by, controlling, or under common control with the Contractor; or (x) takes action for the purpose of any of the foregoing,

C. Termination shall be effected by providing a written notice of termination (a "Notice"), signed by the City Manager or the City's Director of Community Development and Public Works (the "Director") to the Contractor, which will state the extent and effective date of termination. For a termination for cause, the Notice will also state the manner in which the Contractor is in default and the cure period, if any. The Contractor will only be paid for services performed in accordance with the manner of performance set forth in this Agreement.

D. The Contractor shall be paid its costs, including contract close-out costs, on work performed up to the time of termination. Upon receipt of a Notice, the Contractor shall:

1) Cease any further deliveries or work due under this Agreement, on the effective date and to the extent that is specified in the Notice.

2) Place no further orders with any subcontractors, except as may be necessary to perform that portion of this Agreement not subject to the termination.

3) Terminate all subcontracts except those made with respect to contract performance not subject to the termination.

4) Settle all outstanding liabilities and claims which may arise out of such termination, with the ratification of the City's Finance Director.

5) Use its best efforts to mitigate any damages which may be sustained by the Contractor as a consequence of termination under this section.

6) Account for any property in its possession belonging to the City and dispose of it in a manner as directed by the City.

E. After complying with the provisions of subsection D above, the Contractor shall, no later than six (6) months after the effective date of the termination, submit to the City Manager or the Director a termination claim.

F. If the Contractor fails to perform any part of this Agreement during an emergency declared by the City Manager or other authorized official, and such failure seriously threatens the health, safety or welfare of the City's citizens, the City Manager or his designee may, in his sole discretion, provide verbal notice to the Contractor of his intention to terminate the services of the Contractor and, if after serving such verbal notice the violation is not corrected to the City Manager's reasonable satisfaction by the deadline stated in such verbal notice, the City may then terminate this

Agreement and take over the work and prosecute it to completion by contract or by any other method it may deem advisable. The Contractor shall treat such verbal notice as a Notice and shall comply with the provisions of subsection D above. Any such verbal notice shall be followed by a written Notice memorializing the verbal notice, said written Notice to be provided within a reasonable period of time, taking into consideration the nature and extent of the emergency.

G. The Contractor shall be liable to the City for all reasonable costs occasioned by the City in taking over the work and prosecuting it to completion following termination of this Agreement for cause. The Contractor shall make payment promptly upon demand by the City.

H. The Contractor shall continue the performance of this Agreement to the extent not terminated under the provisions of this section.

I. The rights and remedies of the City provided in this section shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Agreement.

18. DISPUTES; APPEALS.

A. Except as otherwise provided in this Agreement, any dispute concerning a question of fact arising under this Agreement which is not disposed of by this Agreement shall be decided by the Director. The decision of the Director shall be final and conclusive unless the Contractor submits to the City Manager a written and signed request for a hearing on the dispute no later than two (2) weeks following the date of such decision.

B. If the City terminates this Agreement or any work or delivery required hereunder pursuant to the provisions of subsection 18B or 18F above, the Contractor may submit to the City Manager a written and signed request for a hearing on the termination no later than two (2) weeks following its receipt of the Notice.

C. The City Manager shall hold a hearing on the dispute or termination within two (2) weeks following receipt of the request for a hearing from the Contractor. The Contractor will be afforded an opportunity to be heard by the City Manager and to offer evidence in support of its appeal. Pending final decision of a dispute hereunder, the Contractor will proceed diligently with the performance of this Agreement and in accordance with the City's decision. The decision of the City Manager shall not be arbitrary or unreasonable and will be made within thirty (30) days following the hearing.

D. The Contractor shall not bring an action against the City, its officers, employees, or agents arising out of or relating to a dispute or termination before the decision has been issued by the City Manager. The City Manager's decision shall be final unless the Contractor brings an action against the City in a court of competent jurisdiction in Prince William County, Virginia or the United States District Court for the Eastern District of Virginia, Alexandria Division, within six (6) months following the City Manager's decision.

19. NONDISCRIMINATION.

A. During the performance of this Agreement:

1) The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

2) The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such Contractor is an equal opportunity employer.

3) Notices, advertisements, and solicitations placed in accordance with federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting the requirements of this Section.

B. The Contractor will include the provisions of the foregoing Subsection A in every subcontract or purchase order of over $10,000, so that the provisions will be binding upon each subcontractor or vendor.

20. DRUG-FREE WORKPLACE.

A. During the performance of this Agreement, the Contractor agrees to (i) provide a drug-free workplace for the Contractor's employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the Contractor that the Contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over $10,000, so that the provisions will be binding upon each subcontractor or vendor.

B. For the purposes of this section, "drug-free workplace" means a site for the performance of work done by the Contractor in connection with this Agreement, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of this Agreement.

21. COMPLIANCE WITH FEDERAL IMMIGRATION LAW.

The Contractor does not, and shall not during the performance of this Agreement, knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.

22. THIRD PARTY RIGHTS.

Nothing herein is intended to confer rights of any kind in any third party. No member, officer, or employee of the City shall have any interest, direct or indirect, in this Agreement or the proceeds thereof.

23. NOTICE.

Except for notice provided to the parties in accordance with the procedures established for requesting work set forth in the Scope of Services, notice and other correspondence provided for in or required by this Agreement shall be hand delivered or sent by overnight mail, certified U.S. mail or via fax or email to the City Manager or the Director at One Park Center Court, Manassas Park, Virginia 20111, (703) 335-0053, or l.palko@manassasparkva.gov or c.odell@manassasparkva.gov as appropriate, and to the Contractor at the address, fax number, or email address designated on the Contractor's signature page of this Agreement. Such notice shall be deemed received (i) upon actual receipt, (ii) on the same day if hand-delivered or sent via facsimile, (iii) the following day if sent using overnight mail, or (iv) three days later if sent using certified U.S. mail.

24. ATTORNEYS' FEES AND COSTS.

If any legal action or proceeding is brought for the enforcement of this Agreement, or because of a dispute, breach, default, or misrepresentation in connection with any of the provisions of this Agreement, the prevailing party shall be entitled to recover from the other party, in addition to any other relief to which such party may be entitled, reasonable attorneys' fees and other costs incurred in such action or proceeding.

25. JURISDICTION AND VENUE.

A. This Agreement has been and shall be construed as having been made and delivered within the Commonwealth of Virginia and shall be governed by laws of the Commonwealth of Virginia, both as to interpretation and performance.

B. Any action of law, suit in equity, or judicial proceeding for the enforcement of this Agreement or any provisions thereof shall be instituted and maintained only in a court of competent jurisdiction in Prince William County, Virginia or the United States District Court for the Eastern District of Virginia, Alexandria Division.

26. SEVERABILITY; WAIVER.

A. If, for any reason, any part, term, or provision of this Agreement is held by a court of competent jurisdiction to be illegal, invalid, void or unenforceable, the remaining parts, terms, and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Agreement did not contain the particular part, term, or provision held to be illegal, invalid, void or unenforceable.

B. If any part, term, or provision of this Agreement is held by a court of competent jurisdiction to be illegal, invalid, void or unenforceable with respect to particular circumstances, such part, term, or provision shall nevertheless remain in full force and effect in all other circumstances.

C. If it should appear that any provision hereof is in conflict with any statutory provision of the Commonwealth of Virginia, said provision which may conflict therewith shall be deemed inoperative and null and void insofar as it may be in conflict therewith, and this Agreement shall be deemed as having been modified to conform to such statutory provisions.

D. One or more waivers by the City of any default shall not be deemed to be a waiver of any subsequent default. Waiver of any provision of this Agreement shall not be construed to be modification of the terms of this Agreement, unless stated to be such in writing, signed by the City's authorized representative. The forgiveness of the nonperformance of any provision of this Agreement does not constitute a waiver of that or any other provision of this Agreement.

27. AMBIGUITY; MEANING OF "CITY".

A. The Contractor acknowledges that it has been afforded the opportunity to have this Agreement reviewed by legal counsel and expressly agrees that any ambiguity herein shall be resolved in favor of the City.

B. The term "City", as used in this Agreement, shall mean the person, board, commission, committee, or other sub-unit or official of the City having the legal obligation or right to act on behalf of the City, as the context may require.

28. ENTIRE AGREEMENT.

This Agreement is the complete expression of the terms hereto and any oral representations or understandings not incorporated herein are excluded. Further, any modification of this Agreement shall be in writing and signed by both parties. Failure to comply with any of the provisions stated herein shall constitute material breach of contract and cause for termination. Both parties recognize time is of the essence in the performance of the provisions of this Agreement.

29. MISCELLANEOUS.

A. This Agreement is the complete expression of the terms hereto and any oral representations or understandings not incorporated herein are excluded. Further, any modification of this Agreement shall be in writing and signed by both parties. Failure to comply with any of the provisions stated herein shall constitute material breach of contract and cause for termination.

B. Both parties recognize time is of the essence in the performance of the provisions of this Agreement.

C. Headings and captions are provided in this Agreement for ease of reference only and shall not be used to construe or interpret any provision of this Agreement.

D. Neither party shall be held liable for any delay or failure in performance of any part of this Agreement from any cause beyond its control and without its fault or negligence, such as acts of God, acts of civil or military authority, government regulations, embargoes, epidemics, war, terrorist acts, riots, insurrections, fires, explosions, earthquakes, nuclear accidents, floods, strikes, power blackouts, volcanic action, other major environmental disturbances, or unusual weather conditions.

E. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original; but all of which together shall constitute one and the same instrument. The delivery of an executed counterpart of this Agreement by fax or as a PDF or similar attachment to an email shall constitute effective delivery of such counterpart for all purposes with the same force and effect as the delivery of an original, executed counterpart.

{Signature pages follow}

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed the day and year first hereinabove written.

CONTRACTOR:

Patriot Disposal, Inc.,
a Virginia [corporation/limited liability company/partnership]

Address: PO Box 3219
Manassas, VA 20108

Fax No.: 877-304-4016

Email: jean.prague@patriotdisposalservices.com

Federal Tax ID No.: 33-1193751

Virginia SCC ID No.: 06868681

By: Jean Prague
Name: Jean Prague
Title: Vice President

ATTEST:

A. Oswald
Name: Andrea Oswald
Title: Controller

CITY OF MANASSAS PARK,
a Virginia municipal corporation

By: _____
Laszlo Palko, City Manager

ATTEST:

_____
Lana Conner, City Clerk

APPROVED AS TO FORM:

_____
Dean H. Crowhurst, City Attorney

A PROPOSAL TO PROVIDE

SOLID WASTE COLLECTION AND DISPOSAL

FOR THE

CITY OF MANASSAS PARK, VA

SUBMITTED TO:

CALVIN E. O'DELL, DIRECTOR
DEPARTMENT OF COMMUNITY DEVELOPMENT
& PUBLIC WORKS
331 MANASSAS DRIVE
MANASSAS PARK, VA 20111

SUBMITTED BY:

PATRIOT DISPOSAL, INC.
MAY 5, 2022

PATRIOT
DISPOSAL
P.O. Box 3219 | Manassas, VA 20108
Phone (703) 257-7100 | Fax (877) 304-4016
www.patriotdisposalservices.com

May 5, 2022

Mr. Calvin E. O'Dell, Director
Department of Community Development
& Public Works
331 Manassas Drive
Manassas Park, VA 20111

Dear Mr. O'Dell:

Patriot Disposal, Inc. is pleased to submit this proposal in response to the Invitation for Bids (IFB) to provide Solid Waste Collection and Disposal Services for the City of Manassas Park.

This offer meets or exceeds all mandatory requirements as defined in the IFB. Patriot Disposal takes no exceptions to any of the requirements or terms and conditions set forth in the IFB or the envisioned contract.

Patriot Disposal acknowledges receipt of Addendum No. 1 dated April 27, 2022, and Addendum No. 2 dated April 29, 2022. The signed Acknowledgment Forms for each Addendum are attached. In accordance with the Instructions to Contractors section of the IFB, Patriot Disposal submits this offer in one (1) hard copy original in a sealed, plainly marked envelope.

We believe you will find the qualifications of Patriot Disposal well-suited to the requirements set forth in the IFB. If you require clarifications or have any questions, please do not hesitate to contact us directly. Thank you.

Sincerely,

Jean Poague
Vice President

CITY OF MANASSAS PARK

Department of Public Works
331 Manassas Drive
Manassas Park, VA 20111

TITLE: **Addendum No. 1 - Solid Waste & Recycling Collection and Disposal**

DATE: April 27, 2022

ISSUED BY: The City of Manassas Park
Department of Public Works
331 Manassas Drive
Manassas Park, VA 20111

The following revisions, additions, deletions and clarifications are hereby made part of the Proposal Requirements and Contract Documents for the above referenced solicitation and shall be taken into account in the preparation of all proposals and the execution of all work. Contractors shall acknowledge receipt of this Addendum in the appropriate space on the Proposal Form.

ADDENDUM 1. SECTION A - ANSWERS TO COMPILED QUESTIONS FROM PRE-BID MEETING ADDITIONAL REQUESTS FOR INFORMATION.

QUESTION 1: Would the City consider collection over multiple days?

RESPONSE 1: City Management is open to having up to two (2) separate collection days: one day for collection of trash and another day for collection of recycling.

QUESTION 2: Can bidders receive a copy of current Agreement/Addenda?

RESPONSE 2: The City's Agreement with Patriot Disposal, including all Addenda, is included with this Addendum as ATTACHMENT 6 – PATRIOT DISPOSAL CONTRACT/SERVICE AGREEMENT

QUESTION 3: Can the City provide 90 days (3 months) of invoice history?

RESPONSE 3: A 90-day (3 month) invoice history from January 2022 through March 2022 is attached to this Addendum as ATTACHMENT 2 – PATRIOT DISPOSAL INVOICE HISTORY

QUESTION 4: Please provide MSW tipping rate at Dominion Transfer Station.

RESPONSE 4: The current tipping rate for MSW at Dominion Transfer Station is $65.00 per ton for waste collected within the City limits under our solid waste contract.

QUESTION 5: Please provide curbside unit counts on the east and west sides of Manassas Park (ASL versus rear-load counts)

RESPONSE 5: The curbside unit total is 3915: 2251 units on the east or Rt. 28 (Centreville Rd.) and 1664 units on west of Rt. 28 (Centreville Rd.). Four townhome/condo communities east of Rt. 28 receive trash and recycling carts, however, carts are placed together in groups at specific collection areas due to the community parking configuration. Those communities are ASL prohibitive and consist of the following communities: Brandy Court, Brandy Station, Outlook, and Stone Ridge.

QUESTION 6: Was the Pre-Bid Meeting mandatory?

RESPONSE 6: The Pre-Bid Meeting was not mandatory.

QUESTION 7: Can notes and questions asked at the Pre-Bid Meeting be sent to all interested bidders?

RESPONSE 7: Yes, notes and questions from the Pre-Bid Meeting can be sent to interested bidders.

QUESTION 8: Can the City provide tonnage reports for refuse, recycling and yard waste for the past 2 years?

RESPONSE 8: Yard waste has been collected with refuse for the last several years so refuse tonnage will also include yard waste.

2021: Refuse (including yard waste) 7,017 Recycling – 3,121
2020: Refuse (including yard waste) 6,595 Recycling – 1,870

QUESTION 9: Is it possible to view the City's proposed Solid Waste Ordinance?

RESPONSE 9: The Ordinance is scheduled for Governing Body review on Tuesday, April 26, 2022. A copy of the ordinance is available to the public on the City's website at www.cityofmanassaspark.

QUESTION 10: The Contractor's Proposal Form indicates that yard waste is collected with trash, however, section 3.1(c) under 3.0 Types of Collection, states that yard waste materials are *required* to be recycled. Can the City please clarify its intent whether to recycle yard waste or include it with trash collection.

RESPONSE 10: The commingled collection of trash and yard waste comprises the baseline price for curbside trash collection. An additional line item for *separate* Yard Waste Collection has been added to the Amended Contractor's Bid Form included with this Addendum as Attachment 3 – Amended Contractor's Bid Form.

QUESTION 11: Would the City consider the exclusion of mattresses and appliances from Bulk Waste collection?

RESPONSE 11: Collection of *all* bulk items, including mattresses and appliances, will comprise the baseline price for Bulk Waste collection. An additional line item for bulk waste collection that excludes mattresses and appliances, has been added to the Amended Contractor's Bid Form included with this Addendum as Attachment 3 – Amended Contractor's Bid Form.

QUESTION 12: Would the City consider hosting quarterly "clean-up" events in lieu of a curbside bulk collection program?

RESPONSE 12: The City may consider the option of hosting quarterly clean-up events and has added an addition price line for such events. Events shall be staged in the City of Manassas Park in a location specified by the City Manager. The contractor shall provide all dumpsters, staffing assistance, haul-away/disposal of all materials collected for four quarterly events. A line item for this service appears on the Amended Contractor's Bid form included with this Addendum as Attachment 3 - Amended Contractor's Bid Form.

QUESTION 13: For refrigeration appliances, including but not limited to refrigerators, freezers, air conditioners, dehumidifiers, or any item containing Freon, will refrigerant be removed (and the units tagged) before being placed for collection?

RESPONSE 13: The City requires any refrigerant-containing appliance to have the refrigerant recovered and tagged by a Section 608 Certified technician before the appliance can be placed at the curb for collection.

QUESTION 14: Can the City provide a current route/road map for the City of Manassas Park?

RESPONSE 14: A current City map is included with this Addendum as Attachment 4 – City of Manassas Park Road Map.

QUESTION 15: Is there currently a limit on the number of bulk items placed for curbside collection?

RESPONSE 15: The City limits the number of bulk items to no more than 3 items per week/per household.

QUESTION 16: Can the City provide current rates it pays for solid waste collection?

RESPONSE 16: All current rates are included in the 3-month Invoice history (see Attachment 2 – Patriot Disposal Invoice History)

QUESTION 17: Does the City impose a container limit, extra bag limit and construction waste limit?

RESPONSE 17: The City imposes a 4-cart limit for curbside collection. The limit can be any configuration of trash, recycling or yard waste carts. At this time, there is a "suggested" bag limit of 4 contractor bags for yard waste and brush. Construction debris is no longer eligible for curbside collection in the City of Manassas Park.

QUESTION 18: Provide clarification of Palisades and Artenna compactors versus containers.

RESPONSE 18: The Amended Contractor's Bid Form (Attachment 3) now reflects an accurate description of the solid waste equipment on site at each facility listed on the form.

QUESTION 19: Are contract extensions unilateral or bilateral?

RESPONSE 19: Contract extensions are unilateral.

QUESTION 20: Is compactor equipment furnished by the contractor? Some properties own their own compactor equipment. In this case, who would be responsible for maintaining that equipment, the owner or the solid waste contractor?

RESPONSE 20: In the event that a property owns its own compactors, the property/property management owner is responsible for compactor maintenance and not the contractor. The Contractor shall be responsible for any equipment damages that may result from unnecessarily roughness or abusive handling of equipment by the Contractor's staff during the course of service.

QUESTION 21: Can the City provide an approximate number of Bulk pick-up requests per week?

RESPONSE 21: The City averages 25-35 calls per week for bulk waste collection per week.

QUESTION 22: Per the Contractor's Bid Form, compactor equipment is listed for various properties. Must the contractor provide compactor equipment units or do the properties own them?

RESPONSE 22: For those properties who do not own their compactor equipment and whose compactor equipment has been provided by the contractor, that equipment should continue to be provided and maintained by the contractor.

QUESTION 23: Can the City provide clarification that it wants a Performance Bond in the amount of 100% of the Annual Contract Value, renewed annually?

RESPONSE 23: The performance bond must be in an amount equal to the full contract price.

QUESTION 24: Since bond companies don't approve performance bonds on terms that aren't mutually agreeable, can the City use another bond form and revise the IFB language so that option to extend the contract is mutually agreeable to both parties?

RESPONSE 24: The Renewable Performance and Payment Bond Form, standard to the industry, and included in this Addendum as ATTACHMENT 5 – RENEWABLE PERFORMANCE AND PAYMENT BOND FORM, shall replace the Performance Bond Form on page 38 of the 2022 Solid Waste Collection and Disposal IFB. The Performance Bond shall be renewed annually. Failure to do so, no later than ninety (90) days prior to the annual renewal of the Agreement shall be cause for termination. The resulting contract will include language that the Contractor has to, first, request an extension before the City Manager or Director of Community Development and Public Works can authorize the extension, Thus, Section 3 of the Solid Waste Collection and Disposal Service Agreement shall be amended as follows:

The initial term of this Agreement (the "Initial Term") shall commence on the date of execution of this Agreement (the "Effective Date") and shall terminate on the date that is one (1) year following the Effective Date. The term of this Agreement may be extended for up to four (4) additional 1-year periods (each, an "Additional Term" and, together with the Initial Term, individually referred to as the "Term"), provided that the Contractor has requested an Additional Term and either the City's city manager (the "City Manager") or the City's Director of Community Development and Public Works (the "Director"), as the designated representative of the City's governing body (the "Governing Body"), has first authorized each such extension prior to the expiration of the then-current Term. If the City Manager or the Director has not authorized such extension prior to the expiration of the then-current Term, this Agreement shall be deemed to have been terminated as of the date of such expiration and shall thereafter have no further force and/or effect, except for those provisions that by definition necessarily survive the termination of this Agreement (e.g., liability).

QUESTION 25: Section 13 (b) Basis and Method of Payment – Would the City reconsider removal of cap of 3% increase per year? If not, contractors will have to guess on future costs which could inflate Year 1 pricing.

RESPONSE 25: Section 13.2 Modification to Rates (b) has been modified as follows: *In addition to the modification to rates described in Section 13.2 (a), an increase/decrease in rates will occur upon a change in tipping fees at the Dominion Transfer Station. Any increase in rates pursuant to this subsection (b) will only take effect upon sixty (60) days' prior notice and provision of proof of the increase/decrease. Any such increase will be limited to a maximum of 5% annually.*

QUESTION 26: In the event we are unable to attain a certified financial statement in time to meet the May 5, 2022 due date, would the City accept a financial statement prepared "in-house" by a CPA?

RESPONSE 26: The City will accept the following options

- A financial statement prepared by an accounting firm
- If your company is not required to use an outside accounting firm, a copy of the financial statement provided to your financial institution.
- If you have not provided a financial statement to a financial institution, an internally prepared financial statement with a signed and notarized affidavit stating that the information provided is correct to the best of the individual's knowledge and that there are no undisclosed material liabilities (e.g. lawsuits, bank loans).

QUESTION 27: Is it possible for a private company to keep their financial disclosure information out of the public view as IFBs are considered public information?

RESPONSE 27: Ownership of all data, materials and documentation originated and prepared for the City pursuant to the IFB shall belong exclusively to the City and be subjected to public inspection in accordance with the Virginia Freedom of Information Act. Trade secrets or proprietary information submitted by an Offeror shall not be subject to the public disclosure under the Virginia Freedom of Information Act; however, the Offeror must invoke the protections of Section 2.2-4342F of the Code of Virginia, in writing, either before or at the time the data is submitted. The written notice must specifically identify the data or materials to be protected and state the reason why protection is necessary. The proprietary or trade secret material submitted must be identified by some distinct method such as highlighting or underlining and must indicate only the specific words, figures, or paragraphs that constitute trade secrets or proprietary information. The classification of an entire proposal document, line item prices and/or total proposal prices as proprietary or trade secrets is not acceptable and will result in rejection and return of the proposal. The City is not responsible for any expenses incurred by an Offeror in preparing and submitting a proposal.

ADDENDUM 1 – SECTION B AMENDED IFB DOCUMENTS

1) AMENDED CONTRACTOR'S BID FORM

The Contractor's Bid Form has been amended to include a line item for yard waste collected separately for recycling purposes and two (2) separate line items for bulk waste collection: one line item for bulk waste including collection of appliances and mattresses and one line item for bulk waste *not* including appliances and mattresses. It has also been amended to reflect the ownership of compactor equipment at all service properties throughout the City. The Amended Contractor's Bid Form, included in this Addendum as Attachment 3, shall replace the Contractor's Bid Form provided in the Solid Waste Collection and Disposal IFB issued on April 15, 2022.

2) AMENDED SOLID WASTE COLLECTION AND DISPOSAL SERVICES AGREEMENT

Sections 3, 4 and 18 (pages 41, 45 and 46) of The Solid Waste Collection and Disposal Services Agreement have been amended. These amended sections, including all strike-throughs and insertions, comprise Attachment 1-A - Amendments to the Solid Waste Collection and Disposal Services Agreement. These three pages are followed by Attachment 1-B The Amended Solid Waste Collection and Disposal Services Agreement, in its entirety, including the incorporation of all amendments made to Sections 3, 4 and 18. Attachment 1-B Amended Solid Waste Collection and Disposal Services Agreement shall replace the Solid Waste Collection and Disposal Services Agreement that was included with the IFB issued on April 15, 2022.

ADDENDUM 1. SECTION C - ATTACHMENTS

ATTACHMENT 1 (A) AMENDMENTS TO THE SOLID WASTE COLLECTION AND DISPOSAL SERVICES AGREEMENT
(B) AMENDED SOLID WASTE COLLECTION AND DISPOSAL SERVICES AGREEMENT

ATTACHMENT 2 PATRIOT DISPOSAL INVOICE HISTORY

ATTACHMENT 3 AMENDED CONTRACTOR'S BID FORM

ATTACHMENT 4 MANASSAS PARK ROAD MAP

ATTACHMENT 5 RENEWABLE PERFORMANCE AND PAYMENT BOND FORM

ATTACHMENT 6 PATRIOT DISPOSAL CONTRACT/SERVICE AGREEMENT

This Addendum MUST be signed and returned with your Invitation for Bid (IFB) documents by Thursday May 5, 2022 at 10:00 a.m. All documents are considered a matter of responsiveness and shall be submitted at or prior to the due date/time. Failure of a Bidder to return the documents by Thursday, May 5, 2022 at 10:00 a.m. shall be cause for rejection of the bid.

Company Name: Patriot Disposal, Inc. Date: 5/5/22

Authorized Representative Signature: Jean Poague

Title: Vice President

CITY OF MANASSAS PARK

Department of Public Works
331 Manassas Drive
Manassas Park, VA 20111

TITLE: **Addendum No. 2 – SOLID WASTE COLLECTION AND DISPOSAL SERVICES IFB**
DATE: April 29, 2022
ISSUED BY: The City of Manassas Park
Department of Public Works
331 Manassas Drive
Manassas Park, VA 20111

The following revisions, additions, deletions and clarifications are hereby made part of the Proposal Requirements and Contract Documents for the above referenced solicitation and shall be taken into account in the preparation of all proposals and the execution of all work. Contractors shall acknowledge receipt of this Addendum in the appropriate space on the Proposal Form.

Addendum 2. ANSWERS TO COMPILED QUESTIONS WITHIN REQUESTS FOR INFORMATION

QUESTION 1: Can you please confirm that the line item that was added for yard waste collection is to be used by the City to determine if they wish to change to separate yard waste collection?

RESPONSE 1: The line item for separate yard waste collection was added specifically to determine whether the City would consider collecting yard waste for purposes of recycling (composting) versus continuing to include it as part of the refuse collection.

QUESTION 2: Are the bulk waste collection line items on the top of the second page of the Amended Bid Form to be priced for all 3,915 units, or should we assume that the bid price per month and per year is for ONE unit only, with a maximum of 3 bulk items per week?

RESPONSE 2: Because bulk waste is not collected at every curbside unit (home) per week as is regular refuse and recycling, the Bulk Waste bid price should only be for one unit (home) so that the City can compare the price difference between a single bulk waste collection that includes mattresses and appliances and a single collection that excludes mattresses and appliances. Billing for bulk waste collection will be calculated on a monthly "on-call" basis (unit cost x no. of units served).

QUESTION 3: Would the City consider changing the pricing for the 10 yard roll-off dumpster for street sweeping to be "per pull" and eliminating the need for a price per year? If the number of pulls are unknown, it is impossible to propose a price that is accurate on a monthly basis and yearly basis.

RESPONSE 3: Since bidders are unable to propose an accurate price due to an unknown number of pulls, a 10-yard roll-off dumpster should be priced per pull.

QUESTION 4: Would the City consider changing the pricing for recycling service for the Public Works Department to be "per month" instead of "per pull" so that all of the line items for routine, weekly collection services are the same?

RESPONSE 4: Recycling service for the Public Works Department should be priced per month instead of per pull in order to maintain pricing continuity for this department.

This Addendum MUST be signed and returned with your Request for Proposal bid documents, due Thursday May, 5, 2022 at 10:00 m. All documents are considered a matter of responsiveness and shall be submitted at the prior to due date/time. Failure of a Bidder to return the documents shall be cause for rejection of the bid.

Company Name: Patriot Disposal Inc.

Date: 5/5/22

Authorized Representative Signature: JC Poague

AMENDED CONTRACTOR'S BID FORM

TO: Director of Community Development & Public Works of the City of Manassas Park, Virginia

Bid of Patriot Disposal, Inc., an individual/partnership/limited liability company/(corporation) (circle one) duly organized under the laws of the State of Virginia.

The undersigned, having carefully read and considered the terms and conditions of the Invitation for Bids for Solid Waste Collection and Disposal for the City of Manassas Park, Virginia (the "IFB"), does hereby offer to perform such services on behalf of the City, of the type and quality and in the manner described, and subject to and in accordance with the terms and conditions set forth in the IFB at the rates (expressed in words and numerals), the frequency of collection and the number and type of containers hereinafter set forth.

RESIDENTIAL CURBSIDE COLLECTION

Curbside collection includes year-round collection of yard waste, bulky waste and non-commercial construction debris for 3915 curbside units. Curbside refuse and recycling is collected every Wednesday between the hours of 7 a.m. and 7 p.m. Residents may set their trash/recycling materials at the curb no earlier than 2:00 p.m. on the previous Tuesday and no later than 6:30 a.m. on the day of collection.

Trash (including yard waste)

- Container type: 96-gallon trash tote
- Quantity of containers: 1 per residential unit
- Collection frequency: once per week

$ 13.30 unit per month — **$ 159.60 per unit per year**

Recycling

- Container type: 64-gallon recycling tote
- Quantity of containers: 1 per residential unit
- Collection frequency: once per week

$ 5.49 unit per month — **$ 65.88 per unit per year**

Trash per unit per year cost x 3915 — **$ 624,834 per year (Anticipated total for Residential Curbside Trash Collection)**

Recycling per unit per year cost x 3915 — **$ 257,920.20 per year (Anticipated total for Residential Curbside Recycling Collection)**

Yard Waste (separate recycling collection):

- Container type: 96 gal cart or paper Biodegradable yard waste bags
- Collection frequency: Once per week
- **$** 1.99 **unit per month** **$** 23.88 **per unit per year**

Bulk Waste Collection
(includes mattresses and appliances)

- **$** 75.00 **unit per month** **$** 900.00 **per unit per year**

Bulk Waste Collection
(excludes mattresses and appliances)

- **$** 50.00 **unit per month** **$** 600.00 **per unit per year**

RESIDENTIAL NON-CURBSIDE COLLECTION

NOTE: Townhome and multifamily communities with dumpsters, compactors and recycling carts are serviced Tuesdays and Fridays.

Blooms Crossing—Silver Meteor Court/Black Hawk Court
131 townhome units

Trash

- Container type: 8-yard front load dumpster
- Quantity of containers: 7
- Collection frequency: twice per week
  $ 1,619.32 /month **$** 19,431.84 **/year**

Recycling

- Container type: 18-gallon recycling bin
- Quantity of containers: 131
- Collection frequency: once per week
  $ 1,584.65/month **$** 19,015.80 **/year**

Bulk waste (includes mattresses, appliances)

- Collection frequency: once per week
  $ 93.64 /month **$** 1,123.68 **/year**

Bulk waste (excludes mattresses, appliances)

- Collection frequency: once per week
  $ 46.82 /month **$** 561.84 **/year**

Park Place Senior Apartments—9659 Manassas Drive
148 Units including 24 cottages

Trash (Mid-Rise Apartments and Cottages)
- Container type: 8-yard front load dumpster
- Quantity of containers: 2
- Collection frequency: twice per week

$ 574.04 /month — **$ 6,888.48 /year**

Trash (Mid-Rise Apartments)
- Container type: 2-yard trash compactor (owned by property)
- Quantity of containers: 1
- Collection frequency: three times per week

$ 1,416.67 /month — **$ 17,000.04 /year**

Recycling (Mid-Rise Apartments)
- Container type: 8-yard front load dumpster
- Quantity of container: 1
- $ 141.95 /month

$ 1,703.40 /year

Recycling (cottages only)
- Container type: 18-gallon recycling bin
- Quantity of containers: 24
- Collection frequency: once per week

$ 294.96 /month — **$ 3,539.52 /year**

Bulk waste (includes mattresses, appliances)
- Collection frequency: once per week

$ 91.88 /month — **$ 1,102.56 /year**

Bulk waste (excludes mattresses, appliances)
- Collection frequency: once per week

$ 45.94 /month — **$ 551.28 /year**

Manassas Park Station (The Reserve)—Digital Drive
224 condo units (flats)

Trash
- Container type: 34-yard self-contained trash compactor (owned by Contractor)
- Quantity of containers: 2
- Collection frequency: twice per week

$ 3,333.34 /month — **$ 40,000.08 /year**

Bulk waste (includes mattresses, appliances)
- Collection frequency: once per week

$ 453.10 /month — **$ 5,437.20 /year**

Bulk waste (excludes mattresses, appliances)
- Collection frequency: once per week

$ 226.55 /month — **$ 2,718.60 /year**

Recycling
- Container type: 4-yard dumpsters
- Quantity of containers: 2
- Collection frequency: twice per week

$ 107.42 /month — **$ 1,289.04 /year**

Manassas Yards Apartments—9430 Russia Branch View Drive
350 apartment units

Trash
- Container type: 34-yard self-contained trash compactor (owned by property)
- Quantity of containers: 2
- Collection frequency: twice per week

$ 3,333.34 /month — **$ 40,001.08 /year**

Recycling
- Container type: 96-gallon recycling cart
- Quantity of containers: 8
- Collection frequency: twice per week

$ 197.10 /month — **$ 2,365.20 /year**

Bulk waste (includes mattresses, appliances)
- Collection frequency: once per week

$ 245.62 /month — **$ 2,947.44 /year**

Bulk waste (excludes mattresses, appliances)
- Collection frequency: once per week

$ 122.81 /month — **$ 1,473.72 /year**

Point at Palisades Apartments – 8100 Palisades Cr.
305 Apartment Units

Trash
- Container type: 34-yard self-contained trash compactor (owned by Contractor)
- Quantity of containers: (1)
- Collection frequency: three times per week

$ 4,546.50 /month — **$ 54,558.00 /year**

Recycling
- Container type: 2-yard plastic dumpster on casters
- Quantity of containers: 1
- Collection frequency: once per week

$ 225.00 /month — **$ 2,700.00 /year**

Artenna Manassas
102 Apartment Units

Trash
- Container type: 2 -yard compactor cans (owned by property)
- Quantity of containers: 2
- Collection frequency: twice per week

$ 1,200.00 /month — **$ 14,400.00 /year**

Recycling
- Container type: 8-yard front load single stream (cardboard only)
- Quantity of containers: 1
- Collection frequency: once per week

$ 200.00 /month — **$ 2,400.00 /year**

Parq 170 Apartments – 170 Market Street
291 Apartment Units

Trash
- Container type: 2-yard compactor dumpsters
- Quantity of containers: 6
- Collection frequency: three times per week

$ 793.95 /month — **$ 9,527.40 /year**

Recycling
- Container type: 64-gallon recycling tote
- Quantity of containers: 11
- Collection frequency: once per week

$ 174.48 /month — **$ 2,093.76 /year**

Bulk waste (includes mattresses, appliances)

- Collection frequency: once per week
  $ 111.04 /month

$ 1,339.68 /year

Bulk waste (excludes mattresses, appliances)

- Collection frequency: once per week
  $ 55.82 /month

$ 669.84 /year

Moseby Ridge I—317 A-K Moseby Court

Trash

- Container type: 8-yard front load dumpster
- Quantity of containers: 2
- Collection frequency: three times per week
  $ 556.27 /month

$ 6,675.24 /year

Recycling

- Container type: 18-gallon recycling bin
- Quantity of containers: 89
- Collection frequency: once per week
  $ 737.21 /month

$ 8,846.52 /year

Bulk waste (includes mattresses, appliances)

- Collection frequency: once per week
  $ 93.64 /month

$ 1,123.68 /year

Bulk waste (excludes mattresses, appliances)

- Collection frequency: once per week
  $ 46.82 /month

$ 561.84 /year

Moseby Ridge II—Kirby Street and Kirby Court

Trash

- Container type: 8-yard front load dumpster
- Quantity of containers: 4
- Collection frequency: three times per week
  $ 1,112.50 /month

$ 13,350.00 /year

Recycling

- Container type: 18-gallon recycling bin
- Quantity of containers: 96
- Collection frequency: once per week
- $ 809.13 /month

$ 9,709.56 /year

Bulk waste (includes mattresses, appliances)

- Collection frequency: once per week
  $ 93.64 /month

$ 1,123.64 /year

Bulk waste (excludes mattresses, appliances)

- Collection frequency: once per week
  $ 46.82 /month

$ 561.84 /year

MUNICIPAL COLLECTION

City Hall—One Park Center Court

Trash

- Container type: 8-yard front load dumpster
- Quantity of containers: 1
- Collection frequency: once per week
  $ 152.01 /month

$ 1,824.12 /year

Recycling

- Container type: 64-gallon recycling bin
- Quantity of containers: 2
- Collection frequency: once per week
  $ 62.29 /month

$ 747.48 /year

Fire Station—9080 Manassas Drive

Trash

- Container type: 6-yard front load dumpster
- Quantity of containers: 1
- Collection frequency: three times per week
  $ 214.62 /month

$ 2,575.44 /year

Recycling

- Container type: 64-gallon recycling tote
- Quantity of containers: 2
- Collection frequency: once per week
  $ 33.39 /month

$ 400.68 year

Parks and Recreation Department—Stone House, One Park Place

Trash

- Container type: 6-yard front load dumpster
- Quantity of containers: 1
- Collection frequency: twice per week

$ 215.77 /month $ 2,589.24 /year

Parks and Recreation Department—Community Center, 99 Adams Street

Trash

- Container type: 8-yard front load dumpster
- Quantity of containers: 1
- Collection frequency: twice per week

$ 296.81 /month $ 3,561.72 /year

Recycling

- Container type: 64-gallon recycling tote
- Quantity of containers: 2
- Collection frequency: once per week

$ 62.34 /month $ 748.08 /year

Parks and Recreation Department—Signal Hill Park, 9300 Signal View Drive

Trash

- Container type: 8-yard front load dumpster
- Quantity of containers: 1
- Collection frequency: once per week

$ 154.45 /month $ 1,853.40 /year

Police Department—329 Manassas Drive

Trash

- Container type: 8-yard front load dumpster
- Quantity of containers: 1
- Collection frequency: once per week

$ 127.49 /month $ 1,529.88 /year

Recycling

- Container type: 64-gallon recycling cart
- Quantity of containers: 2
- Collection frequency: once per week

$ 52.24 /month $ 626.88 /year

Public Works Department—331 Manassas Drive

Trash
- Container type: 8-yard front load dumpster
- Quantity of containers: 1
- Collection frequency: once per week

$ 127.49 /month $ 1,529.88 /year

Trash
- Container type: 10 yard Roll Off Dumpster (for street sweeper)
- Quantity of containers: 1
- Collection frequency: per request

$ 1,000.- ~~/month~~ pull $ N/A /year

Recycling
- Container type: 8-yard front load single stream dumpster
- Quantity of containers: 1
- Collection frequency: once per week

$ 79.38 ~~/pull~~ month $ 952.56 /year

TOTAL CONTRACT PRICE (Including Recycling Collection)

The Total Contract Price shall include the anticipated annual total for Residential Curbside Trash and Recycling Collection, Residential Non-Curbside Trash and Recycling Collection, and Municipal Trash and Recycling Collection.

$ 1,198,484.36/year
(not to include unscheduled pulls for dumpster service)
One million one hundred ninety-eight thousand four hundred eighty four **Dollars and** thirty-six **Cents**

CONTRACTOR: Patriot Disposal, Inc.

By: Jean Poague (SEAL)
Name: Jean Poague
Title: Vice President

PRINCIPAL OFFICE ADDRESS:
10535 Crestwood Dr. #200
Manassas, VA 20109
TELEPHONE: 703-775-0320

ADDITIONAL SERVICES AND RECEPTACLES

UNIT PRICE FOR ADDITIONAL DUMPSTER SERVICE

DUMPSTER TYPE – SERVICE DESCRIPTION	Cost
Four (4) cu. Yard refuse container collected once per week	207.-
Four (4) cu yard refuse container collected twice per week	260.-
Additional collections for four (4) cu yard container	90.
Six (6) cu yard refuse container collected once per week	222.-
Six (6) cu yard refuse container collected twice per week	275.-
Six (6) cu yard recycle container collected once per week	262.-
Additional collections for six (6) cu yard container	100.-
Eight (8) cu yard refuse container collected once per week	300
Eight (8) cu yard refuse container collected twice per week	350
Additional collections for eight (8) cu yard container	100
Twenty (20) cu yard refuse container – priced per pull	750
Thirty (30) cu yard refuse container – priced per pull	850

UNIT PRICE FOR ADDITIONAL CURBSIDE RECEPTACLES

MISCELLANEOUS PROVISIONS	Cost
Additional Curbside Trash Cart (96 gallons)	75.-
Additional Curbside Recycling Cart (64 gallons)	65.-
Additional Curbside Recycling Bin (18 gallons)	15.-

QUARTERLY CLEAN-UP EVENTS: provide (3) 30-yard roll-off dumpsters for bulk waste collection to be pulled for disposal at conclusion of the event.
All-inclusive price for 5 hour event on a Saturday. $ 5,000.00 /event

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APPENDIX 3

DOMINION TRANSFER STATION – PBR 639 – PERMIT

Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN REGIONAL OFFICE
13901 Crown Court, Woodbridge, Virginia 22193
(703) 583-3800
www.deq.virginia.gov

Ann F. Jennings
Secretary of Natural
and Historic Resources

David K. Paylor
Director
(804) 698-4000

Thomas A. Faha
Regional Director

October 21, 2021

Gregg Walbridge
Special Projects Manager
Dominion Transfer Station
Dominion Recycling and Transfer, LLC
9115 Industry Drive
Manassas, Virginia 20111

Re: Dominion Transfer Station
Permit-by-Rule Number 639
Manassas, Prince William County, Virginia
Permit by Rule Approval

Dear Mr. Walbridge:

The Department has received the notice of intent, dated April 1, 2021, and permit application, including corresponding documents, pertaining to Dominion Transfer Station, located at 9115 Industry Drive in Manassas, Virginia 20111, requesting to authorize operating a Transfer Station. Based on the documentation provided, permit-by-rule number 639 has been assigned to the above referenced facility, and is hereby approved as proposed in the permit application.

Attached to this letter are two documents, which must not be separated from this letter for compliance purposes. The two documents are:

ATTACHMENT I: CONDITIONS OF THE PERMIT-BY-RULE STATUS

ATTACHMENT II: FACILITY DESCRIPTION

The purpose of this letter is to acknowledge receipt of the revised documentation submitted in accordance with the requirements of 9VAC20-81-410.A.2., regarding permit-by-rule facilities. In accordance with 9VAC20-81-410.A.4., this facility is deemed to operate under permit-by-rule status, referenced as Permit-by-Rule number 639 (PBR639). Please note, however, that in accordance with 9VAC 20-81-410.A.5., and the attached "Conditions of the Permit-by-Rule Status," the Director may require changes in the documents designed to ensure compliance with the standards of the Virginia Solid Waste Management Regulations (VSWMR). Should such changes not be accomplished by the facility owner or operator, the Director may require the owner, or operator to submit the full application, in order to obtain a regular solid waste management facility permit.

With the acknowledgement of this permit, the facility is required to comply with the following requirements:

1. The facility shall maintain records of self-inspections, facility monitoring, and receipt of unauthorized waste, in accordance with 9VAC20-81-350.

2. The facility shall follow the reporting requirements of 9VAC20-81-530.C., which includes providing written notification of any planned physical alterations, as well as verbal notification within 24 hours, and written notifications within 5 days, of any noncompliance, or unusual condition which may potentially have an adverse effect on health or the environment, such as receipt of hazardous waste, facility fires, etc.

3. In accordance with 9VAC20-81-80, the facility shall submit to the Department Form 50-25 of the Solid Waste Information and Assessment (SWIA), by March 31st of each year. This form is available at: SWIA Information.

4. The facility is responsible for paying an annual fee to the Department of Environmental Quality by October 1st of each year. In accordance with 9VAC20-90-115, the fee amount is determined by the procedures outlined in 9VAC20-90-115.

5. Each calendar year, the owner or operator shall review the Operations Manual and certify that it is consistent with the current operation standards and procedures of the facility, as well as with the regulatory requirements. These certifications shall be maintained in the facility's operating records.

6. The facility is required to adjust the estimated closure cost amount annually for inflation, 60 days prior to the anniversary date of the establishment of the financial mechanism, in accordance with 9VAC20-70-10, *et seq*.

7. The facility shall contact Ms. Susan Mackert, of the Water Permitting Program, Virginia Department of Environmental Quality, at: Susan.Mackert@deq.virginia.gov; or 703-583-3853, in order to verify whether a Virginia Pollutant Discharge Elimination System (VPDES) permit is necessary considering the facility's operations.

Please note that it is the responsibility of Dominion Transfer Station to obtain any other permits, or authorizations that may be necessary. If you have any questions regarding this matter, please contact Joseph Precise, Solid Permit Writer, at telephone 703-583-3841, or email at: joseph.precise@deq.virginia.gov

Respectfully,

Richard Doucette

Richard Doucette
Land Protection and Revitalization Program Manager

Enclosure: Permit Attachments I and II

Cc: Jonathan Meyers / LaBella Associates
Butch Joyce / LaBella Associates
Suzanne Taylor / DEQ-CO
Joseph Precise / DEQ-NRO

ATTACHMENT I
CONDITIONS OF THE PERMIT-BY-RULE STATUS

I. CHANGE OF OWNERSHIP

A permit-by-rule may not be transferred by the permittee to a new owner or operator. However, when the property transfer takes place without proper closure, the new owner shall notify the Department of the sale and fulfill all the requirements contained in 9VAC20-81-410.A.2.a., through 9VAC20-81-410.A.2.k., of the Virginia Solid Waste Management Regulations (VSWMR, 9VAC20-81-10, *et seq.*). Upon presentation of the financial assurance proof, required by the Financial Assurance Regulations for Solid Waste Facilities (9VAC20-70-10, *et seq.*) by the new owner, the Department will release the old owner from her, or his closure and financial responsibilities and acknowledge the new permit-by-rule in the name of the new owner.

II. FACILITY MODIFICATIONS

The owner or the operator of the facility, operating under a permit-by-rule may modify its design and operation by furnishing the Department a new design and construction certificate, prepared by the professional engineer, and an operations manual certificate. Whenever modifications in the design or operation of the facility affect the provisions of the approved closure plan, the owner or operator shall also submit an amended closure plan certificate signed by a professional engineer.

III. LOSS OF PERMIT-BY-RULE STATUS

In the event that the facility operating under a permit-by-rule violates any applicable siting, design and construction, or closure provisions of 9VAC20-81-320, 9VAC20-81-330, or 9VAC20-81-360, respectively, the owner or operator of the facility will be considered to be operating an unpermitted facility as provided for in 9VAC20-81-45 of the VSWMR, and shall be required to either obtain a new permit, as required by Part V [9 VAC 20-81-400, *et seq.*] or close under Part III [9VAC20-81-100, *et seq.*] or IV [9VAC20-81-300, *et seq.*] of these regulations, as applicable.

IV. TERMINATION

The Director shall terminate permit-by-rule and shall require closure of the facility, whenever they determine that:

a. As a result of changes in key personnel, the requirements necessary for a permit-by-rule are no longer satisfied;

b. The applicant has knowingly or willfully misrepresented or failed to disclose a material fact in her, or his disclosure statement, or any other report or certification required under this regulation, or has knowingly, or willfully failed to notify the Director of any material change to the information in the disclosure statement;

c. Any key personnel have been convicted of any of the crimes listed in § 10.1-1409 of the Code of Virginia, punishable as felonies under the laws of the Commonwealth, or equivalent laws of any other jurisdiction; or have been adjudged by an administrative agency, or a court of competent jurisdiction to have violated the environmental protection laws of the United States, the Commonwealth, or any other state, province or country, and the Director determines that such conviction or adjudication is sufficiently probative of the permittee's inability, or unwillingness to operate the facility in a lawful manner.

d. The operation of the facility is inconsistent with the facility's operations manual and/or the operational requirements of the regulations.

V. CERTIFIED OPERATOR

In accordance with the Virginia Waste Management Act (Title 10.1, Chapter 14 of the Code of Virginia), § 10.1-1408.2, this facility must employ a facility operator licensed by the Board of Waste Management Facility Operators (Licensing Regulations, 18VAC155-20-10 *et seq.*).

VI. RIGHT OF APPEAL

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date of the service of this decision to initiate an appeal of this decision, by filing notice with:

David K. Paylor, Director
Virginia Department of Environmental Quality
ATTN: Office of Waste Permitting & Compliance
Post Office Box 1105
Richmond, Virginia 23218

In the event this decision is served to you by mail, three days will be added to that period. Please refer to Part Two of the rules of the Supreme Court of Virginia, which describes the required content of the Notice of Appeal, including specification of the Circuit Court to which the appeal is taken, and additional requirements governing appeals from decisions of administrative agencies.

END OF ATTACHMENT I

ATTACHMENT II
FACILITY DESCRIPTION

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF LAND PROTECTION & REVITALIZATION
OFFICE OF WASTE PERMITTING & COMPLIANCE

Permit-by-Rule Number 639

Facility Name: Dominion Transfer Station

Facility Type: Transfer Station **Latitude:** 38° 46' 40.57" North

Site Location: Manassas Park, Virginia 20111 **Longitude:** 77° 26' 05.18" West

Location Description: Dominion Transfer Station is located at 9115 Industry Drive, on a 2/62-acre property located in an industrially zoned area of Manassas Park, Virginia 20111. Approximately 1.2 miles northeast of the intersection of Manassas Drive (State Route 213) and Route 28. Industry Dr. a paved road, off Euclid Avenue, provides entrance to the facility.

Background: Dominion Transfer Station is owned and operated by Dominion Recycling and Transfer, LLC, a subgroup of Patriot Disposal. The facility includes 2.62 acres of land, developed to facilitate processing 800 tons per day of Municipal Solid Waste (MSW). The facility design consists of a scale; waste processing building of 12,000 square feet of total area; covered, reinforced concrete tipping floor; loading bay; and truck scales. Despite the facility having the capability and ability to run 24 hours/7 days a week, the anticipated typical hours of operation are:

Monday through Sunday: 3:00 a.m. to 7:00 p.m.

All leachate generated on the tipping floor and in the loading area will be collected by floor drains, connected to existing pump station for discharge into the sanitary sewer. Waste management activities will be conducted within a fully enclosed structure of the processing building, and stormwater will not come in contact with waste.

Incoming vehicles will enter the facility via Industry Drive and will be directed to the inbound facility scales, then proceed to the transfer station building to unload waste onto the tipping floor. Material that can be deemed recoverable will be salvaged from the tipping floor and placed in an appropriate roll-off container. Empty transfer trucks will then enter the transfer stations loading bay, equipped with a scale and received waste from the tipping floor. Waste loaded onto the outbound trucks will then be transported to a permitted facility for proper disposal. Unacceptable waste, as described in the facility's *Control Program for Unauthorized Waste,* will be rejected. In accordance with 9VAC20-81-100.E.5(b), "The owner or operator shall inspect a minimum of 1.0% of the incoming loads of waste. In addition, if the facility receives waste generated outside of Virginia and the regulatory structure in that jurisdiction allows for the disposal or incineration of wastes as municipal solid waste that Virginia's laws and regulations prohibit or restrict, the facility shall inspect a minimum of 10% of the incoming loads".

Submission Highlights: The Department is in receipt of DEQ PBR Application Form, signed by John R. Poague on July 29, 2021. The application contains the following documents:

A. Notice of Intent, dated April 1, 2021, to operate a Transfer Station Facility; site location map, dated June 16, 2020; disclosure statements, dated March 24, 2021; a local government certifications, dated March 17, 2020, and March 31, 2020, signed by Michelle Barry, Manassas Park Zoning Administrator, and Laura Coughonar, City of Manassas Park Public Works Operational Manager, respectively. These documents were submitted in accordance with 9VAC20-81-450.B., and are required submissions under 9VAC20-81-410.A.2.a., and 9VAC20-81-410.A.2.c.

B. A document dated July 30, 2021, and signed by Jonathan B. Meyers, Professional Engineer (P.E.) of Joyce Engineering, certifying that the facility conforms to the siting standards of 9VAC 20-81-320. This is a required submission in accordance with 9VAC20-81-410.A.2.b.

C. A document dated July 30, 2021, and signed by Jonathan B. Meyers, Professional Engineer (P.E.) of Joyce Engineering, certifying that the facility has an operations manual that conforms to the standards of 9VAC20-81-340. This is a required submission in accordance with 9VAC20-81-410.A.2.d.

D. An engineer's certification, dated September 26, 2021, signed and sealed by Jonathan B. Meyers, P.E., of Joyce Engineering, stating that the facility has been designed and constructed in accordance with the standards of 9VAC20-81-330. This is a required submission in accordance with 9VAC20-81-410.A.2.e.(1).

E. An engineer's certification, dated July 30, 2021, signed and sealed by Jonathan B. Meyers, Professional Engineer, P.E., of Joyce Engineering, stating that the facility has a closure plan that conforms to the standards of 9VAC20-81-360. This is a required submission in accordance with 9VAC20-81-410.A.2.e.(2).

F. A copy of the Lease Agreement demonstrating that the facility owner and the operator have legal control over the site. This is a required submission under 9VAC20-81-410.A.2.f.

G. Certificate of Good Standing from the State Corporation Commission dated August 8, 2021, indicating that Dominion Recycling and Transfer, LLC. is a valid business entity in the Commonwealth of Virginia. This is a required submission under 9VAC20-81-410.A.2.g.

H. Closure cost estimate form for the amount of $70,000, accounting for removal and disposal of 800 tons of waste and 5000 gallons of leachate and wastewater. Financial assurance mechanism in the amount of $70,000 has been approved and established by the Office of Financial Responsibility on October 10, 2021. This is a required submission, in accordance with 9VAC20-81-410.A.2.h.

I. Public participation documents, which resulted from the public participation effort, in accordance with 9VAC20-81-410.A.3. The public notice was published in *Inside NOVA Prince William* on June 19, 2021, and June 26, 2020; the virtual public meeting was held on July 08, 2020, and the public comment period ended on July 19, 2020. There were no comments received during the public comment period. This is a required submission in accordance with 9VAC20-81-410.A.2.i.

J. Payment of the permit application fee, in accordance with 9VAC20-81-410.A.2.k.

END OF ATTACHMENT II

APPENDIX 4

BATTLE CREEK LANDFILL – SWM 579 – PERMIT

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
VALLEY REGIONAL OFFICE
P.O. Box 3000, Harrisonburg, Virginia 22801
(540) 574-7800 Fax (804) 698-4178
Located at 4411 Early Road, Harrisonburg, VA
www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

Amy Thatcher Owens
Regional Director

June 8, 2021

Mr. Jeff Blevins
Page County Solid Waste Operations Manager
219 Landfill Drive
Luray, VA 22835

RE: Battle Creek Landfill, Solid Waste Permit No. (SWP) 579
Major Permit Modification No. 15 – Daily Disposal Limit Increase

Dear Mr. Blevins:

Enclosed is SWP579 for the Battle Creek Landfill. The public participation period ended on March 23, 2021. No comments requiring changes to the draft permit were received; therefore, only incidental editing of the draft permit occurred. The applicant and all persons who commented during the public participation period have been sent a response to their comments.

This modification to the permit allows the daily disposal limit to increase from 350 tons/days to 850 tons/days and incorporates a Landfill Gas Remediation Plan – GMW-8A dated November 2020 into the permit. In order to document this modification, please incorporate a copy of this letter and its attachments into each copy of SWP579.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date of service of this decision to initiate an appeal of this decision, by filing notice with:

David K. Paylor, Director
Virginia Department of Environmental Quality
ATTN: Division of Land Protection & Revitalization
P.O. Box 1105
Richmond, Virginia 23218

In the event that this decision is served to you by mail, three days are added to that period. Please refer to Part Two of the rules of the Supreme Court of Virginia, which describes the required content of the Notice of Appeal, including specification of the Circuit Court to which an appeal is taken, and additional requirements governing appeals from decisions of administrative agencies.

Please note that it is the responsibility of applicant to obtain any other permits or authorizations that may be necessary. If there are any questions, please contact JengHwa Lyang, Solid Waste Permit Writer, at (540) 574-7826 or jenghwa.lyang@deq.virginia.gov.

Sincerely,

Graham H. Simmerman, Jr., P.G.
Regional Land Protection Program Manager

Enclosure: SWP 579 Permit including Permit Introduction and Modules I, II, III, X, XI, XII, and XIII.

cc: Laura Stuart, P.G., DEQ
Paul Hansohn, DEQ
JengHwa Lyang, Ph.D., P.E., DEQ
Jonathan B. Meyers, P.E., BCEE, LaBella Associates
DEQ File, SWP579

COMMONWEALTH of VIRGINIA

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VALLEY REGIONAL OFFICE
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Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

Amy Thatcher Owens
Regional Director

SOLID WASTE FACILITY PERMIT
PERMIT NUMBER 579

Facility Name: Battle Creek Landfill

Facility Type: Sanitary Landfill **Latitude:** 38°37'22" N

Site Location: Page County **Longitude:** 78°35'20" W

Location Description: The facility is located at 219 Landfill Drive, Luray, Virginia, which is along U.S. Highway 340, about 0.8 miles southwest of the intersection of U.S. Route 211 and U.S. Highway 340.

Background: The facility is a publicly owned and operated sanitary landfill that serves Page County, Warren County, and surrounding Virginia counties and municipalities. The wastes accepted include those wastes identified in Module II, which is based on the information provided on DEQ Form SW PTB dated December 11, 2021 and special wastes indicated in Part B Application Attachment XIII.

This facility was permitted on February 21, 1995 and began operation on January 11, 1999. The facility encompasses 160 acres, of which approximately 67.52 acres have been designated as a waste disposal area, Phases I through V. Phase 1 area, consisting of Cells 1 through 9 with a total of 23.56 acres, and Phase II Cell 10 are currently receiving waste. An area of 5.3 acres in Cells 1, 5, and 6 was certified as closed in 2009.

The total capacity of the Phases I through V landfill area, as provided in the Design Report, Part B Attachment VI, is approximately 7.97 million cubic yards. The estimated site life for the landfill (Phases I through V) is until Year 2032 as provided in the Closure Plan, Part B Attachment IV. This landfill life is based on the daily disposal limit of 850 tons/day, operating 312 days/year with an estimated in-place waste density of 0.69 tons/cubic yard.

Permit Modification*:* This major permit modification is the 15th to Permit Number 579. The modification allows the daily disposal limit to increase from 350 tons/days to 850 tons/days and incorporates the Landfill Gas Remediation Plan – GMW-8A that was approved on December 9, 2020 into the permit.

All previous permit modifications are outlined in detail in Module I, Section I.G.

THIS IS TO CERTIFY THAT:

County of Page
117 South Court Street
Luray, Virginia 22835

is hereby granted a permit to construct, operate, and maintain the facility as described in the attached Permit Modules I, II, III, X, XI, XII, and XIII and Permit Documents incorporated by reference. These Permit Modules and Permit Documents are as referenced hereinafter and are incorporated into and become a part of this permit.

The herein described activity is to be established, modified, constructed, installed, operated, used, maintained, and closed in accordance with the terms and conditions of this permit and the plans, specifications, and reports submitted and cited in the permit. The facility shall comply with all regulations of the Virginia Waste Management Board. In accordance with Chapter 14, § 10.1 - 1408.1(D) of the Code of Virginia, prior to issuing this permit, any comments by the local government and general public have been investigated and evaluated and it has been determined that the facility poses no substantial present or potential danger to human health or the environment. The permit contains such conditions and requirements as are deemed necessary to comply with the requirements of the Virginia Code, the regulations of the Board, and to prevent substantial or present danger to human health or the environment.

Failure to comply with the terms and conditions of this permit shall constitute grounds for the revocation or suspension of this permit and for the initiation of necessary enforcement actions.

The permit is issued in accordance with the provisions of 10.1-1408.1.A, Chapter 14, Title 10.1, Code of Virginia (1950) as amended. Variances that have been approved for this facility are included in Permit Attachment I-1, Previous Permit Approval Letters.

Issued: February 21, 1995

Modification No. 1: November 12, 1998
Modification No. 2: January 7, 1999
Modification No. 3: March 9, 1999
Modification No. 4: April 20, 2001
Modification No. 5: July 31, 2001
Modification No. 6: September 11, 2003
Modification No. 7: October 25, 2007
Modification No. 8: May 30, 2008

Modification No. 9: January 4, 2010
Modification No. 10: February 6, 2014
Modification No. 11: September 16, 2015
Modification No. 12: March 17, 2016
Modification No. 13: December 21, 2016
Modification No. 14: April 4, 2018

APPROVED: _____

B. Keith Fowler
Deputy Regional Director

DATE: 6/8/2021

Modification No. 15

PERMIT MODULES
REFERENCE LIST

PERMIT DOCUMENTS

The documents listed below are hereby incorporated into this permit and the permittee is subject to all conditions contained therein. It is the responsibility of the permittee to properly maintain and update these documents. Any version with a revision date other than as listed below is not considered to be the official approved version and is subject to Department review and approval prior to being recognized as the "permitted" version.

1. Part B Application:
   a. *Permit Drawings, Phase II-V Part B Permit Amendment, Battle Creek Landfill, VDEQ Permit No. 579*, prepared by SCS Engineers, dated February 2013 with revised May 2013 for Sheets 15, 17, 20, and 24 of 26, and revised January 2016 for Sheets 1 through 6, 8 through 14, 16, and 19 (Attachment III).
   b. *Closure Plan,* prepared by SCS Engineers, last revised (Revision #3) June 2013 with revised Pages 1 and 2, as well as Site Lift Calculations by LaBella Associates and dated December 2020 (Attachment IV).
   c. *Post-Closure Plan*, prepared by SCS Engineers, last revised (Revision #2) June 2013 with revised Page 1 by LaBella Associates and dated December 2020 (Attachment V).
   d. *Design Report*, prepared by SCS Engineers, last revised (Revision #3) January 2016 with revised Pages 5, 6, and 6A by LaBella Associates and dated December 2020 (Attachment VI).
   e. *Construction Quality Assurance Plan and Technical Specifications*, prepared by SCS Engineers, dated January 2012 with Section 11300 last revised March 4, 2016 (Attachment VII).
   f. *Leachate Management Plan*, prepared by SCS Engineers, last revised (Revision #4) January 2016 with Phase I Leachate Pipe Sizing dated January 21, 2016 and Leachate Pump Station Calculations last revised February 17, 2016 (Attachment VIII).
   g. *Landfill Gas Management Plan*, prepared by SCS Engineers, last revised (Revision #3) January 2016 (Attachment IX).
   h. *Groundwater Monitoring Plan*, prepared by Draper Aden Associates, last revised (Revision 4) July 14, 2015 (Attachment X).
2. *Permit Drawings, Battle Creek Landfill*, prepared by Oliver Incorporated, dated February 1, 1994 and last revised March 10, 2010.
3. *Permit Drawings, Phase I Permit Amendment, Battle Creek Landfill, Permit Amendment No. 7*, prepared by SCS Engineers, dated June 5, 2007
4. *Battle Creek Landfill Permit No. 579, Minor Permit Amendment for Gas Remediation,* Revision 1: October 24, 2011, prepared by Draper Aden Associates and DEQ approval letter dated March 28, 2012.
5. *Landfill Gas Remediation Plan – GMW-8A, Page County Battle Creek Landfill, Permit Number 579*, by LaBella Associates and dated November 2020.

The following documents have been submitted to satisfy permit or regulatory requirements; however, they are considered reference documents and are not incorporated into Permit No. 579. This list may not be all-inclusive.

1. *Geotechnical and Hydrogeological Evaluation, Part A Application, Proposed Page County Sanitary Landfill*, prepared by Olver Incorporated, dated August 22, 1992.
2. *Construction Quality Assurance/Quality Control Certification Report for Page County Battle Creek Landfill (Cell 1),* prepared by Olver Incorporated, dated June 4, 1999.
3. *Construction Quality Assurance/Quality Control Certification Report for Battle Creek Sanitary Landfill Partial Cell2 Liner System,* prepared by Olver Incorporated, dated October 30, 2000.
4. *Construction Quality Assurance/Quality Control Certification Report for Battle Creek Sanitary Landfill Cell 6 Liner System,* prepared by Olver Incorporated, dated January 26, 2001.
5. *Construction Quality Assurance/Quality Control Certification Report for Battle Creek Sanitary Landfill (Remainder) Cell 2 Liner System,* prepared by Olver Incorporated, dated December 13, 2001.
6. *Construction Quality Assurance/Quality Control Certification Report for Battle Creek Sanitary Landfill Cell 3 Liner System,* prepared by Olver Incorporated, dated June 3, 2002.
7. *Battle Creek Landfill, Cell 4, Phase 1, CQA Documentation,* prepared by Draper Aden Associates, dated September 2003.
8. *Battle Creek Landfill, Cell 7 Liner Construction, QA/QC Certification,* prepared by Olver Incorporated, dated September 2005.
9. *Construction Certification Report, Battle Creek Landfill, Permit No. 579, Page County, Phase 1 Cell 8,* prepared by SCS Engineers, dated September, 2005.
10. *Construction Certification Report, Battle Creek Landfill, Phase 1-Cell 9 Construction,* prepared by SCS Engineers, dated October 23, 2009.
11. *Construction Certification Report, Battle Creek Landfill, Phase I Closure Construction, Permit No. 579,* prepared by SCS Engineers, dated January 20, 2012.
12. *Construction Certification Report, Battle Creek Landfill, Phase II – Cell 10 Construction, Permit No. 579,* by SCS Engineers dated October 2017, with additional information submitted on November 21, 2017.

PERMIT MODULE I
GENERAL PERMIT CONDITIONS

I.A. EFFECT OF PERMIT

The permittee is allowed to dispose solid waste on-site in accordance with the conditions of this permit. Any disposal of solid waste not authorized by this permit is prohibited. Compliance with the terms of this permit does not constitute a defense to any order issued or any action brought under Sections 10.1-1402(18), 10.1-1402(19), or 10.1-1402(21) of the Virginia Waste Management Act (Chapter 14, Title 10.1, Code of Virginia (1950), as amended); or any other law or regulation for protection of public health or the environment. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby. For purposes of this permit, terms used herein shall have the same meaning as those in the Virginia Waste Management Act, and Part I and other pertinent parts of the Virginia Solid Waste Management Regulations (VSWMR, 9VAC20-81), unless this permit specifically provides otherwise; where terms are not defined in the regulations or the permit, the meaning associated with such terms shall be defined by the generally accepted scientific or industrial meaning of the term or a standard dictionary reference. "Director" means the Director of the Department of Environmental Quality, or his designated or authorized representative.

I.B. DUTIES AND REQUIREMENTS

The permittee shall comply with all conditions of this permit and 9VAC20-81. The effect of this permit is detailed in 9VAC20-81-490, and it shall be the duty of the permittee to ensure the applicable requirements are met. Additionally, the permittee is subject to the recording and reporting requirements detailed in 9VAC20-81-530. In addition to these requirements, the following additional conditions are invoked per 9VAC20-81-430, and shall be complied with:

I.B.1. Noncompliance may be authorized by a schedule of compliance [9VAC20-81-490.D. and 9VAC20-81-490.H.]. Any other permit noncompliance constitutes a violation of Virginia Waste Management Act and is grounds for enforcement action, or for permit revocation, revocation and reissuance, or modification [9VAC20-81-570 and 9VAC20-81-600].

I.B.2 The permittee shall comply with the requirements of this permit and any provisions of RCRA Subtitle D (Title 40, Code of Federal Regulations, Section 258) requirements as they become applicable upon their effective date. This permit may not act as a shield against compliance with any part of RCRA or any other applicable federal regulation, state regulation or state law.

I.B.3. In an enforcement action, it shall not be a defense for the permittee that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

I.B.4. In the event of noncompliance with this permit, the permittee shall take all reasonable steps to minimize releases of solid wastes or waste constituents to the environment and shall carry out measures to prevent substantial adverse impacts on human health or the environment.

I.B.5. The permittee shall at all times properly operate and maintain all units (and related appurtenances) which are installed or used by the permittee to achieve compliance with the operations manual and the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing, and training, and adequate laboratory and process controls, including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary equipment only when necessary to achieve compliance with the conditions of this permit.

I.B.6. The permittee shall furnish to the Director, within a reasonable time, any relevant information that the Director may request to determine compliance with this permit, regulations or the Act. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit by the date specified in the request.

I.B.7. The permittee shall allow the Director, or an authorized representative, at a reasonable time, upon the presentation of appropriate credentials, to:

I.B.7.a. Enter the permitted facility where a regulated unit or activity is located or conducted, or where records must be kept under the conditions of this permit;

I.B.7.b. Have access to and copy any records that must be kept under the conditions of this permit;

I.B.7.c. Inspect any unit, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and,

I.B.7.d. Sample or monitor, for the purposes of assuring permit compliance or as otherwise authorized by Virginia Waste Management Act, any substances or parameters at any location within his control.

I.B.8. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample to be analyzed must be the appropriate method from the latest edition of Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Publication SW-846, if available.

Laboratory samples shall be analyzed in accordance with 1 VAC 30-45, Certification for Noncommercial Environmental Laboratories, or 1 VAC 30-46, Accreditation for Commercial Environmental Laboratories.

I.B.9. This permit is not transferable to any person, unless approved by the Director. The Director may require modification or revocation and reissuance of the permit pursuant to 9VAC20-81-490.G. Before transferring ownership or operation of the facility during its operational life, the permittee shall notify the new owner or operator in writing of the requirements of Parts III and V, of the Virginia Solid Waste Management Regulations, the Financial Assurance Regulations, 9VAC20-70, and this permit.

I.B.10. In accordance with § 10.1-1408.2, all facilities must have a Certified Operator as required by the Board of Waste Management Facility Operators-Licensing Regulations, 18 VAC 155-20.

I.B.11. Specifications for all drainage media should specify that the material shall contain no greater than 15% calcium carbonate equivalent. Department literature regarding research on leachate collection media indicates that weight loss greater than 15% results in an unacceptable loss of performance. If a greater percentage is specified or allowed, a demonstration that performance is not adversely affected must be provided to the Department for review and approval.

I.B.12. Recirculation of collected leachate shall not be allowed, in accordance with 9VAC20-81-210.D.3., except when the area to be irrigated is underlain by a composite liner system. Furthermore, in accordance with 9VAC20-81-200.C.3.c., decomposition gas condensate may be recirculated into the landfill provided the facility complies with the composite liner requirement and the leachate control system requirements of Part III of VSWMR. A composite liner system is a system designed to meet the requirements of 9VAC20-81-130.J.1.

I.B.13. The closure cost estimate must reflect the maximum cost of closure at all times. The owner has the responsibility to maintain the closure and post closure cost estimate and associated financial assurance funding as conditions change.

I.B.14. Land-clearing, excavation, and construction activities that involve the disturbance of wetlands or streams shall not commence without authorization from the Virginia Water Protection (VWP) Program and/or Army Corps of Engineers.

I.B.15. Blasting operations shall be conducted to avoid changes in the hydrogeologic character of the remaining underlying formations, and to avoid creation of instabilities or irregularities in these that might potentially lead to damage to the impermeable membrane to be installed. It shall be ensured that adjacent landfill facilities not be damaged, which includes the geosynthetic landfill liner and gas and groundwater compliance monitoring locations.

I.B.16. The facility shall maintain and follow an approved Erosion & Sediment Control Plan for all land-disturbing activities in accordance with the Erosion and Sediment Control Regulations, 9 VAC 25-840.

I.C. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

The permittee shall maintain a complete copy of the Solid Waste Permit and incorporated Permit Documents at the facility, or another location approved by the director, until post-closure is complete and certified by a professional engineer, and shall maintain amendments, revisions, and modification to these documents. In addition, the facility shall maintain the following additional documents:

I.C.1. Operations Manual with annual certification by Responsible Official

I.C.2. Detailed, written estimate, in current dollars, of the cost of closing the facility, post-closure care and corrective action measures

I.C.3. All other documents/records required and applicable from the following:

I.C.3.a. Monitoring records from leachate, gas, and groundwater monitoring.

I.C.3.b. Inspection records as required from construction/installation, operational, closure, post-closure inspection requirements.

I.C.3.c. Personnel training records

I.C.3.d. Daily operational records (i.e., solid waste received and processed, fill area records, records of special wastes accepted, a logbook which is a daily narrative account of the activities at the landfill).

I.C.3.e. Construction quality assurance reports, record drawings and engineers certifications for all new liner and/or final cover construction

I.C.4. An approved copy of the complete Part A permit application

I.C.5. Documentation of the authorization to discharge leachate into the publicly/privately owned treatment works, leachate volumes sent to the POTW, and periodic leachate sampling analytical results

I.C.6. Research, Development, and Demonstration Plan documentation and testing data, if applicable.

I.D. DOCUMENTS TO BE SUBMITTED

In addition to the documents/records/reports to be submitted per the requirements of this permit or 9VAC20-81, the permittee shall also submit the following documents to the Director according to indicated schedules:

I.D.1. Prior to expansion into each new phase, the permittee shall submit all required certification documents per 9VAC20-81-490.A., and:

I.D.1.a. Authorization from the Town of Stanley Waste Water Treatment Plant to discharge the increased volume of leachate and wastewater to the sewerage system and treatment works.

I.D.1.b. Report and supporting documents resulting from quality control/quality assurance activities performed during construction and installation of the liner/drainage systems, including the installation contractor's written acceptance of the surfaces to be lined, synthetic liner manufacturer and installer warranties, laboratory test results of the permeability of the clay liner and the drainage media overlying the liner, and representative copies (sufficient to demonstrate responsible control) of the accumulated inspection schedules resulting from the professional engineer's oversight of the construction.

I.D.2. In accordance with 9VAC20-81-490.A., certification from a design engineer, who must be a professional engineer licensed to practice in the Commonwealth, that the construction of the facility has been completed in accordance with the permit, approved plans and specifications and is ready to begin operation. A certification will be required for each lined phase of development.

I.D.3. Certification (separate from I.D.2, above) from the Construction Quality Assurance (CQA) officer that the approved CQA plan has been successfully carried out and that the constructed unit meets all requirements of the permitted CQA plan, in accordance with 9VAC20-81-130.Q. A certification will be required for each lined phase of development. The CQA officer must be a professional engineer licensed to practice in Virginia.

I.D.4. The as-built plans of all groundwater and gas monitoring wells shall be submitted as these wells are installed or modified. Information to be included on the as-built plans shall include, but is not limited to, the total depth of the well, the surveyed elevations of the top of casing and ground surface (or apron), and the length and location of the screened interval and annular space seal. All dimensions are to be shown on well construction schematics.

I.E. REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE DIRECTOR

All reports, notifications, or other submissions which are required by this permit to be sent or given to the Director should be sent to:

Virginia Department of Environmental Quality
Solid Waste Permitting/Compliance
Valley Regional Office
4411 Early Road/PO Box 3000
Harrisonburg, Virginia 22801

I.F. SITE SPECIFIC CONDITIONS

The provisions of this section are in addition to the permit conditions and regulatory requirements and are specifically developed for this facility. The permittee shall comply with all conditions of this section, as follows:

I.F.1. The final permit is based on permit application submittals (drawings and reports) that may contain the word "proposed' and similarly tentative language. The documents that are incorporated into Permit No. 579 have been evaluated for administrative and technical adequacy and have been approved as proposed. Therefore, any references to a design, construction, operation, monitoring or closure criteria are considered to be approved as proposed.

I.F.2. The facility is subject to the conditions listed in the Part A approval letter dated June 2, 1993.

I.F.3. The cleanout elevations, 1059 feet and 1099 feet for sediment basin SB-1 and SB-2, respectively, shall be marked on the corresponding basin. Each basin shall be cleaned once the sediments in each basin reach the cleanout elevation. The information regarding basin maintenances shall be added to the facility's operations manual.

I.F.4. The landfill shall ensure that construction, operation, and closure activities do not cause glare, excessive dust, smoke, or wildlife attractant which could prove to become a hazard to aircraft operating in the vicinity of the landfill.

I.F.5. Prior to the development of each new disposal area (Phase IV or V), the facility shall submit a pump station calculation to size pumps, other than those specified in the permit, to handle leachate collected from the existing and the new disposal areas.

I.F.6. By December 31 of 2021 and each calendar year thereafter, the permittee shall perform a topographic survey of the facility; this survey shall be certified by a professional engineer or certified land surveyor licensed in the Commonwealth of

Virginia unless exempt pursuant to § 54.1-402. The permittee shall submit a report to the DEQ Valley Regional Office Waste Program by April 1 of the year following with a determination of units/areas of the landfill that have attained final elevations and grades. The report shall also assess the capacity used during the year, the remaining permitted capacity, and the projected remaining site life. The remaining permitted capacity shall be calculated by the comparison of the existing grade and the permitted final cover grade and presented in a cut/fill drawing. Units/Areas that have attained final elevations and slopes must be stabilized in accordance with the permit until final cover is applied within the timeframe specified in the Closure Plan. Except as may be separately approved or permitted in writing by DEQ, no waste shall be placed in areas where the elevations exceed those shown on Drawing No. 7 of 26 Final Closure Plan, dated February 2021 of the Design Plan.

I.G. PERMIT MODIFICATIONS

I.G.1. The permit was modified by a minor modification on November 12, 1998 approving the use of a synthetic tarp material as an alternate daily cover and eliminated two landfill gas monitoring wells.

I.G.2. The permit was modified by a minor modification on January 7, 1999 approving the leachate stone drainage layer material to be either VDOT #8 or #78 stone, the top-most geotextile immediately above the 60-mil HDPE synthetic liner to be either an 8 oz. or 10 oz. geotextile, and the use of either smooth or textured 60-mil HDPE.

I.G.3. The permit was modified by a minor modification on March 9, 1999 approving the change of the hours of operation in the "Operations Manual" to Monday through Saturday, 8 AM to 4 PM and no Sunday services.

I.G.4. The permit was modified by a major modification on April 20, 2001 approving changes to various elements in the permit. The facility's name is changed to Battle Creek Landfill from Page County Regional Sanitary Landfill. The facility's base grades and the final grades are lowered at the same dimension to maintain the same capacity as originally permitted. The facility is adjusted to have four phases and 23 Cells. The capacity of the four phases is estimated to be 3.775 million cubic yards over a design life of approximately 36.3 years. This amendment is also to allow an alternate liner to be placed in Cell 6 only. The location of the gas monitoring wells is changed as the site's specific hydrogeological and hydraulic conditions allow. The synthetic material of the final cap is changed from 30 mil PVC to 40 mil LLDPE. The approval for the use of alternate daily cover dated November 12, 1998, is modified to include the requirement that the use of synthetic tarp is allowed only when a one foot soil layer of weekly cover material will be placed on the working face of the landfill. Coal Combustion Byproduct (CCB) mixed with 50% soil may substitute for soil as a weekly cover.

I.G.5. The permit was modified by a minor modification on July 31, 2001 approving the service area for the landfill to be extended to include Virginia, West Virginia, Maryland, District of Columbia, and Delaware. Permit Amendment #7 has restricted the Service Area to Page County, as well as surrounding Virginia counties and municipalities.

I.G.6. The permit was modified by a minor modification on September 11, 2003 approving the leachate collection system drainage stone to be VDOT #68, in addition to VDOT #8 or VDOT #78.

I.G.7. The permit was modified by a major modification on October 25, 2007. This major modification was submitted in accordance with the June 10, 2005 Dismissal Order, which required that a permit amendment be submitted to include a maximum daily tonnage rate for the Landfill and revised design criteria to verify if all of the waste in Phase I was to remain in place, as well as the redesign of the leachate transfer structure. The Operations Manual was also updated.

I.G.8. The permit was modified by a minor modification on May 30, 2008 approving the Landfill's operating hours in the Operations Manual (Permit Attachment II-1). The amendment involves extending the morning hours from 7:30 AM to 5:30 AM on Mondays (or the next day after a holiday or landfill closure).

I.G.9. The permit was modified by a minor modification on January 4, 2010 approving the use of textured HDPE geomembrane liner that is functionally equivalent to the smooth geomembrane that was originally specified.

I.G.10. The permit was modified by a major modification on February 6, 2014 approving reconfiguration of Phases II through IV as Phases II through V and redesigns of the bottom liner and final cover grades to increase the top of the landfill elevation from approximately 1320 feet to approximately 1350 feet and to increase the disposal capacity from approximately 4.85 million cubic yards to approximately 7.97 million cubic yards with no change of the landfill footprint. This modification also approved options for a geomembrane/GCL alternate liner, leachate recirculation, and an active gas collection system. Furthermore, under this modification, a new leachate pump station was approved for installation with the new perimeter force main to replace the existing leachate pump station. This permit modification also incorporated the gas compliance network change, approved on March 28, 2012, of replacing Gas Monitoring Well GMW-7A with Gas Monitoring Wells GMW-7B through 7D.

I.G.11. The permit was modified by a minor modification on September 16, 2015 approving the revised Groundwater Monitoring Plan (GMP) to reflect the following changes to the facility's compliance groundwater monitoring network: (1) Groundwater monitoring wells MW-6 and MW-7 have been removed from the background monitoring requirements, but would remain as downgradient wells for the Phase III expansion; (2) Proposed groundwater monitoring well MW-14 has

been removed from the network due to its location within the footprint of the proposed sediment basin; and (3) Proposed groundwater monitoring well MW-15 remains part of the downgradient network for the Phase II expansion.

I.G.12. The permit was modified by a minor modification on March 17, 2016 approving the revised Design Plan, narratives of Design Report, Leachate Management Plan, Landfill Gas Management Plan, Phase 1 Leachate Pipe and Pump Station calculations, and Technical Specifications. These revised documents (1) modified the thickness of controlled subgrade beneath GCL from 24 inches to 12 inches; (2) updated the changes in gas and groundwater monitoring networks in the design plans and gas management plan; and (3) revise the layout of the leachate removal system.

I,G.13. The permit was modified by a minor modification on December 21, 2016 approving revised Drawing Nos. 8, 14, and 16 of the Design Plans, narratives of the Design Report, stone protrusions into liner calculations in Attachment VI-2f, and Sections 02272 and 02444 of the Technical Specifications. These revised documents proposed to use angular stones in the granular leachate collection layer with a heavier (16 oz.) geotextile placed between the granular leachate collection layer and the geomembrane.

I.G.14. The permit was modified by a minor modification on April 4, 2018 approving a smaller capacity of pumps in the pump station to handle leachate collected from Phases I through III. Prior to the development of each new disposal area (Phase IV or V), the facility shall submit a pump station calculation to size pumps, other than those specified in the permit, to handle leachate collected from the existing and the new disposal areas.

APPENDIX 5

REWORLD FAIRFAX – WTE – PBR 545 – PERMIT

Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

www.deq.virginia.gov

Travis A. Voyles
Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director

July 24, 2024

VIA ELECTRONIC MAIL
Lucas Dushac, Facility Manager
Reworld Fairfax, LLC
9898 Furnace Road
Lorton, Virginia 22079
LDushac@reworldwaste.com

Subject: Reworld Fairfax, LLC, Permit-By-Rule No. 545 (PBR545)
PBR Modification Approval
Permitting Enhancement and Evaluation Platform (PEEP) Request Number SUB112

Dear Mr. Dushac,

The Virginia Department of Environmental Quality (DEQ) has received the request to modify PBR545 – Reworld Fairfax, LLC, located at 9898 Furnace Road in Lorton, Virginia. The modification application was received on May 14, 2024. The modification changes the name of the facility from Covanta Fairfax, Inc to Reworld Fairfax, LLC.

Attached to this letter are two documents that have been modified and must not be separated from this letter for compliance purposes. The two documents are:

ATTACHMENT I: CONDITIONS OF THE PERMIT-BY-RULE STATUS

ATTACHMENT II: FACILITY DESCRIPTION

The purpose of this letter is to acknowledge receipt of the revised documentation submitted in accordance with the requirements of 9 VAC 20-81-410.A.6. for PBR modifications. In accordance with 9VAC20-81-410.A.4, this facility continues to operate under PBR status. With this modification, Attachments I and II have been revised and enclosed. Please insert the revised Attachments and submitted documentation into all copies of PBR545 along with this letter to document the modification. Please note, however, that in accordance with 9VAC20-81-410.A.5.,

and the attached "Conditions of the Permit-by-Rule Status," the Director may require changes in the documents designed to assure compliance with the standards of the Virginia Solid Waste Management Regulations (VSWMR). Should such changes not be accomplished by the facility owner or operator, the Director may require the owner or operator to submit the full application and to obtain a regular solid waste management facility permit.

In addition, with the acknowledgement of this permit modification, the facility is required to comply with the following requirements:

1. The facility shall maintain records of self-inspections, facility monitoring, and receipt of unauthorized waste in accordance with 9VAC20-81-350.
2. The facility is required to follow the reporting requirements of 9VAC20-81-530.C., which includes written notification of any planned physical alterations (C.1) and notification, orally within 24 hours and written within 5 days, of any noncompliance or unusual condition which may potentially have an adverse effect on health or the environment, such as receipt of hazardous waste, facility fires, etc. (C.3).
3. Submission of the Solid Waste Information and Assessment (SWIA) 50-25 Form in accordance with 9VAC20-81-80 by March 31st of each year. This form can be submitted online at https://portal.deq.virginia.gov/. A hard copy of the DEQ Form 50-25 can be found at https://law.lis.virginia.gov/admincode/title9/agency20/chapter81/section9998/.
4. The facility is responsible for paying an annual fee to DEQ by October 1st of each year. The fee amount is determined based upon the procedures outlined in 9VAC20-90-113.
5. The facility shall review and certify its Operations Manual is consistent with current facility operations and regulatory requirements annually, by December 31st of each calendar year. These certifications shall be maintained in the facility's operating record.
6. The facility is required to adjust the estimated closure cost amount annually for inflation, 60 days prior to the anniversary date of the establishment of the financial mechanism in accordance with 9VAC20-70-10, *et seq*.

Please note that it is the responsibility of Reworld Fairfax, LLC to obtain any other permits or authorizations that may be necessary. Your DEQ contact in this matter is Julia Sisler. If you have any questions regarding the PBR modification process or review, please contact her at (804) 432-8262 or julia.sisler@deq.virginia.gov.

Sincerely,

Jim Datko, P.E.
Regional Land Protection Program Manager
Virginia Department of Environmental Quality
(571) 866-6446
james.datko@deq.virginia.gov
Northern Regional Office
13901 Crown Court
Woodbridge, Virginia 22193

Enclosure: Attachments I and II

cc:

Kevin McGunnigle, Reworld (kmcgunnigle@reworldwaste.com)
Julia Sisler, DEQ Solid Waste Permit Writer (julia.sisler@deq.virginia.gov)
Jenny Poland, DEQ Solid Waste Permit Coordinator (jenny.poland@deq.virginia.gov)
Josiah Bennet, DEQ Financial Assurance (Josiah.bennet@deq.virginia.gov)
DEQ ECM File PBR545

ATTACHMENT I
CONDITIONS OF THE PERMIT-BY-RULE STATUS

I. CHANGE OF OWNERSHIP

A permit-by-rule may not be transferred by the permittee to a new owner or operator. However, when a property transfer takes place without proper closure, the new owner shall notify the Department of the sale and fulfill all the requirements contained in 9VAC20-81-410.A.2.a. through 9VAC20-81-410.A.2.k. of the Virginia Solid Waste Management Regulations (VSWMR, 9VAC20-81-10, *et seq*.). Upon presentation of the financial assurance proof required by the Financial Assurance Regulations for Solid Waste Facilities (9VAC20-70-10, *et seq*.) by the owner, the Department will release the old owner from his closure and financial responsibilities and acknowledge the new permit-by-rule in the name of the new owner.

II. FACILITY MODIFICATIONS

The owner or operator of a facility operating under a permit-by-rule may modify its design and operation by furnishing the Department a new design and construction certificate prepared by the professional engineer and an operations manual certificate. Whenever modifications in the design or operation of the facility affect the provisions of the approved closure plan, the owner or operator shall also submit an amended closure plan certificate signed by a professional engineer.

III. LOSS OF PERMIT-BY-RULE STATUS

In the event that a facility operating under a permit-by-rule violates any applicable siting, design and construction, or closure provisions of 9VAC20-81-320, 9VAC20-81-330, or 9VAC20-81-360, respectively, the owner or operator of the facility will be considered to be operating an unpermitted facility as provided for in 9VAC20-81-45 of the VSWMR and shall be required to either obtain a new permit as required by Part V [9VAC20-81-400, *et seq.*] or close under Part III [9VAC20-81-100, *et seq.*] or IV [9VAC20-81-300, *et seq.*] of these regulations, as applicable.

IV. TERMINATION

The Director shall terminate permit-by-rule and shall require closure of the facility whenever he finds that:

a. As a result of changes in key personnel, the requirements necessary for a permit-by-rule are no longer satisfied.

b. The applicant has knowingly or willfully misrepresented or failed to disclose a material fact in his disclosure statement, or any other report or certification required under this regulation or has knowingly or willfully failed to notify the Director of any material change to the information in the disclosure statement.

c. Any key personnel have been convicted of any of the crimes listed in § 10.1-1409 of the Code of Virginia, punishable as felonies under the laws of the Commonwealth or the equivalent of them under the laws of any other jurisdiction; or have been adjudged by an administrative agency or a court of competent jurisdiction to have violated the environmental protection laws of the United States, the Commonwealth or any other state and the Director determines that such conviction or adjudication is sufficiently probative of the permittee's inability or unwillingness to operate the facility in a lawful manner.

d. The operation of the facility is inconsistent with the facility's operations manual and/or the operational requirements of the regulations.

V. CERTIFIED OPERATOR

In accordance with the Virginia Waste Management Act (Title 10.1, Chapter 14 of the Code of Virginia), § 10.1-1408.2, this facility must employ a facility operator licensed by the Board of Waste Management Facility Operators (Licensing Regulations, 18VAC155-20-10 *et seq*.).

VI. RIGHT OF APPEAL

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date of the service of this decision to initiate an appeal of this decision, by filing notice with:

Michael S. Rolband, Director
Virginia Department of Environmental Quality
ATTN: Division of Land Protection & Revitalization
Post Office Box 1105
Richmond, Virginia 23218

In the event this decision is served to you by mail, three days will be added to that period. Please refer to Part Two of the rules of the Supreme Court of Virginia, which describes the required content of the Notice of Appeal, including specification of the Circuit Court to which the appeal is taken, and additional requirements governing appeals from decisions of administrative agencies.

END OF ATTACHMENT I

ATTACHMENT II
FACILITY DESCRIPTION

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF LAND PROTECTION & REVITALIZATION
OFFICE OF FINANCIAL RESPONSIBILITY AND WASTE PROGRAMS
Permit-By-Rule 545

Facility Name: Reworld Fairfax, LLC

Facility Type: Waste to Energy Facility **Latitude:** 38º 41'42" North

Site Location: County of Fairfax **Longitude:** 77º 14 '28" West

Location Description: Reworld Fairfax, LLC is located at 9898 Furnace Road in Lorton, Virginia, within the boundaries of the I-95 Landfill Complex. The site is one mile to the west of Interstate 95 highway, one mile northeast of the Occoquan River, and one mile east of Route 123 (Ox Road) in the Mills Branch Watershed. Access is provided by the paved Furnace Road.

Background: The facility is owned and operated by Reworld Fairfax, LLC. The I-95 Energy Resource/Recovery Facility (E/RRF) began commercial operation in June 1990 under Solid Waste Permit (SWP) Number 510, issued on November 2, 1987, to the County of Fairfax Board of Supervisors. On February 22, 1988, the permit was amended and transferred to Ogden Martin Systems of Fairfax, Inc. The parent company, Ogden Corporation, became Covanta Energy Corporation in 2001, and Ogden Martin Systems of Fairfax, Inc., became Covanta Fairfax, Inc. On May 18, 2010, SWP510 was revoked and Permit-by-Rule (PBR) No.545 was assigned to the facility. Covanta Fairfax, Inc. changed the facility name to Reworld Fairfax, LLC effective April 16, 2024.

The facility consists of four nominal 750 ton per day refuse-fired boilers and two 63.8-megawatt turbine generators. The facility has a process rate of approximately 3,000 tons per day of Municipal Solid Waste (MSW), consisting of materials approved in the facility's Title V Industrial Air Permit, Facility No.71920, and generates approximately 700-800 tons per day of combined ash residue (bottom and fly ashes) and recycles approximately 80 tons per day of ferrous and non-ferrous metals.

The facility includes an administration building; main building which houses the tipping enclosure, boiler enclosure and turbine-generator area; scale house and scale; residue enclosure; air pollution control (APC) equipment, cooling towers; oil and bulk chemical storage tanks; an electrical substation; water treatment plant; and pump house.

Operations: The facility is open to receive waste Monday through Friday, 5:00 am to 7:00 pm, and Saturday and Sunday, 5:00 am to 4:00 pm; however, it is permitted to process waste 24-hours per day, seven days per week. Fairfax County may deliver waste after hours if Reworld Fairfax, LLC is notified in advance; however, waste deliveries are not allowed after 10:00 pm. The facility is surrounded by a 7-foot-high chain link fence with gates at the front and rear access points. Waste

haulers enter the property after first passing through the 1-95 Landfill Complex scale house located off Furnace Road. Haulers are then weighed at the Reworld Fairfax, LLC scale house before entering the tipping enclosure to deposit their loads on the tipping floor. Loads are inspected for any unauthorized waste, as identified in the Solid Waste Operating Manual (SWOM) prior to being pushed into the pit by a loader. The storage pit can hold up to 21,000 tons of refuse; however, to maintain proper operations, the maximum effective storage capacity is 16,715 tons. As necessary, the facility may store an additional 3,000 tons of waste material on the tipping floor in the locations shown on Figure 4 of the SWOM. Oversized items and white goods are separated from the incoming waste stream and stored in temporary roll-off containers.

Once waste is unloaded in the pit, a grapple fluffs the waste and feeds it to the hopper to be burned. The resulting ash and non-combustible materials, including ferrous and non-ferrous metals, are stored in the residue enclosure prior to being loaded into transport vehicles for final disposal. The residue enclosure is designed to store approximately 1,500 tons of ash. Ash residue is disposed of at the I-95 Sanitary Landfill, while the recovered ferrous and non-ferrous metals are sold on the open market for reuse/recycling.

Ash Residue Testing: In accordance with 9VAC20-81-340.E.7., the facility shall perform a chemical analysis of all residual ash generated in accordance with the facility's permit. Based on a statistical analysis performed using ash testing data from 1994 to 2009, and the quantity of ash generated by the facility, the facility shall perform semi-annual ash sampling and report results within 90 days of sample collection in accordance with 9VAC20-81-340.E.7.d.

Wastewater Management: Wastewater is collected via floor drains, settling sump, and sump pumps designed to transfer wastewater to the wastewater lift station where it is reused on site. Excess water and ash from cleaning and maintenance activities inside the boiler building and APC area drain into floor trenches, which drain to sumps and subsequently to the two settling basins located in the APC area. The solids settle and the water is reused as quench water for the ash residue. Wastewater not reused, including boiler blowdown, cooling tower blowdown, and neutralization tank batch discharges, along with sanitary sewage from facility buildings and leachate from the 1-95 Sanitary Landfill are pumped from a lift station to the Publicly Owned Treatment Works (POTW).

Submission Highlights: The Department is in receipt of the SWMF Change of Owner/Operator Form signed by Lucas Dushac on May 14, 2024. The following documents comprise the Permit-by-Rule submittal:

A. A notice of intent dated May 14, 2024. A disclosure statement dated May 7, 2024. A local government certification dated January 25, 2021, and signed by John Kellas, Deputy Director of Public Works – Solid Waste for the County of Fairfax. These documents are in accordance with 9VAC20-81-450.B., and are required submissions under 9VAC20-81-410.A.2.a. and 9VAC20-81-410.A.2.c.

B. A document signed by Ms. Denise Wessels, P.E., dated May 4, 2010, certifying that the facility conforms to the siting standards of 9VAC20-81-320. This is a required submission in accordance with 9VAC20-81-410.A.2.b.

C. An Operations Manual, dated September 2011, that conforms to the standards of 9VAC20-81-340. This is a required submission in accordance with 9VAC20-81-410.A.2.d.

D. A document signed by Ms. Denise Wessels, a professional engineer, dated May 4, 2010, certifying that the facility has been designed and constructed in accordance with the standards of 9VAC20-81-330. This is a required submission in accordance with 9VAC20-81-410.A.2.e.(1).

E. A Closure Plan dated October 2009 that conforms to the standards of 9VAC20-81-360. This is a required submission in accordance with 9VAC20-81-410.A.2.e.(2).

F. The site lease dated March 10, 1986, and last amended April 9, 2014. A copy of the next lease amendment which demonstrates that Reworld Fairfax, LLC has legal control over the site will be provided to the Department when finalized. This is a required submission under 9VAC20-81-410.A.2.f.

G. Certification of Good Standing from the State Corporation Commission dated November 22, 2011, and a Certificate of Amendment, dated April 16, 2024, that indicates the facility owner, Reworld Fairfax, LLC, is a valid business entity in the Commonwealth of Virginia. This is a required submission under 9VAC20-81-410.A.2.g.

H. The cost estimate for facility closure is $6,267,052, which covers the design throughput of 3,000 tons. Financial Assurance in the amount of $6,267,052 has been provided in the form of a surety bond and was approved by the Office of Financial Assurance in a compliance letter dated November 14, 2023. This is a required submission in accordance with 9VAC20-81-410.A.2.h.

I. A copy of the air permit issued June 10, 2016. This is a required submission in accordance with 9VAC20-81-410.A.2.j.(3).

J. Payment of the permit application fee in accordance with 9 VAC 20-81-410.A.2.k.

END OF ATTACHMENT II

APPENDIX 6

GENERAL RECYCLING INFORMATION – CITY WEBSITE

CITY OF MANASSAS PARK
RECYCLING GUIDELINES

Recycling materials are collected on Wednesdays for single-family homes and townhome communities with curbside collection service.

Recycling carts/bins should be placed at the curb no earlier than 2:00 p.m. on Tuesday and no later than 6:00 a.m. Wednesday morning.

Please remove all emptied trash/recycling carts from the curb no later than 10:00 a.m. on Thursday.

Please observe the following guidelines for disposal of recycling materials:

- **DO NOT PLACE RECYCLBLES IN PLASTIC BAGS.**
- **RECYCLABLES SHOULD BE PLACED LOOSELY INTO RECYCLING CARTS.**
- **Crush/compress plastic containers and aluminum cans, if possible**
- **Thoroughly rinse all food from containers. Containers should be clean/dry.**
- **Remove caps and lids from containers.**

RECYCLING CARTS CONTAINING ANY CONTAMINANTS, UNACCEPTABLE RECYCLABLES, OR ANY RECYCLABLES CONTAINED IN A PLASTIC BAG WILL NOT BE COLLECTED.

ACCEPTABLE CURBSIDE RECYCLABLES

PLASTICS: Plastics bearing the codes 1, 2, and 5, are acceptable for recycling. These include food/beverage plastics (no styrene/Styrofoam), detergent/ bleach/fabric softener containers, all narrow neck bottles, ketchup & mustard containers, milk & water bottles, plastic toys, empty garbage and recycling containers, wide mouth plastic jars (peanut butter, yogurt, margarine & butter tubs, cottage cheese & sour cream containers, whipped topping and mayonnaise containers).

ALUMINUM: Food & beverage containers, ferrous/bimetal food & beverage containers, pet food cans, tuna cans, juice cans, soup cans, vegetable cans, soft drink cans, non-hazardous content aerosol cans, aluminum foil bake ware and cookware (empty and clean).

PAPER: Newspaper/inserts, white/colored paper, telephone books, catalogs, junk mail, small cardboard items (flattened, small enough to fit in a recycling cart), non-metallic gift wrap (tape, ribbons removed), all other clean, dry paper.

~~***GLASS:***~~ Glass is no longer acceptable for curbside recycling but may be taken to the Glass recycling dumpster located at Signal Hill Park, 9300 Signal View Dr. Manassas Park, VA 20111.

CARDBOARD Cardboard boxes/items small enough to fit into the curbside recycling cart. Large cardboard materials such as appliance/electronics/moving boxes are not acceptable for curbside collection and may be taken to the cardboard recycling dumpster at Signal Hill Park 9300 Signal View Dr. Manassas Park, VA 20111

UNACCEPTABLE CURBSIDE RECYCLABLES

- **Plastic bags/film**: plastic trash bags, plastic grocery bags (should be returned to your grocer for recycling), vegetable bags (carrot or celery packaging), plastic wrap (Saran or Handi-Wrap), candy/food wrappers.
- **Batteries and electronics**
- **Diapers –** clean or dirty
- **Glass –** glass must be disposed of as trash or taken to a nearby glass recycling location.
- **Styrofoam** - cups, plates, bowls, "to-go" containers, egg cartons, packing materials
- **'To Go' containers or plastic cutlery** (knives, forks, spoons)
- **Ceramics** (pottery, flowerpots, decorative ceramics, dishes)
- **Wood and waste wood**
- **Shredded paper and other specific paper products such** paper towels, napkins, diapers, tissues, feminine hygiene products, wax paper, parchment paper, laminated paper, ribbon, any paper contaminated with food, Amazon shipping boxes with packing tape/labels attached.
- **Motor oil containers** (please dispose with household trash)
- **Construction/remodeling/demolition materials**: reusable materials may be taken to Habitat for Humanity's RESTORE located at 10159 Hastings Dr. Manassas, VA 20110 Please call (703) 369-6145 to make confirm that your items are acceptable for donation
- **Vinyl siding, clothes hangers, garden hoses, cords/cables, roping, chains**
- **Combination food/metal products** (frozen juice cans, freeze/thaw dessert containers)
- **Any materials contaminated with food waste** (pizza boxes, TV dinner trays).
- **Household trash/food waste/beverages**

NON-CURBSIDE RECYCLING RESOURCES

WASTE TIRE DISPOSAL/RECYCLING: The Tire Recycling Solution (Proco Tire) 703-396-8473
8220 Birch St. Manassas, VA 20111 Telephone: 703-396-8473 http://prococompany.com/
Call for current fee schedule.

ELECTRONICS RECYCLING AT THE FOLLOWING LOCATIONS:

Please note – some items may be accepted free of charge and some items may require a fee.
Securis, Inc. 3900 Stonecroft Blvd. Suite F Chantilly, VA 20151
https://securis.com/event/e-recycling-near-chantilly-va/2023-09-09/

Staples Office Supply 9890 Liberia Ave, Manassas, VA 20110
https://www.staples.com/stores/recycling

Best Buy 13093 Gateway Center Dr, Gainesville, VA 20155
https://www.bestbuy.com/site/recycling/recycle-faqs/pcmcat174700050009.c?id=pcmcat174700050009

REPORT MISSED RECYCLING COLLECTION

Missed collections must be reported no later than 10:00am on Thursday of the same week collection was missed.
Please call Patriot Disposal (703) 275-7100 or the Solid Waste Management Office at 703-335-8818 to report missed collection or email solidwaste@manassasparkva.gov

E-WASTE (ELECTRONICS) RECYCLING LINKS FOR LOCAL RECYCLERS

Please see the links below for free or low-cost recycling opportunities in the greater Manassas/Manassas Park area:

STAPLES, INC

9890 Liberia Ave Manassas, VA 20111
(Davis Ford Shopping Center)
Telephone 703-257-2373
https://www.staples.com/sbd/cre/marketing/sustainability-center/recycling-services/

ITEMS ACCEPTED FOR RECYCLING AT STAPLES:

- Accessories/adapters/cables
- All-in-one computers
- Cable/satellite receivers
- Calculators
- Camcorders
- CD/DVD/Blu-Ray players
- Coffee brewers (less that 40lbs)
- Computer speakers
- Connected home devices
- Copiers/fax machines
- Cordless phones
- Desktop computers
- Digital cameras
- Digital projectors
- Flash Drives
- Gaming consoles/handhelds
- GPS devices
- Hard drives
- iPods/MP3 players
- Keyboards/mice
- Laptop computers/eReaders
- Mobile phones
- Modems
- Monitors/ LCD, LED,CRT,PLASMA 50”/smaller
- Multifunction devices
- Printers/Scanners
- Routers

ITEMS THAT CANNOT BE RECYCLED AT STAPLES

- Air conditioners
- Alkaline batteries
- Appliances
- Floor-model printers and copiers
- Kitchen appliances
- Lamps or bulbs
- Large servers
- Large speakers
- Non-rechargeable lithium batteries
- Smoke detectors
- Televisions
- Vaporizers

BEST BUY

13093 Gateway Center Dr. Gainesville, VA 20155

(Virginia Gateway Complex)

Telephone 571-248-4944

https://www.bestbuy.com/site/services/recycling/pcmcat149900050025.c?id=pcmcat149900050025

Best Buy provides an exhaustive list of recyclables accepted at no charge and those accepted for a fee at their website.

ECO-ATM

Walmart 9401 Liberia Ave. Manassas, VA 20110

https://locations.ecoatm.com/va/manassas/sell-my-phone-manassas-va-6623.html

"Fast cash for phones & tablets"

SECURIS, Inc. Electronics and Data Destruction

3900 Stonecroft Blvd., Suite F Chantilly, VA 20151

Telephone: 703-436-1967

Securis, Inc. schedules monthly e-Waste events for Northern VA residents at their Chantilly location.

Please see link below for dates and fees:

https://securis.com/events/

CARDBOARD RECYCLING DUMPSTER

NOW AVAILABLE FOR RECYCLING CARDBOARD ITEMS TOO LARGE FOR YOUR RECYCLING CART.

ITEMS MUST BE FLATTENED BEFORE BEING PLACED IN THE DUMPSTER.

THIS DUMPSTER IS ONLY FOR CARDBOARD

(NO FOOD OR PIZZA BOXES PLEASE)
CARDBOARD DUMPSTER IS LOCATED AT:

SIGNAL HILL PARK
9300 Signal View Dr, Manassas Park, VA 20111

An additional cardboard dumpster will be located on the west side of Manassas Park (west of Route 28) in the near future.

For questions about Cardboard recycling, please contact the Manassas Park Department of Public Works, Solid Waste Division by emailing: solidwaste@manassasparkva.gov or call 703-393-0881

MANASSAS PARK WELCOMES THE PURPLE CAN PROGRAM

The City of Manassas Park, like many other jurisdictions around the country, is removing glass from the curbside recycling stream where broken pieces of glass damage more valuable recyclables like plastic and cardboard during transport in recycling trucks.

Glass jars and bottles should no longer be included in recycling carts/bins.

There are two options for managing your glass waste:

Option #1 - Recycle your glass jars/bottles using the Purple Can Program!

The City of Manassas Park has joined other Northern Virginia jurisdictions in The Purple Can Club, a glass-only recycling program which includes over 40 glass-only drop-off containers that are located throughout the Northern Virginia region. The City of Manassas Park currently has one Purple Can located at:

Signal Hill Park
9300 Signal View Dr. Manassas Park, VA 20111
The Purple Can is located in the parking area below the pavilion.

An additional Purple Can will be located on the west side of Route 28 in the near future.

ACCEPTABLE GLASS MATERIALS FOR THE PURPLE CAN PROGRAM:

- CLEAN Glass bottles and jars only, must be emptied and rinsed
- Any shapes, sized or colors of glass bottles and jars
- No need to remove lids or labels

UNACCEPTABLE MATERIALS

- Do NOT bag glass (No plastic of any kind)
- No lamps or bulbs
- No other glass items, such as ceramics, porcelain, windows, Pyrex, mirror, or sheet-glass.

MULTI-FAMILY COMMUNITIES are also welcome to use the Purple Can glass-only drop-off containers.

Disposal Option #2 – If you choose not to participate in the Purple Can Program, please place any glass bottles or jars in your trash container.

For questions regarding the Purple Can Program or glass recycling/disposal, please contact.
the Manassas Park Department of Public Works, Solid Waste Division at:
solidwaste@mansasasparkva.gov
or call
703-393-0881

APPENDIX 7

GENERAL HHW INFORMATION – CITY WEBSITE

CITY OF MANASSAS PARK
Household Hazardous Waste
DROP OFF EVENT SCHEDULE 2024

Saturday, April 19, 2025
Saturday, July 17, 2025
Saturday, September 27, 2025

EVENT LOCATION: **Dept. of Public Works**
331 Manassas Dr.
Manassas Park, VA 20111

EVENT HOURS: **8:00 a.m. to Noon**

This event is sponsored for residential use only.
Commercial entities will not be allowed disposal access during this event.

There will be no electronics collected at these events.

Please be prepared to show photo ID with Manassas Park address in lieu of vehicle decal.

The following materials will be accepted:

- Oil Based Paint, no latex*
- Gas/Oil Mixtures
- Hobby Chemicals
- Solvents
- Brake Fluid
- Bleach
- Herbicides & Insecticides
- Automobile Batteries
- Propane Tanks **(less than 20lb)**
- Fuels
- Pool Chemicals
- Household Cleaners
- Paint Thinners
- Deck Cleaner
- Pesticide/Insect Sprays
- Stains/Varnish
- Used Motor Oil
- Antifreeze

***Latex Paint can be disposed with regular trash once the paint has been thoroughly dried and the lid has been removed from the can. Paint can be air-dried in a safe place away from children, pets or wildlife. Absorbent materials like clay (non-scoopable) kitty litter or shredded news paper also work well as drying agents. Have cans that are half-full or more? Consider contacting your local schools as their theatre/drama departments can make use of older paint for stage sets.**

Driving Directions:

The Department of Public Works is located at 331 Manassas Drive. From Route 28/Centreville Rd, take Manassas Drive west for approximately 1.5 miles. The entrance to the event will be on the left, just past the 7-11. Public Works staff will be directing traffic into and out of the event location.

For more information, please contact the Department of Public Works – Solid Waste Division at solidwaste@manassasparkva.gov or call 703-393-0881

Ciudad de Manassas Park
Evento de eliminación de Residuos Domésticos Peligrosos
Calandario de Eventos 2024

Sabado 20, de abril, 2024
Sábado 22 de junio, 2024
Sábado 28 de septiembre, 2024

UBICACIÓN DEL EVENTO: **Dept. de Obras Publicas**
331 Manassas Drive
Manassas Park, VA 20111

HORAS DE EVENTO: **De 8:00 h. a 12:00 h.**

Estos eventos están destinados únicamente a los residentes de Manassas Park.
No se aceptarán residuos peligrosos de entidades comerciales durante este evento.

No se recolectaron electrónicos en estos eventos
Por favor, esté listo para presentar una identificación con foto con la dirección de la Manassas Park en lugar de la calcomanía del vehículo.

Se aceptará el material siguiente:

pintura a base de aceite, no látex*	Herbicida & Insecticida	Disolvente para Pintura
Mezcla de aceite y gasolina	Batería de Automóvil	Limpiador de Cubierta
Solventes	Químicos de Hobby	Pesticidas/Insecticidas en
Tanques Propano (limite 20lbs)	Liquido de Frenos	Gasolina
Tintes / Barniz	Químicos de Piscina	Aceite de Motor Usado
Lejía	Limpiadores de Hogar	Anticongelante

***La pintura de látex puede desecharse con la basura normal una vez que la pintura se haya secado completamente y se haya quitado la tapa del bote. La pintura puede secarse al aire libre en un lugar seguro, lejos de niños, animales domésticos o fauna salvaje. Los materiales absorbentes como la arena para gatos (no recogible) o el papel de periódico triturado también funcionan bien como agentes secantes.**
¿Tiene latas medio llenas o más? Póngase en contacto con las escuelas locales, ya que sus departamentos de teatro pueden utilizar la pintura vieja para decorados teatrales.

Cómo llegar en coche:

El Departamento de Obras Públicas se encuentra en 331 Manassas Drive.
Desde Route 28/Centreville Rd, tome Manassas Drive hacia el oeste durante aproximadamente 1.5 millas.
La entrada al evento estará a la izquierda, justo después del 7-11. El personal de Obras Públicas dirigirá el tráfico hacia y desde el lugar del evento.

Para más información, por favor en contacto con el Departamento de Obras Públicas - División de Residuos Sólidosen solidwaste@manassasparkva.gov o llame al 703-393-0881

APPENDIX 8

FY 2024 BUDGET SUMMARY

CITY OF MANASSAS PARK
FY 2024
SOLID WASTE BUDGET

TYPE	ACCOUNT NUMBER	ACCOUNT DESCRIPTION	FY2024 BUDGET AMOUNT ADOPTED
	Solid WasteExpenditures		
X	503-98103-1101-00-00-00	Refuse & Recycling Salaries/Wage	$ 64,081.42
X		Salary Adjustments	$ -
X	100-81100-1301-00-00-00	Assistant Community Development Director	$ -
X	503-98103-1301-00-00-00	Refuse & Recycling Part-Time Wages	$ 4,521.72
X	503-98103-2100-00-00-00	FICA	$ 5,248.14
X	503-98103-2210-00-00-00	Retirement	$ 6,664.47
X	503-98103-2222-00-00-00	401 A ICMA	
X	503-98103-2310-00-00-00	Group Health	$ 2,314.75
X	503-98103-2400-00-00-00	Life Insurance	$ 346.04
X	503-98103-3170-00-00-00	Contract Services	$ 1,320,499.00
X	503-98103-3170-00-91-00	Hazardous Waste events	$ 55,000.00
X	503-98103-3170-00-92-00	Additional dumpsters	$ 8,500.00
X	503-98103-5133-74-00-00	NVRC - Nothern Virginia Waste Management P	$ 2,900.00
X	503-98103-5699-00-00-00	Glass Dumpsters & Servicing	$ 5,000.00
	503-98103-3170-00-92-00	Cardboard Box Recycling Dumpster	$ 4,656.00
X	503-98103-6021-74-00-00	New City Hall Tap Fee Share	
X	503-98103-3500-00-00-00	Printing	$ 1,500.00
X	503-98103-5210-00-00-00	Postage	$ -
	503-98103-3600-00-00-00	Advertising, Outreach, and Education	$ 2,900.00
	503-98103-5500-00-00-00	Training and Certification	$ 3,000.00
X	503-98103-9999-00-00-00	Administrative Fee/Transfer to General Fund	$ 138,286.93
X	503-93100-0002-00-00-00	Transfer to Gen Fund	$ -
X	503-93100-0033-00-00-00	Contribution to Reserves	
	Solid WasteExpenditures Total		**$ 1,625,418.46**

TYPE	ACCOUNT NUMBER	ACCOUNT DESCRIPTION	FY2024 BUDGET AMOUNT (ADOPTED)
	SOLID WASTE REVENUES		
R	503-16080-0001-00-04-00	Refuse & Recycling Fee	$ 1,396,344.30
R	503-16810-0001-00-06-00	Municipal Solid Waste Host Fee (Transfer Station)	$ 69,000.00
R	503-16811-0001-00-05-00	Reserve Contribution	$ 146,497.48
R	503-18990-0031-00-07-00	Other Revenue	$ -
R	503-41050-0012-00-11-00	Transfer from Storm Water	$ 8,076.68
R	503-24040-0007-00-10-00	Litter Control	$ 5,500.00
	SOLID WASTE REVENUES TOTAL		**$ 1,625,418.46**

APPENDIX 9

COMMUNITY PROFILE – EXCERPTS

Virginia

COMMUNITY PROFILE

Manassas Park city

Virginia Works

Economic Information & Analytics Division

6606 West Broad Street , Richmond, Virginia 23230
Tel: (804) 786-7496 Email:LMI@virginiaworks.gov
https://www.virginiaworks.com

Last updated: 9/12/2024 1:54:07 AM

Table of Contents

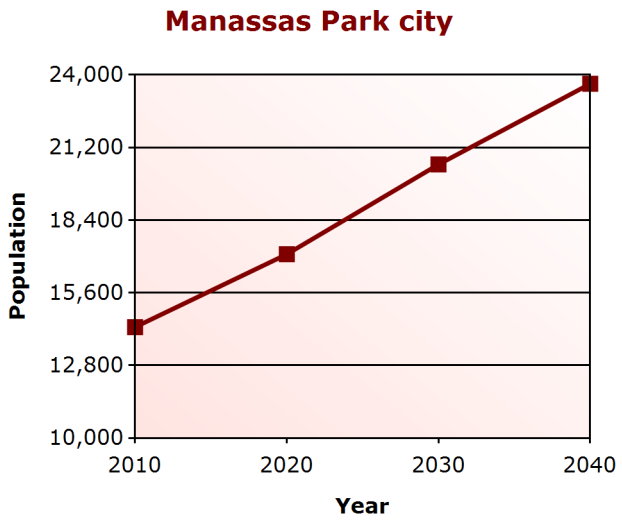
I. Introduction

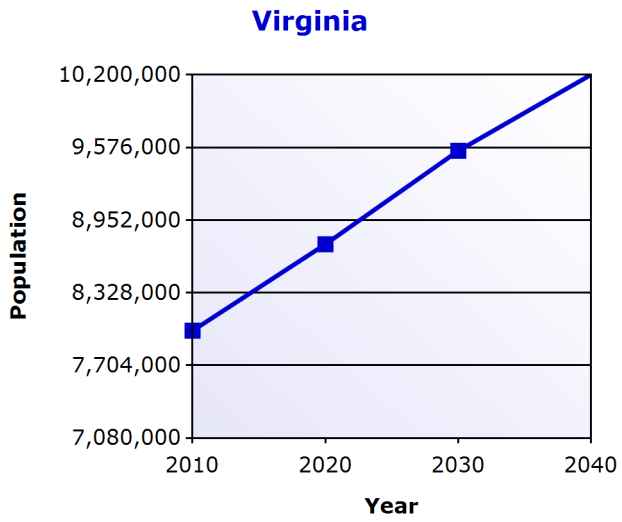
This report provides a community profile of Manassas Park city. It is intended to complement the information found in our Virginia Workforce Connection application, which can be accessed online at:

www.virginiaworks.com

The report is divided into three major sections. The first contains a profile of regional demographic characteristics and trends, the second supplies similar information for the regional economy, and the third provides a profile of regional education characteristics.

Population Change





	Manassas Park city	Percent change	Number Change	Virginia	Percent change	Number Change
2000	10,290			7,079,030		
2010	14,273	38.71 %	3,983	8,001,024	13.02 %	921994
2020	17,082	19.68 %	2,809	8,744,273	9.29 %	743249
2030	20,544	20.27 %	3,462	9,546,958	9.18 %	802685
2040	23,652	15.13 %	3,108	10,201,530	6.86 %	654572

Source: U.S. Census Bureau, Weldon Cooper Center for Public Service.

Did you know...

you can log on to our website today and see population counts from each Decennial Census all the way back to 1900? Looking for annual population estimates? We have those too, all the way back to the 1970s!

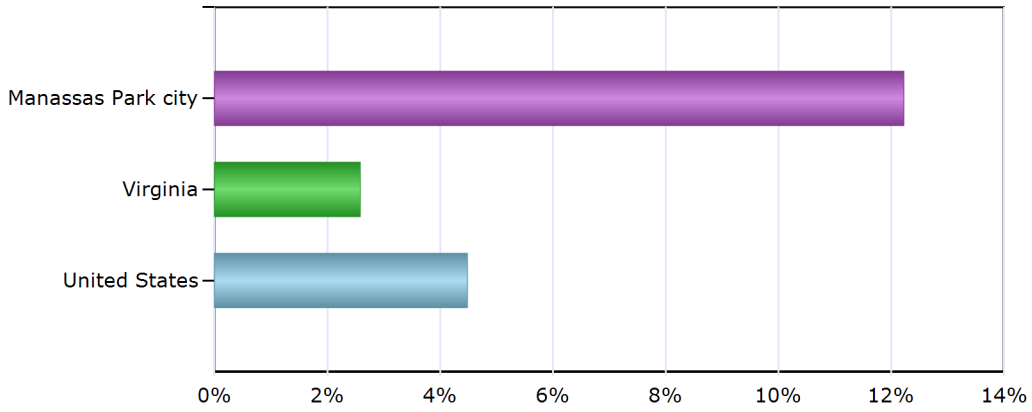
For this data and more, visit us on the web at:

www.VirginiaWorks.com

United States™ Census 2010

English Language Skills

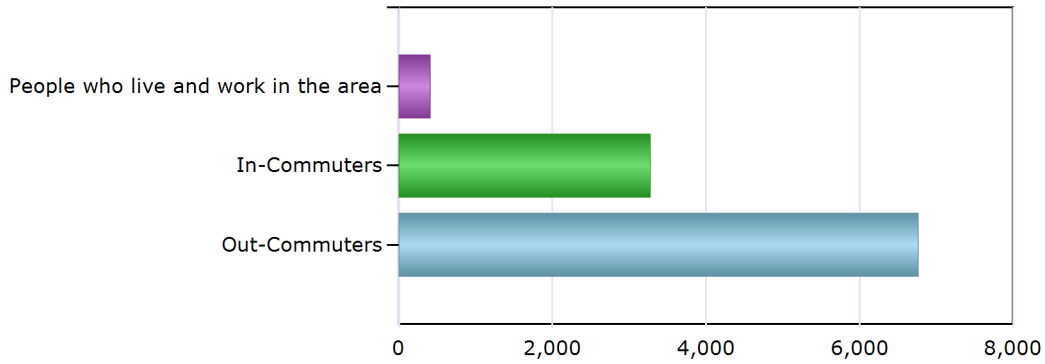
(Age 5 and over that speak English less than well)



	Total	Speak English less than well	Percent
Manassas Park city	14,674	1,794	12.23%
Virginia	7,800,044	201,628	2.58%
United States	298,691,202	13,400,003	4.49%

Source: U.S. Census Bureau
American Community Survey, 2012-2016.

Commuting Patterns



Commuting Patterns	
People who live and work in the area	406
In-Commuters	3,274
Out-Commuters	6,763
Net In-Commuters (In-Commuters minus Out-Commuters)	-3,489

Source: U.S. Census Bureau,
OnTheMap Application and LEHD Origin-Destination Employment Statistics, 2014.

Top 10 Places Residents are Commuting To

Area	Workers
Fairfax County, VA	2,457
Prince William County, VA	1,108
Loudoun County, VA	645
Manassas city, VA	542
District of Colu, DC	372
Arlington County, VA	242
Fairfax city, VA	173
Alexandria city, VA	158
Henrico County, VA	82
Fauquier County, VA	77

Top 10 Places Workers are Commuting From

Area	Workers
Prince William County, VA	1,071
Fairfax County, VA	485
Manassas city, VA	378
Loudoun County, VA	177
Fauquier County, VA	155
Warren County, VA	73
Prince George's County, MD	72
Stafford County, VA	69
Montgomery County, MD	61
Spotsylvania County, VA	59

Source: U.S. Census Bureau,
OnTheMap Application and LEHD Origin-Destination Employment Statistics, 2014.

Please Note: Commuting patterns data is no longer produced from the Decennial Census. As an alternative, we are providing commuting data from the U.S. Census Bureau's OnTheMap application and LEHD Origin-Destination Employment Statistics program. Since this data is produced from an entirely different data set, it is not advisable to compare the new data with previously released commuting patterns. For more information about the OnTheMap application or the LEHD program, please visit the following website:

http://lehd.ces.census.gov

Employers by Size of Establishment

	Manassas Park city	Virginia
0 to 4 employees	238	207,308
5 to 9 employees	42	40,586
10 to 19 employees	28	30,102
20 to 49 employees	23	22,145
50 to 99 employees	4	7,462
100 to 249 employees	6	3,930
250 to 499 employees	1	1,066
500 to 999 employees	1	375
1000 and over employees	0	266
	343	**313,240**

Employment by Size of Establishment

	Manassas Park city	Virginia
0 to 4 employees	330	261,536
5 to 9 employees	272	269,886
10 to 19 employees	378	410,082
20 to 49 employees	680	669,001
50 to 99 employees	300	513,170
100 to 249 employees	929	578,899
250 to 499 employees	339	364,060
500 to 999 employees	542	257,107
1000 and over employees	0	726,652
	3,770	**4,050,393**

Note: Asterisks (***) indicate non-disclosable data.
'Zero; no employment' typically represents new startup firms or sole-proprietorships.

Source: Virginia Works, Economic Information & Analytics,
Quarterly Census of Employment and Wages (QCEW), 1st Quarter (January, February, March) 2024.

50 Largest Employers

1. Manassas Park City School Board
2. City of Manassas Park
3. Capital Executive Limousine Service
4. Realtime Peo II, LLC
5. C.W. Strittmatter, Inc.
6. Atlas Plumbing LLC
7. Labor ReadyMid-Atlantic, Inc.
8. Patriot Disposal Inc
9. Titan Erosion Control
10. James River Equipment
11. QMT Associates
12. Stafford Systems Inc
13. Gi Johns
14. Abc Glass & Mirror Inc
15. Super Concrete Co Inc
16. Hercules Fence
17. Potomac Waterproofing Inc
18. Southern Building Service Inc
19. Titan Plumbing Inc.
20. Capitol Building Supply
21. United Masonry Inc Of Va
22. Virginia Contractors Supply
23. Matheson Tri Gas Inc
24. Agro Lawn Landscapes
25. Barrett Business Services Inc
26. Railroad Dental Associates
27. JSC Concrete Construction
28. United Building Envelope Restoration LLC
29. Azor Construction LLC
30. Cook Out Manassas Park Inc
31. Hr Service Group LLC
32. Minnieland Private Day School
33. CMI Contracting LLC
34. Mastercraft Auto Body
35. F & B Concrete
36. Bull Run Alcohol Safety Action Prog
37. Creative Landscape, LLC
38. U.S. Department of Commerce
39. Advanced Cable Net Solutions, Inc.
40. Blue Haven Pools & Spas
41. Nva Services INC
42. White Line Construction, Inc
43. Comcast Cablevision
44. Emsi Engineering Inc.
45. J & M Landscaping
46. Super Ready Mix Inc
47. 7 Eleven Store 2581 33714b
48. Auto Body Inc
49. K W Smith & Son Inc
50. Prestons Pub

Source: Virginia Works, Economic Information & Analytics,
Quarterly Census of Employment and Wages (QCEW), 1st Quarter (January, February, March) 2024.

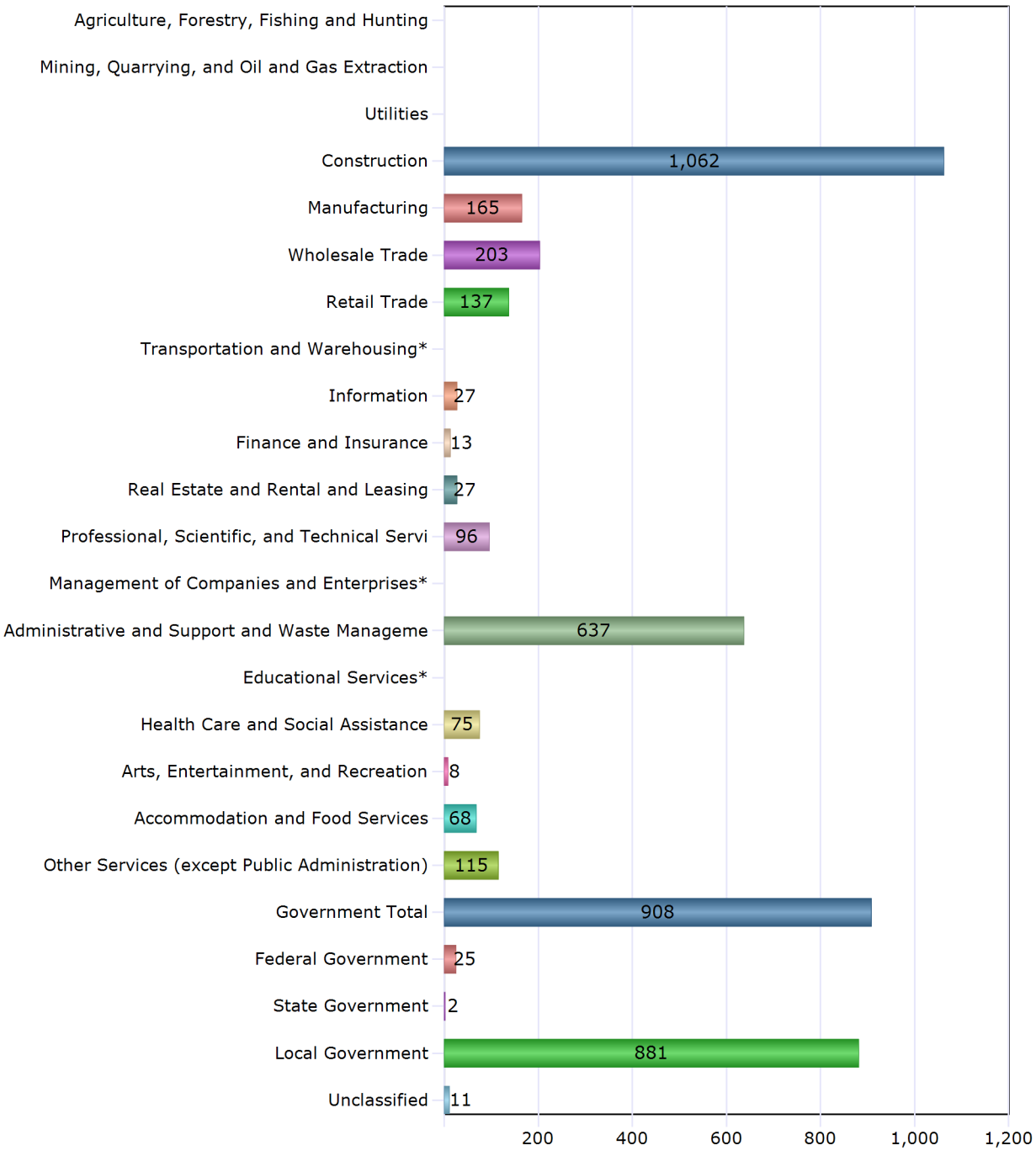
Did you know...

you can search over 300,000 employer listings on our website provided by Infogroup? This easy-to-use feature lets you search for employers by keyword, industry, sales volume, size range, and more!

For this data and more, visit us on the web at:

www.VirginiaWorks.com

Employment by Industry



Total: 3,771

Note: Asterisk (*) indicates non-disclosable data.

Source: Virginia Works, Economic Information & Analytics,
Quarterly Census of Employment and Wages (QCEW), 1st Quarter (January, February, March) 2024.

Industry Employment and Projections

Long Term (Period= 30)

	Employment			Percent	
	Estimated 2020	Projected 2030	Change	Total	Annual
Total, All Industries	1,082,312	1,232,136	149,824	13.84%	1.3%
Total Self-Employed and Unpaid Family Workers	75,856	77,434	1,578	2.08%	.21%
Agriculture, Forestry, Fishing and Hunting	2,389	2,757	368	15.4%	1.44%
Mining	401	352	-49	-12.22%	-1.29%
Mining, Quarrying, and Oil and Gas Extraction	401	352	-49	-12.22%	-1.29%
Utilities	***	***	***		***
Construction	61,477	70,114	8,637	14.05%	1.32%
Manufacturing	17,826	18,697	871	4.89%	.48%
Wholesale Trade	***	***	***		***
Retail Trade	100,525	103,164	2,639	2.63%	.26%
Transportation and Warehousing	27,152	34,020	6,868	25.29%	2.28%
Information	31,863	33,236	1,373	4.31%	.42%
Finance and Insurance	33,775	35,330	1,555	4.6%	.45%
Real Estate and Rental and Leasing	14,784	15,572	788	5.33%	.52%
Professional, Scientific, and Technical Services	225,849	260,511	34,662	15.35%	1.44%
Management of Companies and Enterprises	24,662	29,583	4,921	19.95%	1.84%
Administrative and Support and Waste Management and Remediation Services	72,795	84,847	12,052	16.56%	1.54%
Educational Services	86,344	106,456	20,112	23.29%	2.12%
Health Care and Social Assistance	98,697	114,715	16,018	16.23%	1.52%
Arts, Entertainment, and Recreation	11,275	16,940	5,665	50.24%	4.15%
Accommodation and Food Services	67,408	85,466	18,058	26.79%	2.4%
Other Services (except Public Administration)	29,565	34,235	4,670	15.8%	1.48%
Unclassified	73,564	82,913	9,349	12.71%	1.2%

Note: Asterisks (***) indicate non-disclosable data.
Projections data is for Northern Virginia (LWDA XI). No data available for Manassas Park city.

Source: Virginia Works, Economic Information & Analytics,
Long Term Industry and Occupational Projections, 2020-2030.

Industry Employment and Projections

Short Term (Period= 25)

	Employment			Percent	
	Estimated 2023	Projected 2025	Change	Total	Annual
Total, All Industries	4,226,956	4,296,812	69,856	1.65%	.82%
Total Self-Employed and Unpaid Family Workers	239,513	241,252	1,739	.73%	.36%
Agriculture, Forestry, Fishing and Hunting	***	***	***	***	***
Mining	***	***	***	***	***
Mining, Quarrying, and Oil and Gas Extraction	***	***	***	***	***
Utilities	***	***	***	***	***
Construction	209,584	213,530	3,946	1.88%	.94%
Manufacturing	245,235	247,714	2,479	1.01%	.5%
Wholesale Trade	113,897	116,115	2,218	1.95%	.97%
Retail Trade	392,138	392,340	202	.05%	.03%
Transportation and Warehousing	***	***	***	***	***
Information	70,361	70,652	291	.41%	.21%
Finance and Insurance	146,669	151,031	4,362	2.97%	1.48%
Real Estate and Rental and Leasing	58,218	58,714	496	.85%	.43%
Professional, Scientific, and Technical Services	466,794	481,278	14,484	3.1%	1.54%
Management of Companies and Enterprises	87,697	89,808	2,111	2.41%	1.2%
Administrative and Support and Waste Management and Remediation Services	248,458	255,074	6,616	2.66%	1.32%
Educational Services	371,820	373,352	1,532	.41%	.21%
Health Care and Social Assistance	483,528	506,605	23,077	4.77%	2.36%
Arts, Entertainment, and Recreation	54,620	51,914	-2,706	-4.95%	-2.51%
Accommodation and Food Services	334,821	341,070	6,249	1.87%	.93%
Other Services (except Public Administration)	130,750	132,292	1,542	1.18%	.59%
Unclassified	403,403	407,459	4,056	1.01%	.5%

Note: Asterisks (***) indicate non-disclosable data.
Projections data is for Virginia Statewide. No data available for Manassas Park city.

Source: Virginia Works, Economic Information & Analytics,
Short Term Industry and Occupational Projections, 2023-2025.

APPENDIX 10

VARIOUS APPROVAL DOCUMENTS BY CITY

Figure I :
The City of Manassas Park Public Hearing on Solid Waste Management Plan

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Notice of Public Hearing published May 14, 1991:
The City council of Manassas Park will hold a Public Hearing on Tuesday, May 21, 1991 at 8:00 p.m. at City Hall, One Park Center Court, to get citizen input on the City's Comprehensive Solid Waste Management Plan. Copies of Plan can be reviewed in office of Planning and zoning, Monday - Friday froa 8:30 - 5:00 p.m.

Frank McDonough, Public Works Director, addressed this issue. In accordance with Virginia Waste Management Act of 1986, City is required to develop and implement a comprehensive solid waste mangement plan which includes goals for solid waste management within this jurisdiction, strategy for public education and information on recycling, consideration of public and private partnerships, and private sector pArticipation and execution of the plan. Recycling goals of 10\ by 1991, 15% by 1993, and 25\ by end of 1995. This plan was developed by Manassas Park to meet or exceed these goals.
Troy Taylor; The recycling goals that were initiated by the City in July 1990 have been going on for several months. City is working on tracking the recycling effort, determine percentage of participation by citizens and measure that against solid waste removal.

Gary Weakley, 140 Denver Drivet In response to question fro Mr. Weakley, the City does not pay separate for recycling. It is part of contract with BFI. He is in favor of recycling but thinks the City should have igloos like the ones at Prince Williain Library for citizens to take their recycling. He finds it hard to recycle and remember to put out bin on each Wednesday.

Mayor closed the Public Hearing at 8:18 p.m.

Figure 2:
City of Manassas Park Resolution
to Adopt Comprehensive Waste Management Plan

RESOLUTION

RE: Adopt Comprehensive Solid Waste Management Plan for the City of nassas Park, Virginia

WHEREAS, the Virginia Waste Management Act of 1986, Section 10.1-1411 of the Code of Virginia (1950) as amended, requires municipalities, in the absence of a regional plan, to develop and implement a comprehensive solid waste management plan; and

WHEREAS, the Public works Committee will participate in the review and analysis of solid waste managamant, and make appropriate revisions to the City's solid waste management plan; and

WHEREAS, the programs proposed for the racluction and recycling of solid waste are a combined responsibility of all citizens, businesses and qovernment in the City of Manassas Park; and

WHEREAS, the Public Works Committee has unanimously recommended that the proposed Comprehensive Solid waste Management Plan be approved and adopted by the City Council; and

WHEREAS, the City staff also recommends approval and adoption of the Comprehensive Solid Waste Manaqement Plan: and

NOW THEREFORE, BE IT RESOLVED that the City Of Manassas Park City Council does hereby approve and adopt the Attached Comprehensive Solid Waste Manaqement Plan for the City of Manassas Park, Virginia.

Approved June 4, 1991

Melanie L. Jackson, Mayor

Lana R. Conner, City Clerk

Figure 3:
Notice of Public Hearing and Minutes of Public Hearing
2007 Comprehensive Solid Waste Management Plan

NOTICE OF PUBLIC HEARING
CITY OF MANASSAS PARK, VA

Notice is hereby given that the Governing Body of the City of Manassas Park will hold a public hearing on Tuesday, February 12, 2008 at 7:00 p.m., or as soon thereafter as possible, for the purpose of receiving public comment and considering the following:

The Comprehensive Solid Waste Management Plan for the City of Manassas Park.

Public hearings are held in the Council Chambers at City Hall, One Park Center Court, Manassas Park, Virginia. The public is encouraged to attend this hearing and provide comments on the agenda item.

Information concerning this hearing is available for review on the City website at wwv.cityofmanassaspark .us and in the City Clerk's office at City Hall between the hours of 8:30 a.m. and 5:00 p.m., Monday-Friday.

For publication: January 29, 2008 and February 5, 2008.

Page Three Governing Body Meeting February 19, 2008

5b. Comprehensive Waste Management: Kathy Gammell, Director of Public Works: Public Hearing Notice published January 29, 2008 and February 5, 2008.

As required by the Virginia Department of Environmental Quality, the City of Manassas Park has updated its Comprehensive Solid Waste Management Plan as of December 2007. The 2007 plan update details the planning period for twenty (20) years through 2027. The plan addressed solid waste collection as well as recycling. Virginia Solid Waste regulations require a Public Hearing on this plan.
Annually, the City conducts three (3) cleanup days, with Curbside Pick-up in May, and Drop-off to dumpsters in September and February. Additionally, the City conducts a fall cleanup on one Saturday in September for household hazardous waste, paints, pesticides, and battery collection. There is a recycling bin at city hall in their parking lot. Schools have taken a real role as far as recycling in the schools.

The Mayor opened the Public Hearing at 7:13 pm.

Citizens wishing to address Public Hearing:
There were no citizens wishing to address Public Hearing.

MOTION: Councilmember Kassinger moved to close Public Hearing 7:15pm.

Figure 10: Resolution to Adopt
Interoffice Recycling and Procurement Policy for City Government

RESOLUTION 90-1000-657

Resolution establishing an interoffice recycling and procurement policy for the City Government of Manassas Park.

WHEREAS, the City Council is committed to achieving the State mandated recycling "goals", and

WHEREAS, the City Council recognizes the need for all City Government offices to participate in the recycling effort, and

WHEREAS, the City Council recognizes that the use of recycled products should become established policy for all City departments.

NOW,THEREFORE, BE IT RESOLVED by the City Council of the City of Manassas Park, Virginia:

1. The City of Manassas Park shall use recycled paper containing recycled fiber whenever possible. Exceptions to this policy may be granted but only after review by the Solid Waste Disposal Committee.
2. Recycled content paper should be used in all copiers for one-sided copying.
3. All stock paper utilized in computer printers, including form fed and laser printers, should be recycled paper.
4. Any new high-speed copy machines or duplicators to be purchased by the City shall be capable of handling two-sided copying on recycled paper.
5. All purchases of recycled products should meet or exceed their non-recycled counterparts.
6. All one-time-use-only paper (such as memo paper, note pads, telephone message pads and notebook paper) should be made from recycled paper products.
7. All City government offices shall make an effort to recycle used products that are presently part of the recycling process, (i.e., glass, paper, aluminum, oil) and any future expansion of the recycling effort.

Approved November 6, 1990

Melanie L. Jackson, Mayor

Lana A. Connor, City Clerk

APPENDIX 11

EPA – 2018 FACTS AND FIGURES

Advancing Sustainable Materials Management: 2018 Fact Sheet

Assessing Trends in Materials Generation and Management in the United States

December 2020

Introduction

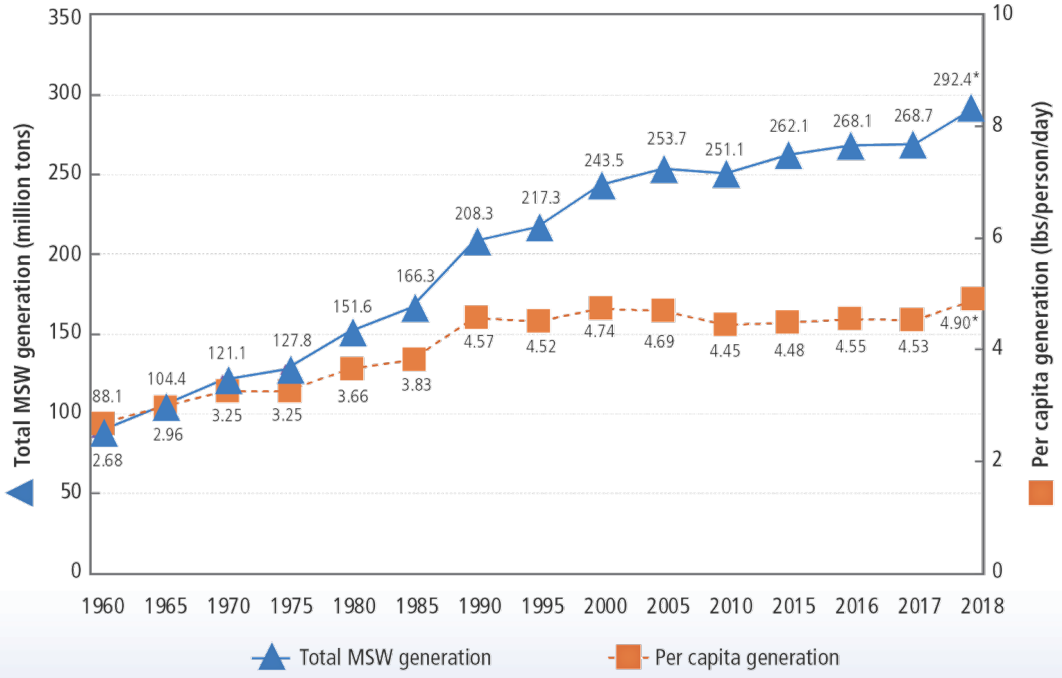
The U.S. Environmental Protection Agency (EPA) has collected and reported data on the generation and disposition of municipal solid waste (MSW) in the United States for more than 35 years. This information is used to measure the success of materials management programs across the country and to characterize the national waste stream. These facts and figures are based on the most recent information, which is from calendar year 2018.

In 2018, in the United States, approximately 292 million tons (U.S. short tons unless specified) of MSW were generated (See Figure 1). Of the MSW generated, approximately 69 million tons were recycled and 25 million tons were composted. Together, about 94 million tons were recycled or composted, equivalent to a 32.1 percent recycling and composting rate (See Figure 2). In addition, about 18 million tons of food (6.1 percent) were processed through other food management pathways (See Figure 3, Table 1 and text box page 5). More than 34 million tons of MSW (11.8 percent) were combusted with energy recovery. Finally, more than 146 million tons (50.0 percent) were landfilled (See Figure 3 and Table 1).

Information about waste generation and management is an important foundation for managing materials. EPA's Sustainable Materials Management (SMM) approach refers to the use and reuse of materials in the most productive and sustainable way across their entire lifecycle. Through SMM, EPA helps to meet the material needs of the future by providing methods to decrease environmental impacts of materials use while increasing economic competitiveness.

This report analyzes MSW trends in generation and management, materials and products, and economic indicators affecting MSW. It also includes a section on the generation and management of construction and demolition (C&D) debris, which is not a part of MSW, but comprises a significant portion of the non-hazardous solid waste stream.

Figure 1. MSW Generation Rates, 1960 to 2018*



*MSW generation rose considerably from 2017 to 2018 mainly because EPA enhanced its food measurement methodology to more fully account for all the ways wasted food is managed throughout the food system.

Figure 2. MSW Recycling and Composting Rate, 1960 to 2018

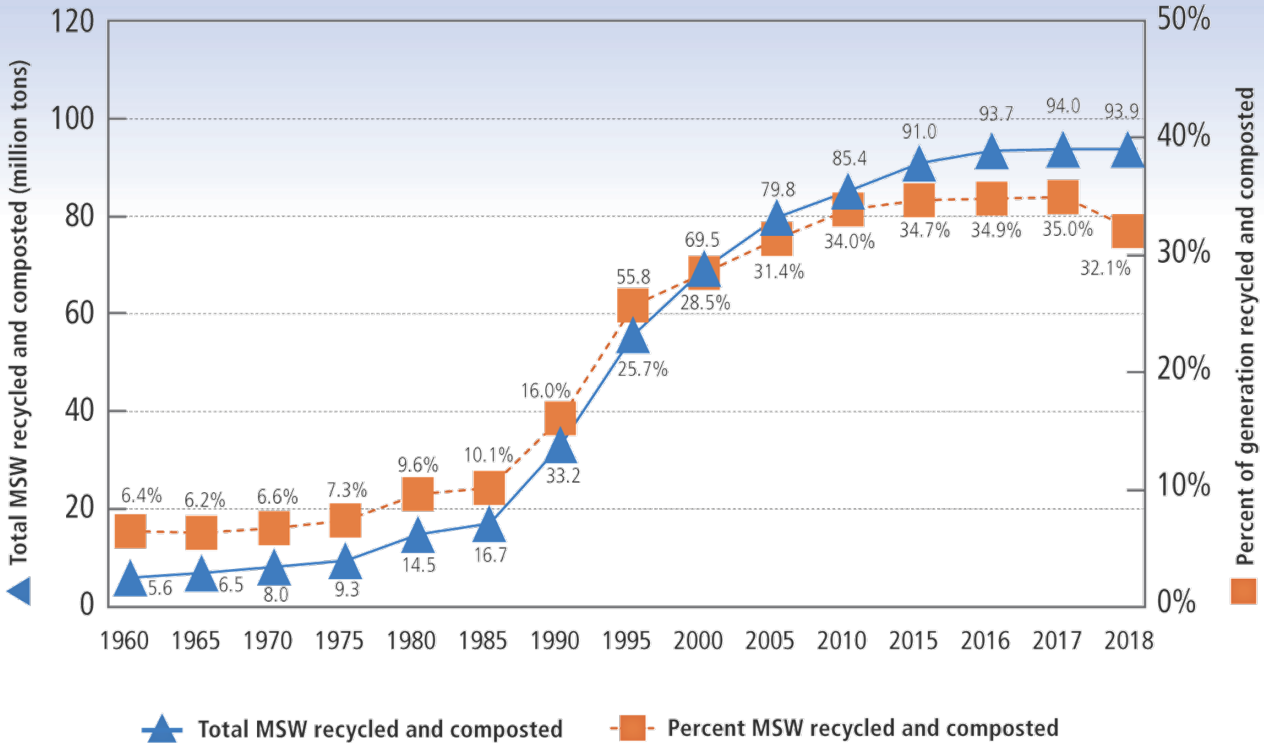


Figure 3. Management of MSW in the United States, 2018

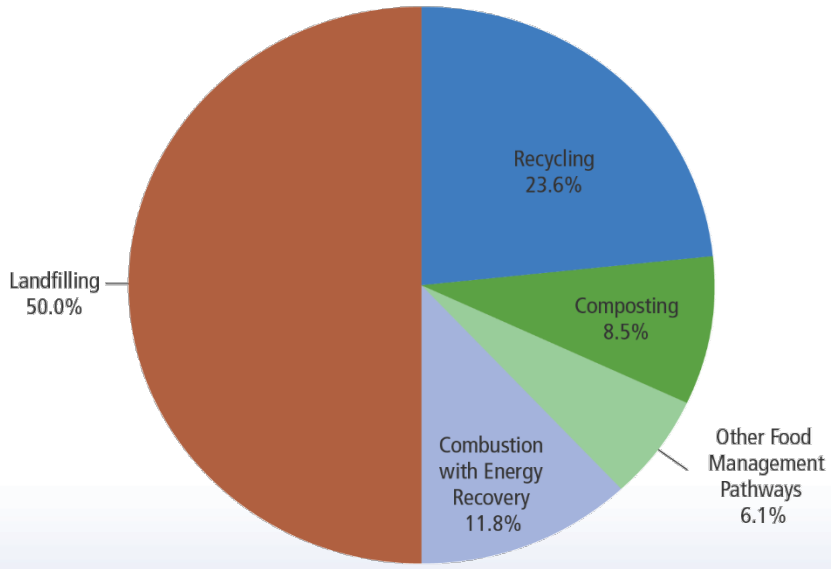


Table 1. Generation, Recycling, Composting, Other Food Management Pathways, Combustion with Energy Recovery and Landfilling of Materials in MSW, 2018*
(in millions of tons and percent of generation of each material)

Material	Weight Generated	Weight Recycled	Weight Composted	Weight Other Food Management Pathways¥	Weight Combusted with Energy Recovery	Weight Landfilled	Recycling as Percent of Generation	Composting as Percent of Generation	Other Food Management Pathways as Percent of Generation	Combustion as Percent of Generation	Landfilling as Percent of Generation
Paper and paperboard	67.39	45.97	-	-	4.20	17.22	68.2%	-	-	6.2%	25.6%
Glass	12.25	3.06	-	-	1.64	7.55	25.0%	-	-	13.4%	61.6%
Metals											
Steel	19.20	6.36	-	-	2.31	10.53	33.1%	-	-	12.0%	54.9%
Aluminum	3.89	0.67	-	-	0.56	2.66	17.2%	-	-	14.4%	68.4%
Other nonferrous metals†	2.51	1.69	-	-	0.08	0.74	67.3%	-	-	3.2%	29.5%
Total metals	**25.60**	**8.72**	-	-	**2.95**	**13.93**	**34.1%**	-	-	**11.5%**	**54.4%**
Plastics	35.68	3.09	-	-	5.62	26.97	8.7%	-	-	15.8%	75.5%
Rubber and leather	9.16	1.67	-	-	2.50	4.99	18.2%	-	-	27.3%	54.5%
Textiles	17.03	2.51	-	-	3.22	11.30	14.7%	-	-	18.9%	66.4%
Wood	18.09	3.10	-	-	2.84	12.15	17.1%	-	-	15.7%	67.2%
Other materials	4.56	0.97	-	-	0.66	2.93	21.3%	-	-	14.4%	64.3%
Total materials in products	**189.76**	**69.09**	-	-	**23.63**	**97.04**	**36.4%**	-	-	**12.5%**	**51.1%**
Other wastes											
Food, other‡	63.13	-	2.59	17.71	7.55	35.28	-	4.1%	28.1%	11.9%	55.9%
Yard trimmings	35.40	-	22.30	-	2.57	10.53	-	63.0%	-	7.3%	29.7%
Miscellaneous inorganic wastes	4.07	-	-	-	0.80	3.27	-	-	-	19.7%	80.3%
Total other wastes	**102.60**	-	**24.89**	**17.71**	**10.92**	**49.08**	-	**24.3%**	**17.3%**	**10.6%**	**47.8%**
Total municipal solid waste	**292.36**	**69.09**	**24.89**	**17.71**	**34.55**	**146.12**	**23.6%**	**8.5%**	**6.1%**	**11.8%**	**50.0%**

* Includes waste from residential, commercial and institutional sources.

¥ Animal feed, bio-based materials/biochemical processing, codigestion/anaerobic digestion, donation, land application, sewer/wastewater treatment.

† Includes lead from lead-acid batteries.

‡ Includes collection of other MSW organics for composting.

Details might not add to totals due to rounding.

Negligible = Less than 5,000 tons or 0.05 percent.
A dash in the table means that data are not available.

Trends in Municipal Solid Waste

Our MSW, or trash, is comprised of various items consumers throw away. These items include packaging, food, yard trimmings, furniture, electronics, tires and appliances. MSW does not include industrial, hazardous or C&D waste. Sources of MSW include residential waste, as well as waste from commercial and institutional locations, such as restaurants, grocery stores, other businesses, schools, hospitals and industrial facilities. Industrial facility waste includes waste from sources such as offices, cafeterias and packaging, but not process waste.

Over the last few decades, the generation, recycling, composting, combustion with energy recovery and landfilling of MSW has changed substantially. Solid waste generation peaked at 4.74 pounds per person per day in 2000 and 2005, falling to 4.51 pounds per person per day in 2017. The higher rate of 4.91 pounds per person per day in 2018 reflects the change in food waste measurement methodology (*See* Figure 1 and text box).

The combined recycling and composting rate increased from less than 10 percent of generated MSW in 1980 to 35.0 percent in 2017. In 2018, the recycling and composting rate was 32.1 percent (*See* Figure 2). Without including composting, recycling alone rose from 14.5 million tons (9.6 percent of MSW) in 1980 to 69 million tons (23.6 percent) in 2018. Although more tons were recycled in 2018 than ever before, the recycling rate decreased to the lowest levels since 2006. Composting was negligible in 1980, but it rose to 24.9 million tons in 2018 (8.5 percent).

In 2018, for the first time in this report series, EPA revised its food measurement methodology to more fully capture flows of excess food and food waste throughout the food system. The resulting category, other food management pathways, accounted for 17.7 million tons (6.1 percent) (*See* Figure 3, Table 2 and text box for details).

Combustion with energy recovery was less than 2 percent of generation in 1980 at 2.8 million tons. In 2018, 34.6 million tons (11.8 percent of MSW generated) were combusted with energy recovery (*See* Table 2).

Since 1990, the total amount of MSW going to landfills has increased by less than one million tons, from 145.3 million tons in 1990 to 146.1 million tons in 2018 (*See* Table 2). The net per capita 2018 landfilling rate was 2.4 pounds per day, which was lower than the 3.2 per capita rate in 1990 (*See* Table 3).

New Enhanced Food Measurement Methodology

EPA enhanced its food measurement methodology to more fully estimate flows of food throughout the food system. Expanding beyond composting, combustion with energy recovery and landfilling, 2018 estimates include food flowing to a total of nine pathways. The food waste generation estimates for 2018 account for the additional food flowing to the six new pathways which are:

- animal feed
- land application
- codigestion/anaerobic digestion
- bio-based materials/biochemical processing
- donation
- sewer/wastewater treatment

Table 2. Generation, Recycling, Composting, Other Food Management Pathways, Combustion with Energy Recovery and Landfilling of MSW, 1960 to 2018 (in millions of tons)

Activity	1960	1970	1980	1990	2000	2005	2010	2015	2017	2018
Generation	88.1	121.1	151.6	208.3	243.5	253.7	251.1	262.1	268.7	292.4
Recycling	5.6	8.0	14.5	29.0	53.0	59.2	65.3	67.6	67.0	69.1
Composting*	neg.	neg.	neg.	4.2	16.5	20.6	20.2	23.4	27.0	24.9
Other Food Management**	-	-	-	-	-	-	-	-	-	17.7
Combustion with energy recovery†	0.0	0.5	2.8	29.8	33.7	31.7	29.3	33.5	34.2	34.6
Landfilling and other disposal‡	82.5	112.6	134.3	145.3	140.3	142.2	136.3	137.6	140.5	146.1

* Composting of yard trimmings, food and other MSW organic material. Does not include backyard composting.

** Other food management pathways include animal feed, bio-based materials/biochemical processing, codigestion/anaerobic digestion, donation, land application and sewer/wastewater treatment.

Details might not add to totals due to rounding.
neg. (negligible) = less than 5,000 tons or 0.05 percent.
A dash in the table means that data are not available.

† Includes combustion of MSW in mass burn or refuse-derived fuel form, and combustion with energy recovery of source separated materials in MSW (e.g., wood pallets, tire-derived fuel).

‡ Landfilling is what remains after recycling, composting, other food management and combustion with energy recovery are accounted for. Landfilling includes other disposal methods such as combustion without energy recovery.

Table 3. Generation, Recycling, Composting, Other Food Management Pathways, Combustion with Energy Recovery and Landfilling of MSW, 1960 to 2018 (in pounds per person per day)

Activity	1960	1970	1980	1990	2000	2005	2010	2015	2017	2018
Generation	2.7	3.3	3.7	4.6	4.7	4.7	4.4	4.5	4.5	4.9
Recycling	0.2	0.2	0.4	0.6	1.0	1.1	1.1	1.2	1.1	1.2
Composting*	neg.	neg.	neg.	0.1	0.3	0.4	0.4	0.4	0.5	0.4
Other Food Management**	-	-	-	-	-	-	-	-	-	0.3
Combustion with energy recovery†	0.0	neg.	0.1	0.7	0.7	0.6	0.5	0.6	0.6	0.6
Landfilling and other disposal‡	2.5	3.1	3.2	3.2	2.7	2.6	2.4	2.3	2.4	2.4
Population (In millions)	180.0	204.0	227.3	249.9	281.4	296.4	309.1	320.9	325.1	327.2

* Composting of yard trimmings, food and other MSW organic material. Does not include backyard composting.

** Other food management pathways include animal feed, bio-based materials/biochemical processing, codigestion/anaerobic digestion, donation, land application and sewer/wastewater treatment.

Details might not add to totals due to rounding.
neg. (negligible) = less than 5,000 tons or 0.05 percent.
A dash in the table means that data are not available.

† Includes combustion of MSW in mass burn or refuse-derived fuel form, and combustion with energy recovery of source separated materials in MSW (e.g., wood pallets, tire-derived fuel).

‡ Landfilling is what remains after recycling, composting, other food management and combustion with energy recovery are accounted for. Landfilling includes other disposal methods such as combustion without energy recovery.

Analyzing MSW

EPA analyzes MSW by breaking down the data in two ways: by material and by product. Materials are made into products, which are ultimately reprocessed through recycling or composting or managed by combustion with energy recovery facilities or landfills. They may also be processed by other management methods for food. Examples of materials that EPA tracks include paper and paperboard, plastics, metals, glass, rubber, leather, textiles, wood, food and yard trimmings. For a full list of materials, *see* Table 1.

Products are what people buy and handle, and they are manufactured out of the types of materials listed above. Product categories include containers and packaging, nondurable goods, durable goods, food and yard trimmings. Containers and packaging, such as milk cartons and plastic wrap, are assumed to be in use for a year or less; nondurable goods like newspaper and clothing are assumed to be in use for less than three years; and durable goods, such as furniture, are assumed to be in use for three or more years. Some products, such as appliances, may be made of more than one material. Information about products shows how consumers are using and discarding materials and offers strategies on ways to maximize the source reduction, recycling and composting of materials.

Materials in MSW

Table 1 and the following figures provide specific information about materials in MSW. Table 1 shows generation, recycling, composting, other food management pathways, combustion with energy recovery and landfilling by material, weight and percent of generation.

Figure 4, below, provides the breakdown of MSW generation by material. Paper and paperboard, along with food, continued to be the largest components of MSW generated. Paper and paperboard accounted for about 23 percent, while food accounted for over 21 percent. Yard trimmings and plastics comprised about 12 percent each. The remaining amount of MSW generated consisted of rubber, leather and textiles; metals; wood; glass; and other materials.

Figure 5 provides the breakdown of MSW recycling by material in 2018. Paper and paperboard comprised the largest component of MSW recycling, representing nearly 67 percent. Metals made up over 12 percent of MSW recycled. The remaining amount of MSW recycled consisted of rubber, leather and textiles; plastics; glass; wood; and other materials.

Figure 6 provides the breakdown of MSW composting and other food management pathways by material, Figure 7 provides the breakdown of MSW combustion with energy recovery and Figure 8 provides the breakdown of MSW landfilling.

Figure 4. Total MSW Generation (by material), 2018
292.4 Million Tons

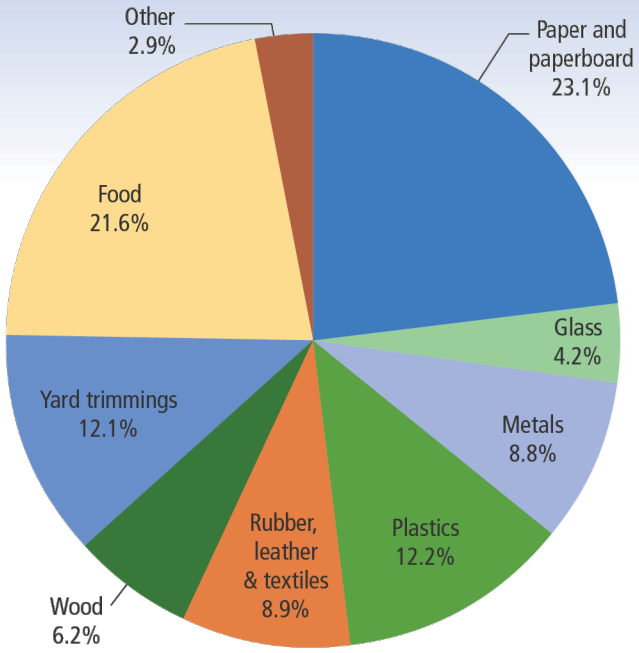


Figure 5. Total MSW Recycling (by material), 2018
69.1 Million Tons

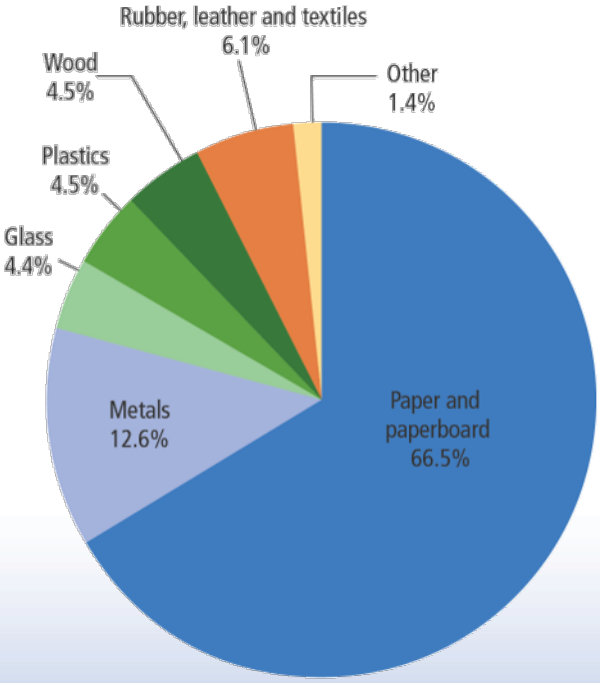


Figure 6. Total MSW Composting and Other Food Management Pathways (by material), 2018
42.6 Million Tons

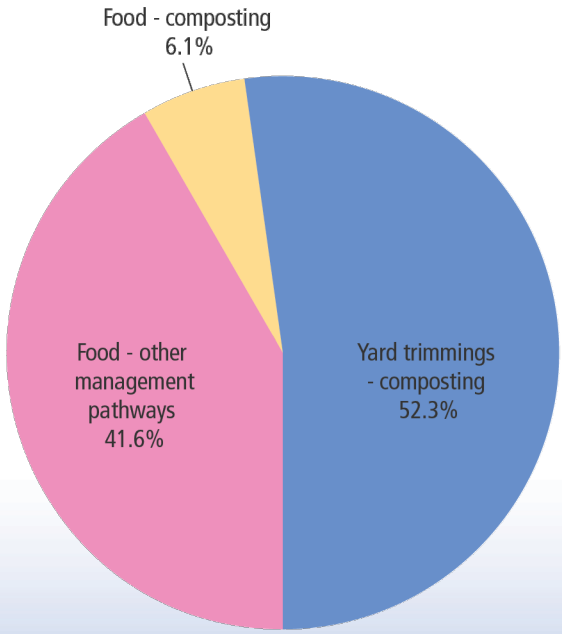


Figure 7. Total MSW Combusted with Energy Recovery (by material), 2018 34.6 Million Tons

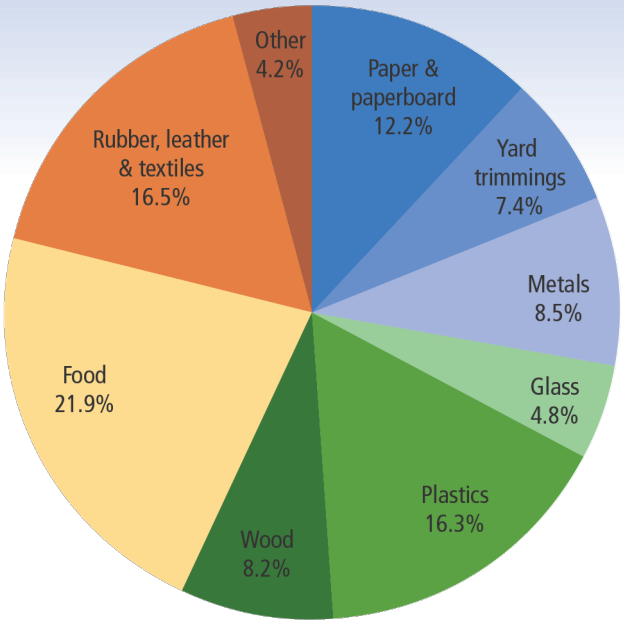
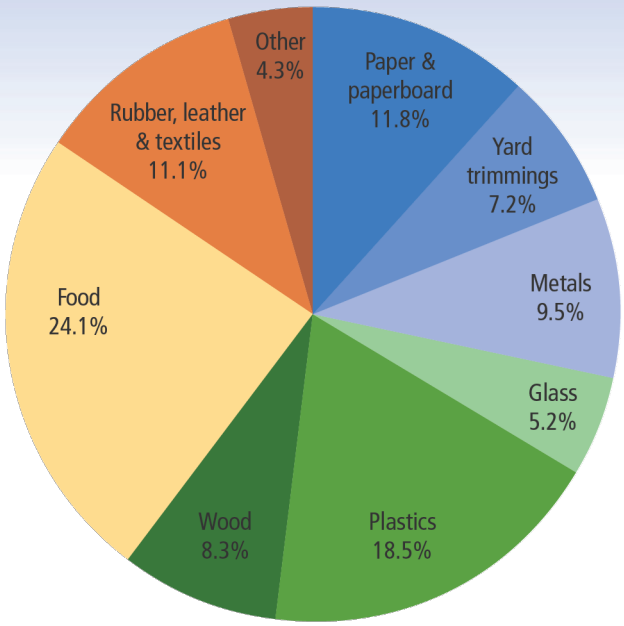


Figure 8. Total MSW Landfilled (by material), 2018 146.1 Million Tons



Products in MSW

The following information provides the details of the products found in MSW, including generation, recycling, composting, other food management pathways, combustion with energy recovery and landfilling by product category, weight and percent of generation. The product categories include containers and packaging, durable goods, nondurable goods, and other wastes which include food, yard trimmings and miscellaneous inorganic wastes. See Table 4 for generation and management by product category.

These other wastes made up the largest portion of MSW generated at 102.6 million tons (35.1 percent) in 2018. More than 82 million tons of containers and packaging (28.1 percent), 57.1 million tons (19.5 percent of MSW generation) of durable goods and more than 50 million tons (17.3 percent of MSW generation) of nondurable goods were generated.

The containers and packaging product category had the highest recycling rate at 53.9 percent in 2018. Paper products, steel and aluminum were the most recycled materials by percentage in this category. The recycling of nondurable goods was 28.1 percent. Paper products such as newspapers/mechanical papers were the most recycled nondurable goods. Newspapers/mechanical papers include newspapers, directories, inserts, as well as some advertisement and direct mail printing. Overall, 18.5 percent of durable goods were recycled. With a 99 percent recycling rate in 2018, lead-acid batteries continued to be one of the most recycled products.

Yard trimmings had the highest composting rate of all product categories at 63 percent. Food was composted at a rate of 4.1 percent. Other food management pathways were estimated at 28.1 percent of food waste generation.

Durable goods were combusted at a rate of 16 percent and nondurables at a rate of 14.1 percent. Food and miscellaneous inorganic wastes were combusted with energy recovery with a rate of 11.9 percent and 19.7 percent, respectively. Containers and packaging, along with yard trimmings, were combusted at rates below 10 percent.

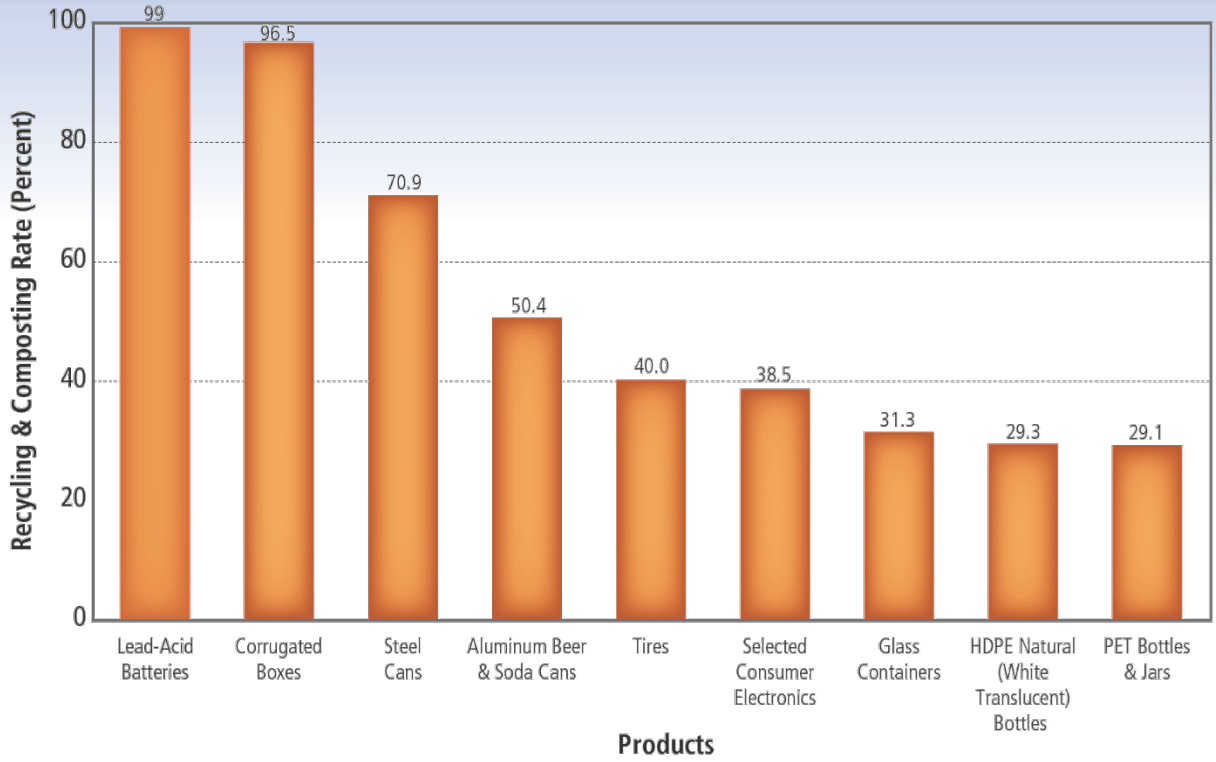
Durable goods had the highest landfill rate of 65.5 percent. Nondurable goods had the second highest landfill rate at 57.8 percent. Food had the third highest landfill rate of 55.9 percent. Containers and packaging, along with yard trimmings, were the product categories with the lowest landfill rates at 37.1 percent and 29.7 percent, respectively.

Figure 9 displays selected individual products with high recycling rates.

Recycling Rates

Measured by percent of generation, individual products with the highest recycling rates in 2018 were lead-acid batteries (99 percent), corrugated boxes (96.5 percent), steel cans (70.9 percent), newspapers/mechanical papers (64.8 percent), major appliances (59.8 percent), aluminum cans (50.4 percent), mixed paper (43.1 percent), tires (40 percent) and selected consumer electronics (38.5 percent).

Figure 9. Selected Products with High Recycling Rates, 2018*



*Does not include combustion with energy recovery

Table 4. Generation, Recycling, Composting, Other Food Management Pathways, Combustion with Energy Recovery and Landfilling of Products in MSW, 2018* (in millions of tons and percent of generation of each product)

Products	Weight Generated	Weight Recycled	Weight Composted	Weight Other Food Management Pathways¥	Weight Combusted with Energy Recovery	Weight Landfilled	Recycling as Percent of Generation	Composting as Percent of Generation	Other Food Management Pathways as Percent of Generation	Combustion as Percent of Generation	Landfilling as Percent of Generation
Durable goods											
Steel	16.99	4.73	-	-	2.20	10.06	27.8%	-	-	13.0%	59.2%
Aluminum	1.75	-	-	-	0.27	1.48	-	-	-	15.4%	84.6%
Other nonferrous metals†	2.51	1.69	-	-	0.08	0.74	67.3%	-	-	3.2%	29.5%
Glass	2.46	Negligible	-	-	0.33	2.13	Negligible	-	-	13.4%	86.6%
Plastics	13.69	0.93	-	-	1.74	11.02	6.8%	-	-	12.7%	80.5%
Rubber and leather	7.98	1.67	-	-	2.27	4.04	20.9%	-	-	28.5%	50.6%
Wood	6.51	Negligible	-	-	1.18	5.33	Negligible	-	-	18.1%	81.9%
Textiles	3.87	0.58	-	-	1.02	2.27	15.0%	-	-	26.3%	58.7%
Other materials	1.34	0.97	-	-	0.03	0.34	72.4%	-	-	2.2%	25.4%
Total durable goods	**57.10**	**10.57**	**-**	**-**	**9.12**	**37.41**	**18.5%**	**-**	**-**	**16.0%**	**65.5%**
Nondurable goods											
Paper and paperboard	25.49	12.08	-	-	2.63	10.78	47.4%	-	-	10.3%	42.3%
Plastics	7.46	0.18	-	-	1.42	5.86	2.4%	-	-	19.0%	78.6%
Rubber and leather	1.18	Negligible	-	-	0.23	0.95	Negligible	-	-	19.5%	80.5%
Textiles	12.87	1.93	-	-	2.14	8.80	15.0%	-	-	16.6%	68.4%
Other materials	3.44	Negligible	-	-	0.67	2.77	Negligible	-	-	19.5%	80.5%
Total nondurable goods	**50.44**	**14.19**	**-**	**-**	**7.09**	**29.16**	**28.1%**	**-**	**-**	**14.1%**	**57.8%**

Table 4 (continued). Generation, Recycling, Composting, Other Food Management Pathways, Combustion with Energy Recovery and Landfilling of Products in MSW, 2018* (in millions of tons and percent of generation of each product)

Products	Weight Generated	Weight Recycled	Weight Composted	Weight Other Food Management Pathways¥	Weight Combusted with Energy Recovery	Weight Landfilled	Recycling as Percent of Generation	Composting as Percent of Generation	Other Food Management Pathways as Percent of Generation	Combustion as Percent of Generation	Landfilling as Percent of Generation
Containers and packaging											
Steel	2.21	1.63	-	-	0.11	0.47	73.8%	-	-	5.0%	21.2%
Aluminum	1.92	0.67	-	-	0.25	1.00	34.9%	-	-	13.0%	52.1%
Glass	9.79	3.06	-	-	1.31	5.42	31.3%	-	-	13.3%	55.4%
Paper and paperboard	41.90	33.89	-	-	1.57	6.44	80.9%	-	-	3.7%	15.4%
Plastics	14.53	1.98	-	-	2.46	10.09	13.6%	-	-	16.9%	69.5%
Wood	11.58	3.10	-	-	1.66	6.82	26.9%	-	-	14.3%	58.8%
Other materials	0.29	Negligible	-	-	0.06	0.23	Negligible	-	-	20.7%	79.3%
Total containers and packaging	**82.22**	**44.33**	**-**	**-**	**7.42**	**30.47**	**53.9%**	**-**	**-**	**9.0%**	**37.1%**
Other wastes											
Food, other‡	63.13	-	2.59	17.71	7.55	35.28	-	4.1%	28.1%	11.9%	55.9%
Yard trimmings	35.40	-	22.30	-	2.57	10.53	-	63.0%	-	7.3%	29.7%
Miscellaneous inorganic wastes	4.07	-	-	-	0.80	3.27	-	-	-	19.7%	80.3%
Total other wastes	**102.60**	**-**	**24.89**	**17.71**	**10.92**	**49.08**	**-**	**24.3%**	**17.3%**	**10.6%**	**47.8%**
Total municipal solid waste	**292.36**	**69.09**	**24.89**	**17.71**	**34.55**	**146.12**	**23.6%**	**8.5%**	**6.1%**	**11.8%**	**50.0%**

* Includes waste from residential, commercial and institutional sources.

¥ Animal feed, bio-based materials/biochemical processing, codigestion/anaerobic digestion, donation, land application, sewer/wastewater treatment.

† Includes lead from lead-acid batteries.

‡ Includes collection of other MSW organics for composting.

Details might not add to totals due to rounding.

Negligible = less than 5,000 tons or 0.05 percent.
A dash in the table means that data are not available.

Environmental and Economic Benefits

Environmental Benefits of Recycling and Composting

The energy and greenhouse gas (GHG) benefits of recycling, composting and combustion with energy recovery that are shown in Table 5 are calculated using EPA's WARM (Waste Reduction Model) tool (*See*: https://www.epa.gov/warm). WARM calculates and totals the GHG emissions of baseline and alternative waste management practices, including source reduction, recycling, composting, combustion with energy recovery and landfilling. For example, paper and paperboard recycling, at about 46 million tons, resulted in a reduction of over 155 $MMTCO_2E$ in 2018. This reduction is equivalent to removing over 33 million cars from the road for one year.

> In 2018, about 94 million tons of MSW in the U.S. were recycled and composted, saving over 193 $MMTCO_2E$. This is comparable to the emissions that could be reduced from taking almost 42 million cars off the road in a year.

Table 5. 2018 Environmental Benefits

(The numbers in the Recycled, Composted, Combustion with Energy Recovery and Landfilled columns are listed by weight of material* in millions of tons)

Material	Recycled	Composted	Combustion with Energy Recovery	Landfilled	GHG Benefits ($MMTCO_2E$)	Number of Cars Taken Off the Road Per Year (millions of cars)
Paper and paperboard	45.97	-	4.20	17.22	(155.17)	(33.52)
Glass	3.06	-	1.64	7.55	(0.90)	(0.19)
Metals						
Steel	6.36	-	2.31	10.53	(15.50)	(3.35)
Aluminum	0.67	-	0.56	2.66	(6.12)	(1.32)
Other nonferrous metals**	1.69	-	0.08	0.74	(7.54)	(1.63)
Total metals	**8.72**	**-**	**2.95**	**13.93**	**(29.16)**	**(6.30)**
Plastics	3.09	-	5.62	26.97	4.13	0.89
Rubber and leather†	1.67	-	1.73	0.78	0.17	0.04
Textiles	2.51	-	3.22	11.30	(2.56)	(0.55)
Wood	3.10	-	2.84	12.15	(3.30)	(0.71)
Food, other‡	-	2.59	7.55	35.28	(6.97)	(1.51)
Yard trimmings	-	22.30	2.57	10.53	0.78	0.17
Miscellaneous inorganic wastes	-	-	0.80	3.27	(0.28)	(0.06)
Totals	68.12	24.89	33.12	138.98	(193.26)	(41.74)

*Includes material from residential, commercial, institutional and industrial sources (except not industrial process waste).
**Includes lead-acid batteries. Other nonferrous metals calculated in WARM as mixed metals.
†Only includes rubber from tires. ‡Includes collection of other MSW organics for composting.

These calculations do not include an additional 24.9 million tons of MSW that could not be addressed in the WARM model (including 17.7 million tons from food waste managed by means outside of the scope of the WARM model). $MMTCO_2E$ is million metric tons of carbon dioxide equivalent. Numbers in parentheses indicate a reduction in either greenhouse gases or vehicles, and therefore represent environmental benefits. Details might not add to totals due to rounding.

Source: WARM model Version 15 (https://www.epa.gov/warm). Number of cars taken off the road/year was calculated using the Greenhouse Gas Equivalency Calculator, updated March 2020.

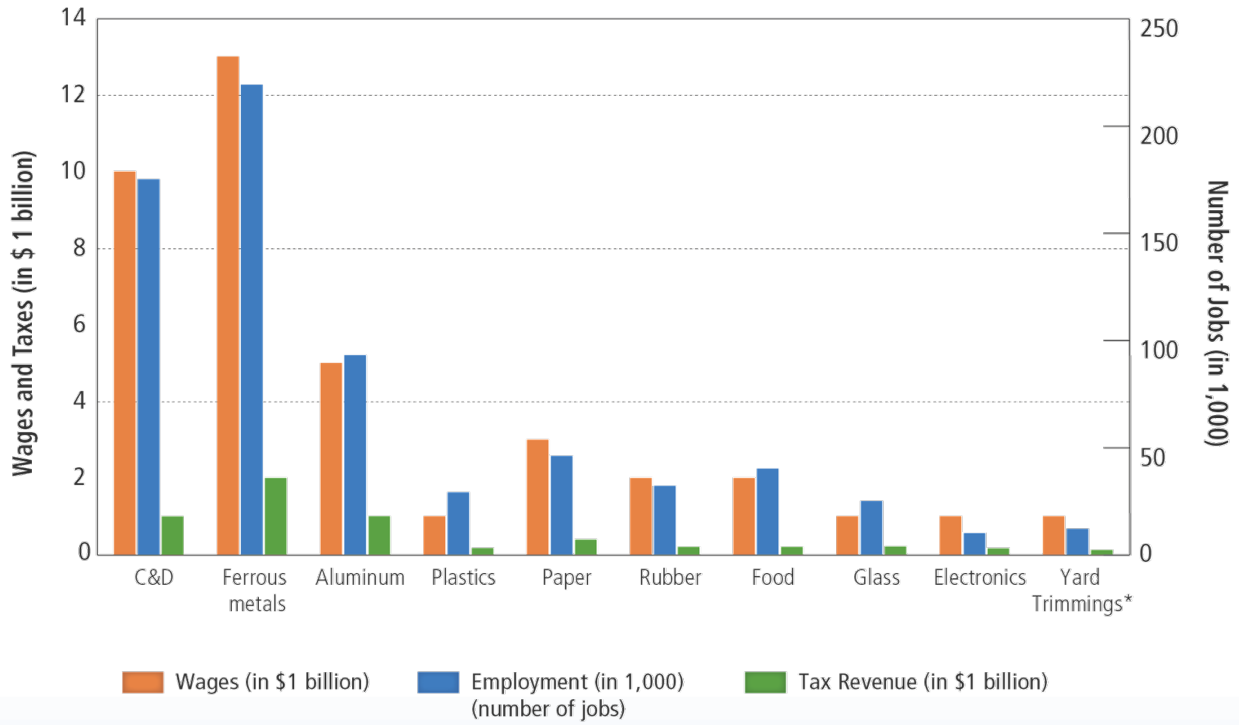
Economic Indicators

Economic Benefits of Recycling and Composting

How our nation uses materials is fundamental to our economic and environmental future. Economic and community benefits of recycling include increasing economic security by tapping a domestic source of materials; supporting American manufacturing; conserving valuable resources; and creating jobs in the recycling and manufacturing industries.

In 2020, EPA updated the Recycling Economic Information (REI) Report[1] to increase the understanding of the economic implications of material reuse and recycling. The 2020 REI Report included updated information about the number of recycling jobs, wages and tax revenue (*See* Figure 10). The report showed that the recycling and reuse of materials creates jobs and also generates local and state tax revenues. The data from the most recent year available showed that in 2012, recycling and reuse activities in the United States accounted for: 681,000 jobs; $37.8 billion in wages; and $5.5 billion in tax revenues. This calculation equates to 1.17 jobs for every 1,000 tons of materials recycled. Ferrous metal provided the largest contribution to all three categories (jobs, wages and tax revenue), followed by C&D and nonferrous metals, such as aluminum.

Figure 10. Wages, Taxes and Jobs Attributed to Recycling



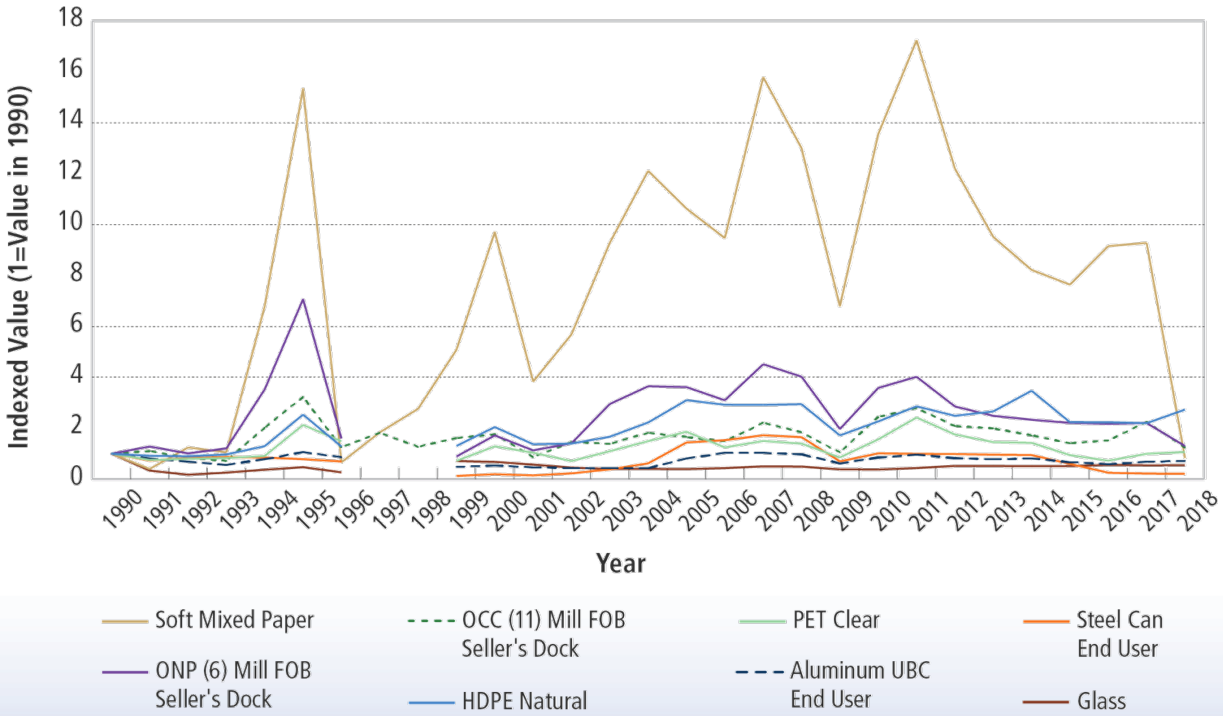
* Yard Trimmings category includes biodiesel, biogas, compost, mulch and wood chips

Recycled Commodity Values

Scrap[2] commodity markets set the price for materials that are being recycled, such as various types of paper or plastic. Manufacturers can realize cost, energy and environmental savings when scrap commodities are used as raw materials instead of virgin materials[3].The prices for these markets are determined by the perceived value of the commodity and the relative supply and demand at any given point in time. This could provide insight on how municipalities or other organizations responsible for recycling may change their behavior to promote recycling practices and the resulting prices could be a driver toward the overall incentive to recycle across the country. This analysis focuses on the market set prices of a variety of postconsumer plastics, steel and aluminum cans, paper and glass, which represent a subset of all recycled commodity markets.

Figure 11 shows trends in commodity prices over time. It provides the indexed values by year for the following recycled commodities from 1990 to 2018: high-density polyethylene (HDPE) natural bottles; polyethylene terephthalate (PET) clear bottles; aluminum used beverage cans (UBC); steel cans; old newspaper (ONP) (grade 6 and 56); old corrugated containers (OCC) (grade 11); paper stock (PS) (grade 1 and 54) soft mixed paper; and glass containers. The values are normalized to 2018 using the Consumer Price Index (CPI) from the Bureau of Labor Statistics (BLS).They are indexed to allow commodity values with different metrics, such as dollars per ton, dollars per gross ton and dollars per short ton, to be shown on the same graph and to compare their relative rates of change. The indexed value indicates the change in value of the data since 1990, where one is equal to the value in 1990. For example, an indexed value of two would mean the commodity value for that year would be two times the 1990 value.

Figure 11. Indexed Recycled Commodity Values by Year



Source: Pulp & Paper Global Fact & Price Book, 2003-2004. Page 128. Paperloop, Inc. 2004. See endnotes for additional sources[4]

Figure 11 shows similar trends across all commodities for indexed values, where one is equal to the value in 1990. For example, all commodity values spiked in 1995, except steel cans, and dipped in 2009. Many commodities also experienced a price spike in 2000, 2007 and 2011. In contrast, the indexed lines for glass, aluminum and steel cans appear to fluctuate less frequently. Figure 11 also shows all paper grades (ONP, OCC and mixed paper) experienced a drop in 2018.

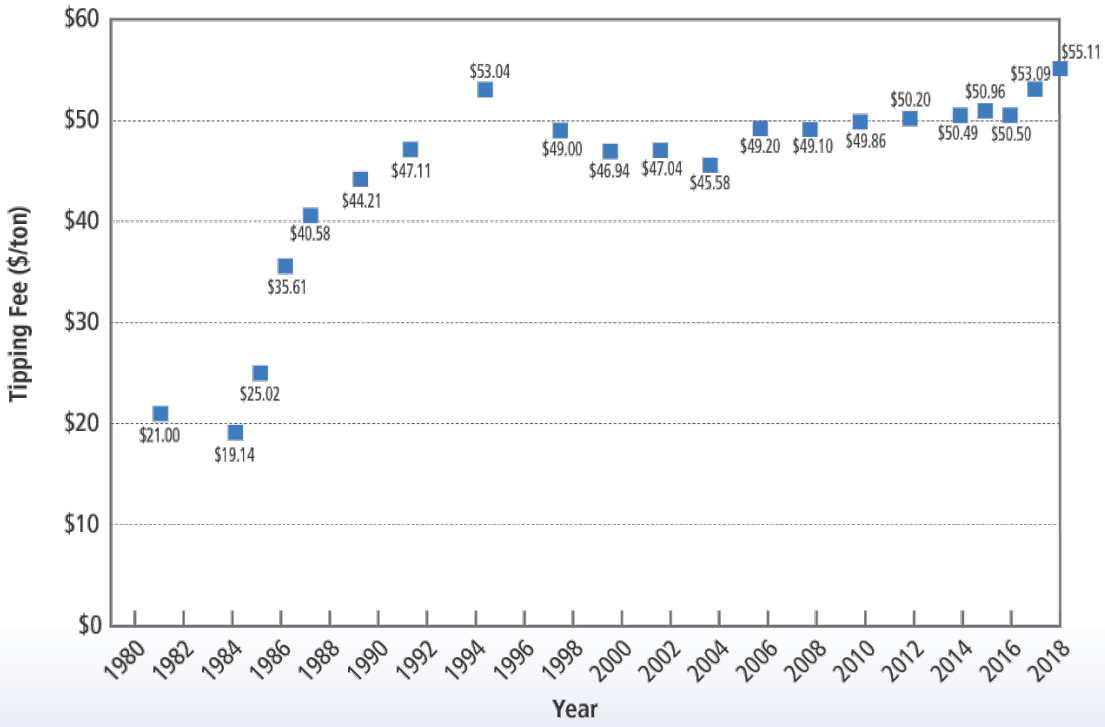
Landfill Tipping Fees

Tipping fees are important to consider as they typically increase as landfill capacity decreases. For example, the average tipping fee in South Central states ($34.80) with more available space for landfills (Arkansas, Louisiana, New Mexico, Oklahoma, Texas) is about half of the average in the Northeast ($67.39).[5]

From 1985 to 1995, there was a rapid rise in national landfill tipping fees, followed by a steady decrease from 1995 to 2004. Since 2004, there has been a slow and steady average increase of about one percent per year in landfill tipping fees (*See* Figure 12). The tipping fees are expressed in constant 2018 dollars.

To allow for meaningful comparisons, national mean annual landfill tipping fees were normalized to the value of the dollar in 2018 using the Consumer Price Index (CPI) from the Bureau of Labor Statistics. This figure shows an average increase from 1985 to 1995 of $3.39 per year, followed by a steady decrease of $0.83 per year through 2004 and an average increase of $0.68 per year from 2004 to 2018.

Figure 12. National Landfill Tipping Fees, 1982-2018 ($2018 per ton)



Source: National Solid Wastes Management Association (NSWMA) Municipal Solid Waste Landfill Facts. See endnotes for additional sources[6]

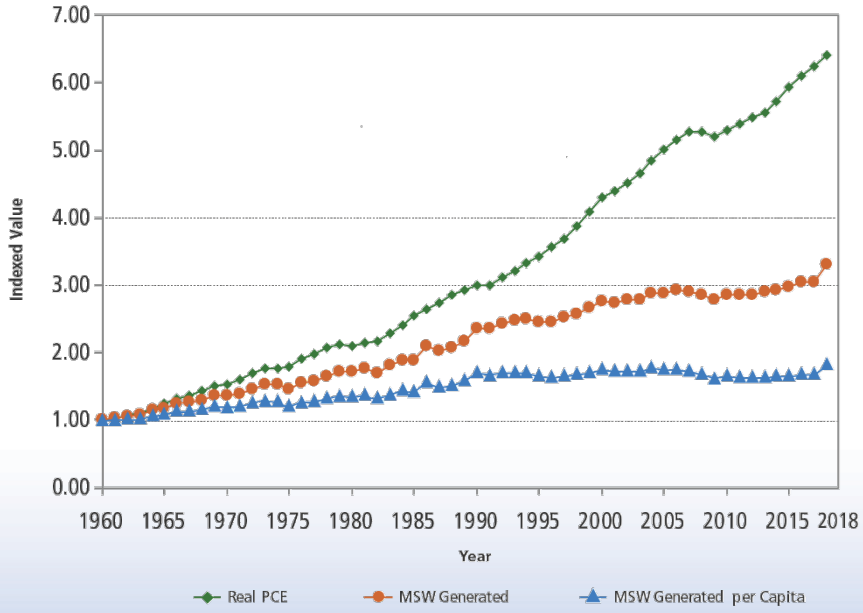
MSW Generation and Household Spending

In the United States, the change in the amount of MSW generated typically mirrors trends in how much money households spent on goods and services. Personal Consumer Expenditures (PCE) measure household spending on goods and services such as food, clothing, vehicles and recreation services. PCE is one of the four components of economic growth, along with government spending, private investments and net exports. As PCE is an indicator of the household consumption of goods and services, which make up nearly 70 percent of the gross domestic product (GDP), PCE has a stronger conceptual tie to MSW generation than the other three GDP components. PCE adjusted for inflation is referred to as real PCE. This metric is more useful in making comparisons over time because it normalizes the value of a dollar by considering how much a dollar could purchase in the past versus today. Figure 13 explores the relationship between MSW generated and real PCE.

Figure 13 is an indexed graph, showing the relative changes in real PCE, MSW generated and MSW generated per capita over time. It is indexed to allow all three of these metrics to be shown on the same graph and to compare their relative rates of change since 1960. The indexed value indicates the change in the value of the data since 1960. For example, if, for a given year, the value was three, then the data value for that year would be three times the 1960 value. In this case, a 1960 value of 200 would mean the resulting year's value would be 600. The 2018 MSW per capita generation indexed value is 1.8, which means that MSW per capita generation has increased by 80 percent since 1960.

Figure 13 shows that real PCE has increased at a faster rate than MSW generation, and the disparity has become even more distinct since the mid-1990s. This index indicates that the amount of MSW generated per dollar spent is falling. In other words, the U.S. economy has been able to enjoy dramatic increases in household spending on consumer goods and services without the societal impact of similarly increasing MSW generation rates. This figure also shows that the MSW generated per capita leveled off in the early-to-mid 1990s.

Figure 13. Indexed MSW Generated and Real PCE over Time (1960-2018)



Source: See endnotes[7]

MSW Methodology

The data summarized in this fact sheet characterizes the MSW stream as a whole by using a materials flow methodology that relies on a mass balance approach. EPA recognizes that there are several approaches to measuring material flows. To be consistent, EPA reports the quantities of materials in tons in the current fact sheet, but the Agency will continue to explore options for alternative measurement methodologies to describe materials management in the United States.

Using data gathered from industry associations, businesses and government sources, such as the U.S. Department of Commerce and the U.S. Census Bureau, EPA estimates the weight in tons of all MSW materials and products generated, recycled, composted, managed by other methods for food, combusted with energy recovery and landfilled. Other sources of data, such as waste characterizations and research reports performed by governments, industry or the press, supplement these data.

EPA has consistently used materials flow analysis to allow for the comparison of data over the last three decades. EPA recognizes that this methodology differs from other methodologies that also estimate the generation of MSW and other waste data. EPA will continue to work with stakeholders to identify methodologies and additional publicly available data to improve our national understanding of materials flow in the United States.

Construction and Demolition (C&D) Debris Generation and Management Results

Construction and demolition (C&D) debris is a type of waste that is not included in MSW. Materials included in C&D debris are steel, wood products, drywall and plaster, brick and clay tile, asphalt shingles, concrete and asphalt concrete (asphalt pavement). These materials are used in buildings, roads and bridges, and other structures. The generation estimate represents C&D debris amounts from construction, renovation and demolition activities for buildings, roads and bridges, and other structures. C&D debris end-of-life (EOL) management includes quantities of materials going to next use or directed to landfills. “Next use” designates an intended next-use market which, depending on the material, may include fuel, manufactured products, aggregate, compost and mulch or soil amendment. The manufactured products next use encompasses estimates of C&D debris processed (e.g., ground, crushed or extracted and melted) for incorporation in the manufacture of new materials and products. For example, C&D asphalt is processed for use in the production of asphalt mixtures.

In 2018, 600 million tons of C&D debris were generated. Figure 14 shows the 2018 generation composition for C&D debris. C&D concrete was the largest portion at 67.5 percent, followed by asphalt concrete at 17.8 percent. C&D wood products made up 6.8 percent, and the other products accounted for 7.9 percent combined. The 2018 generation estimates are presented in more detail in Table 6. As shown in Figure 15, demolition represented over 90 percent of total C&D debris generation. Construction, on the other hand, represented under 10 percent.

Figure 14. C&D Debris Generation Composition by Material (before processing), 2018

600 Million Tons

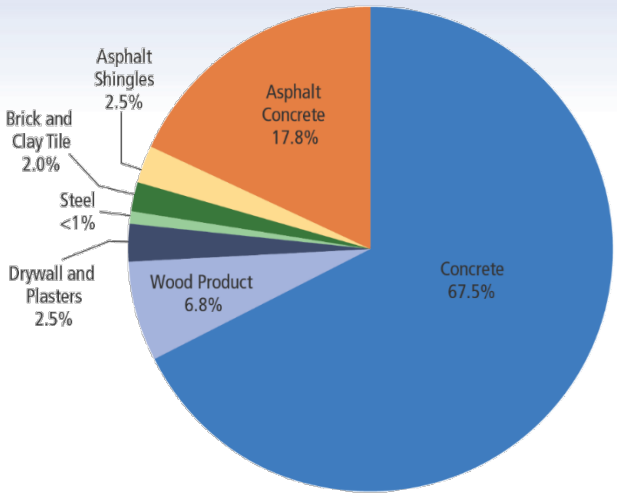


Table 6. C&D Debris Generation by Material and Activity, 2018 (in millions of tons)

	Waste During Construction	Demolition Debris	Total C&D Debris
Concrete	24.2	381.0	405.2
Wood Products[7]	3.4	37.4	40.8
Drywall and Plasters	3.9	11.3	15.2
Steel[8]	0	4.7	4.7
Brick and Clay Tile	0.3	12.0	12.3
Asphalt Shingles	1.2	13.9	15.1
Asphalt Concrete	0	107.0	107.0
Total	**33.0**	**567.3**	**600.3**

[8,9] See endnotes.

Figure 15. Contribution of Construction and Demolition Phases to Total 2018 C&D Debris Generation

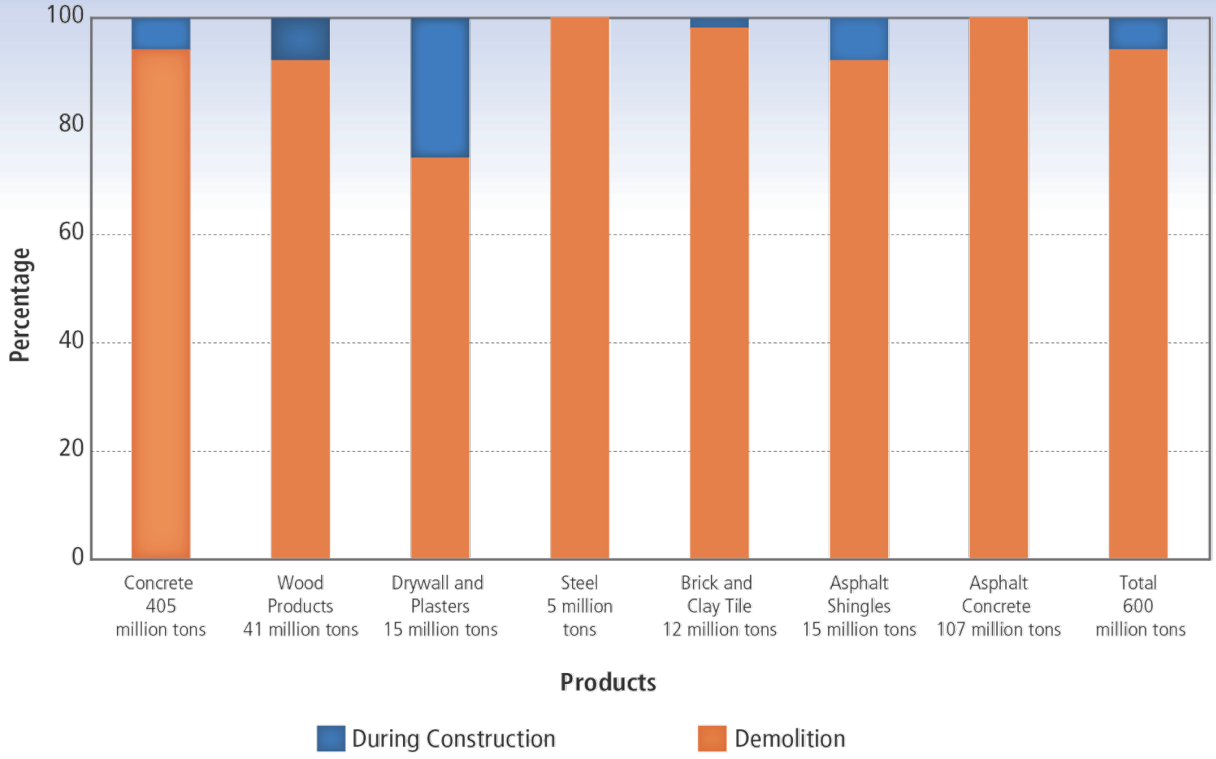


Table 7 displays the amount of C&D debris generation from buildings, roads and bridges, and other structures for each material. The "other structures" category includes C&D debris generation estimates from communication, power, transportation, sewer and waste disposal, water supply, conservation and development, and the manufacturing infrastructure. In 2018, roads and bridges contributed significantly more to C&D debris generation than buildings and other structures, and concrete made up the largest share of C&D debris generation for all three categories.

Table 7. C&D Debris Generation by Source, 2018 (in millions of tons)

	Buildings	Roads and Bridges	Other
Concrete	102.0	168.3	134.9
Wood Products[7]	39.5	0.0	1.3
Drywall and Plasters	15.2	0.0	0.0
Steel[8]	4.7	0.0	0.0
Brick and Clay Tile	12.3	0.0	0.0
Asphalt Shingles	15.1	0.0	0.0
Asphalt Concrete	0.0	107.0	0.0
Total	**188.8**	**275.3**	**136.2**

Figure 16 shows 2018 C&D debris managed through next use or sent to landfills. Aggregate was the main EOL next use for C&D debris at 52 percent. The total quantity of all C&D debris that was sent to aggregate was about 313 million tons. Concrete alone, was sent to aggregate at the quantity of about 301 million tons (see Table 8). The next largest end destination was landfill, at 24 percent of the total amount of C&D debris. The total quantity of all C&D debris that was sent to landfills was about 144 million tons. Over 71 million tons of concrete alone were sent to landfills (see Table 8).

Figure 16. C&D Debris Management by Destination, 2018
600 million tons

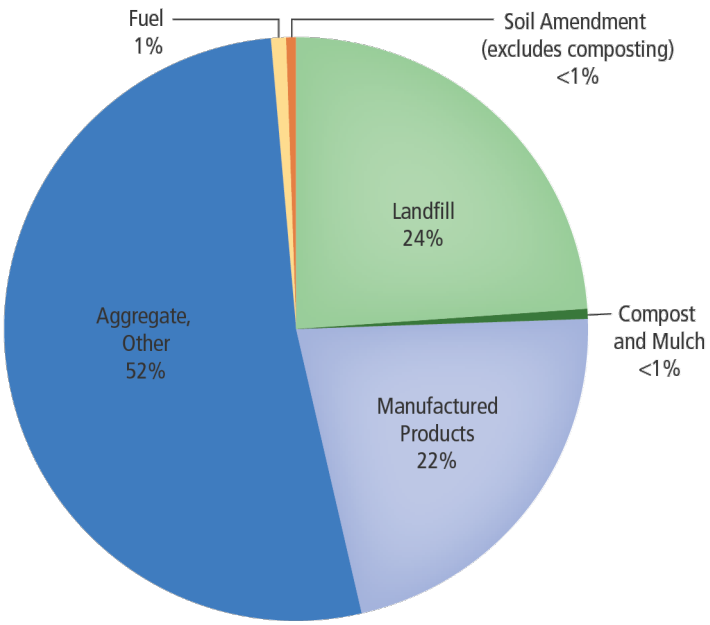


Figure 16 also shows that the "manufactured products" next use followed at 22 percent of the total generated C&D debris amount. The total quantity of all C&D debris that was sent to manufactured products was 132 million tons. About 92 million tons of C&D asphalt pavement alone, were incorporated in manufactured products (see Table 8). About 3 percent of the total C&D debris was directed to fuel, compost and mulch, and soil amendment (see Figure 16).

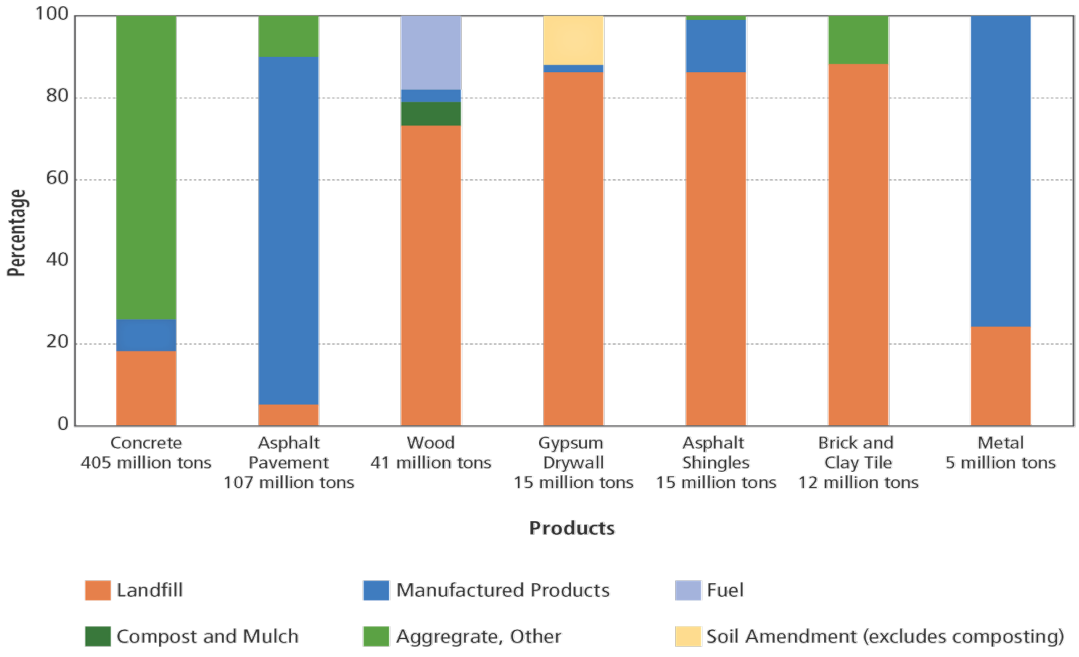
Table 8 is a summary of the total tonnages of each material type intended for next use destinations or sent to landfills. About 457 million tons were directed to next use and over 143 million tons of C&D debris were sent to landfills in 2018.

Figure 17 depicts quantities of a material in each destination as a fraction of the total generated amount for the material in 2018. The use in manufactured products was the dominant next use for asphalt concrete (asphalt pavement) and metals. Aggregate was the main destination for C&D concrete. Landfills were the primary destination for C&D debris wood, asphalt shingles, gypsum drywall[10] and brick and clay tile.

Table 8. C&D Debris Management by Material and Destination, 2018 (in millions of tons)

Material Type in C&D Debris	Landfill	Next Use					Total Next Use
		Compost and Mulch	Manufactured Products	Aggregate, Other	Fuel	Soil Amendment	
Concrete	71.2	0	32.8	301.2	0	0	334.0
Wood	29.6	2.5	1.2	0	7.5	0	11.2
Gypsum Drywall	13.2	0	.2	0	0	1.9	2.1
Metal	1.1	0	3.6	0	0	0	3.6
Brick and Clay Tile	10.8	0	0	1.5	0	0	1.5
Asphalt Shingles	13.0	0	2.0	.1	.02	0	2.1
Asphalt Concrete	4.9	0	91.8	10.3	0	0	102.1
TOTAL	**143.8**	**2.5**	**131.6**	**313.1**	**7.5**	**1.9**	**456.6**

Figure 17. C&D Debris Management by Destination, 2018 (percent of total generation amount for the material)



Resources

The 2018 data tables and the summary of the MSW characterization methodology are available on the EPA website, along with information about waste reduction, recycling and sustainable materials management.

Please visit:

https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling

https://www.epa.gov/warm

Endnotes

1. US EPA. 2020. "Recycling Economic Information Report" (2020). The 2020 REI report provided updated economic and recycling information to reflect the most recent available data for input-output modeling in the United States. The 2020 report built on the Waste Input-Output methodology by generating more current results based on transparent and publicly available data. This revised study provides greater clarity and transparency for assessing the economic impacts of recycling activities in the U.S.
2. Scrap can refer to both postconsumer as well as pre-consumer commodities; however, this analysis addresses postconsumer commodities only.
3. Institute of Scrap Recycling Industries (ISRI) 2020. 2019 Recycling Industry Yearbook. https://www.isri.org/recycling-commodities/recycling-industry yearbook.
4. Recycled Commodity Values. Soft mixed paper consists of a clean, sorted mixture of various qualities of paper not limited as to type of fiber content. Prohibitive Materials may not exceed 1 percent. There are specific limits on the percent of contaminants allowed in soft mixed paper. Data were not available for ONP, metals, plastics and glass in 1997 and 1998. For plastics, glass and metals, there was a transition in data sources between 1996 and 1999 and between 2004 and 2005, so some of the change between years could be due to the methodology of the data source for capturing data.

   Additional sources include Secondary Materials Pricing and Secondary Fiber Pricing. 2003-2018. Accessed February 2020. Available at http://www.recyclingmarkets.net/. 1970 to 2004 historical data tabulated from weekly or monthly industry publications and averaged annually during the time periods shown. Publications included Waste Age Recycling Times, Waste News, Paper Recycler, Miller Freeman, Inc.
5. Waste 360. 2018. "EREF Study Shows Continued Increase in Average MSW Landfill Tip Fees". August 1. https://www.waste360.com/landfill-operations/eref-study-shows-continued-increase-average-msw-landfill-tip-fees
6. Sources include National Solid Wastes Management Association (NSWMA) Municipal Solid Waste Landfill Facts. October 2011 (Data from 1985 to 2008). Waste Business Journal. "The Cost to Landfill MSW Continues to Rise Despite Soft Demand." July 11, 2017 (Data for 2010 to 2015). Environmental Research & Education Foundation. "Analysis of MSW Landfill Tipping Fees" April 2018 (Data for 2016 and 2017). Waste 360. "EREF Study Shows Average MSW Landfill Tip Fee Continues to Rise". October 29, 2019. (Data from 2018).
7. MSW Generation: US EPA. 2020. Solid Waste in the United States: 2018 Facts and Figures working papers. Population: U.S. Census Bureau. Population Division. Annual Estimates of the Resident Population. PCE: Bureau of Economic Analysis (BEA). 2019. Tables 2.3.4 and 2.3.5.
8. Wood consumption in buildings also includes some lumber consumed for the construction of other structures. Data were not available to allocate lumber consumption for non-residential and unspecified uses between buildings and other structures except for railroad ties. Since non-residential buildings such as barns, warehouses and small commercial buildings are assumed to consume a greater amount of lumber than other structures, the amount of lumber for construction remaining after the amount for railroad ties is split out is included in the buildings source category.
9. Steel consumption in buildings also includes steel consumed for the construction of roads and bridges. Data were not available to allocate steel consumption across different sources, but buildings are assumed to consume the largest portion of steel for construction.
10. Names of the materials are slightly different in the generation versus management analyses, due to material categorizations across the various data sources and data availability. For example, in the generation analyses the term used is drywall and plasters, whereas in the management analysis the term used is gypsum drywall.

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APPENDIX 12

ESTIMATED WASTE QUANTITIES

APPENDIX 12

CITY OF MANASSAS PARK

WASTE GENERATION PROJECTIONS

2024 ESTIMATE

YEAR	POPULATION	Pounds per person per day	TOTAL TONNAGE	RESIDENTIAL (55%) EPA 2018	COMMERCIAL 45% EPA 2018	RECYCLING (25% minimum) DEQ regulation	CDD waste (1.8 tons per person per year) EPA 2018	HHW (20 pounds per household per year or 6 pounds per person per year) County
2020	17,216	2.95	9,269	5,098	4,171	2,317	30,989	52
2030	19,876	2.95	10,701	5,885	4,815	2,675	35,777	60
2035	21,436	2.95	11,541	6,347	5,193	2,885	38,585	64
2040	22,996	2.95	12,380	6,809	5,571	3,095	41,393	69
2045	24,729	2.95	13,313	7,322	5,991	3,328	44,512	74

2018 EPA ESTIMATE

YEAR	POPULATION	Pounds per person per day	TOTAL TONNAGE	RESIDENTIAL (55%) EPA 2018	COMMERCIAL 45% EPA 2018	RECYCLING (25% minimum) DEQ regulation	CDD waste (1.8 tons per person per year) EPA 2018	HHW (20 pounds per household per year or 6 pounds per person per year) County
2020	17,216	4.9	15,395	8,467	6,928	3,849	30,989	52
2030	19,876	4.9	17,774	9,776	7,998	4,444	35,777	60
2035	21,436	4.9	19,169	10,543	8,626	4,792	38,585	64
2040	22,996	4.9	20,564	11,310	9,254	5,141	41,393	69
2045	24,729	4.9	22,114	12,163	9,951	5,528	44,512	74

APPENDIX 13

RECYCLING SUMMARY 2012 – 2016 – 2020 AND CY 2020 FORM

City of Manassas Park, Virginia

Principal Recyclable Materials (PRM)

PRM Material	Tons recycled CY 2012	Tons recycled CY 2016	Tons recycled CY 2020
Paper	71	516	1,212
Metal	43	586	3
Plastic	0	3	0
Glass	0	0	0
Commingled	837	1,345	1,870
Yard Waste	435	146	1
Waste Wood	62	10	0
Textiles	0	0	0
Waste Tires	104	32	23
Used Oil	164	368	26
Used Oil Filters	9	4	0
Used Antifreeze	12	13	2
Batteries	32	9	4
Electronics	7	3	0
Inoperative Motor Vehicles	20	0	0
Grease, Fat, Bone	0	138	0
Food Waste	192	39	115
Total PRM in Tons	**1,986**	**3,211**	**3,256**

MSW Disposed

Waste Type	Tons disposed CY 2012	Tons disposed CY 2016	Tons disposed CY 2020
Houshold Waste	5,695	5,009	6,595
Commercial Waste	1,186	1,912	2,330
Institutional Waste	120.11	3724	0
Other	0	0	0
Total MSW	**7,002**	**10,645**	**8,925**

Credits Solid Waste Reused

Material	2012	2016	2020
Used oil	4.33	0	0
Antifreeze	1.25	0	0
Furniture	1.5	0	0
Pallets	1.5	26	1
Total Reused Soild Waste	**8.58**	**26**	**1**

Credits Non-MSW Recycled

Material	2012	2016	2020
Concrete / stone	457	1784	274
Total Reused Soild Waste	**457**	**1784**	**274**

Credits Total	**466**	**1810**	**275**

Credit for Source Reduction Program (SRP)

Rates	2012	2016	2020
SRP	0%	0%	2%

Recycling Rates

Rates	2012	2016	2020
Base Recycling Rate	22.1%	23.2%	26.7%
Adjusted Recycling Rate	25.9%	32.1%	28.3%
Adjusted Recycling Rate + SRP	25.9%	32.1%	30.3%
Credit Max Allowed Base +5	27.1%	28.2%	31.7%
Final Recycle Rate	**25.9%**	**28.2%**	**30.3%**

Commonwealth of Virginia
Locality Recycling Rate Report
DEQ Form 50-30 (Revised September 2018)

Date Submitted 4/29/21

Calendar Year CY2020

Solid Waste Planning Unit
Click on the adjacent cell for drop down menu

Manassas Park (City)

SWPU Web Page www.cityofmanassaspark.us

	Contact 1		Contact 2
Name	Laura Coughanour		Calvin O'Dell
Title	Public Works Operations Manager		Director of Community Development
Address Line 1	331 Manassas Dr.		331 Manassas Dr.
Address Line 2	Manassas Parrk, VA 20111		Manassas Park, VA 20111
Address Line 3			
Phone Number	703-393-0881		703-335-0019
Email address	l.coughanour@manassasparkva.gov		c.odell@manassasparkva.gov
Total Population for SWPU	17,307	**SWPU Population Density**	5,915
Mandated Recycling Rate (% will auto calculate)	25%	**Reporting Frequency** (Will auto calculate)	Every 4 years
Sources for PRM Data *Example: Permit #112, County Landfill*	Patriot Disposal Services, Inc, Manassas, Va Republic Services Inc. , Fairfax, VA, American Disposal Inc. Fairfax, VA American Recycling Center, Manassas, VA Bates Trucking Inc, Bladensburg, MD	Heritage Crystal Clean, Rockville, VA, Indianapolis, IN, Safeguard Shredding, Oakton, VA , TruShred, Gainesville, VA, Broad Run Recycling, Leesburg, VA	Milestone Metals, Fairfax, VA, Manassas Transfer Station, Manassas, VA, Butler Paper, Suffolk, VA, Balls Ford Compost Facility (PWC), Manassas, VA, Valley Proteins, Winchester, VA
Other Sources for collected data *Example: Walmart/Target*	**THE FOLLOWING MANASSAS PARK BUSINESSES:** A&H Equipment, ABC Glass & Mirror, J&K Mechanical, OHI Design, Product Conversions Co., PTAC Operating Centers, Ricks Iron Works,	Spring Valley Concrete, The King's Masons,	
Comments:	Manassas Park staff queried all area haulers and any haulers who were reported in use by Manassas Park businesses via the Business Recycling Reporting form.	As a small City of 2.25 sq. mile, Manassas Park does not have a landfill or an operating transfer station, to date. All solid waste and recycling materials are hauled by a solid waste contractor or self-hauled.	This report represents the most current data provided by those haulers who returned completed forms and the local business s who cooperated with our reporting requests.

Enter tons (whole numbers only) in the yellow highlighted boxes for PRMs and MSW Disposed.Totals will auto calculate.

Principal Recyclable Materials (PRM)	
PRM Material	**Tons recycled**
Paper	1,212
Metal	3
Plastic	0
Glass	0
Commingled	1,870
Yard Waste	1
Waste Wood	0
Textiles	0
Waste Tires	23
Used Oil	26
Used Oil Filters	0
Used Antifreeze	2
Batteries	4
Electronics	0
Inoperative Motor Vehicles	0
Other Total (Specify Material and tonnage on Rows 24 - 39 to the right.)	115
Total PRM in Tons	**3,256**

Specify Other PRMs for Row 39	
PRM Material	**Tons recycled**
Food Waste	115
Other Total	115

MSW Disposed	
Household Waste	6,595
Commercial Waste	2,330
Institutional Waste	0
Other	
Total MSW	**8,925**

Credit for Source Reduction Program	
SRP does not apply enter "0". SRP does apply enter "2"	
0	
2%	

Enter facility information and material in columns A and B. Enter tons (whole numbers only) in the yellow highlighted boxes. Totals will auto calculate.

Credits Recycling Residue Facility/Operation	Material	Tons
Total		0

Credits Solid Waste Reused Reuse Method	Material	Tons
Returned to shipping company for reuse	pallets	1
Total		1

Credits Non-MSW recycled Recycling Method	Material	Tons
Recycled into roadway materials (Broad Run Recycling, Nokesville, VA)	construction/demolition debris	274
Total		274
CREDITS TOTAL		275

Recycling rates auto calculate.

Base Recycling Rate	**26.7%**
Adjusted Recycling Rate	**28.3%**
Adjusted Recycling Rate + SRP	**30.3%**
Credit Max Allowed Base +5	**31.7%**
Final Recycle Rate	**30.3%**

APPENDIX 14

EXECUTIVE SUMMARY – NVWMB – NVRC – 2021 ANNUAL REPORT

THE DISTRICT'S PAINTCARE PROGRAM WAS ESTABLISHED IN 2016 WITH NINE COLLECTION LOCATIONS WHICH TO DATE, HAVE COLLECTED ABOUT 200,000 GALLONS OF PAINT FOR REUSE

Examples of targeted solutions: Glass Recycling and PaintCare

While the region's growth and resulting waste generation is exacerbating the areas limited processing capacity for solid waste, there have been some positive solid waste management solutions in the region. The "Purple Can Club," a network of more than 40 drop-off bins for glass food and beverage containers, was collaboratively developed by several Northern Virginia localities. Glass recovery in traditional material recovery facilities proves difficult in curbside recycling collection systems and often winds up in a landfill. To address this issue, Arlington, Fairfax, and Prince William counties as well as the City of Alexandria initially began to collect glass separately for recycling in recycling drop off centers using drop off containers painted purple. Glass collected separately from other materials contains fewer contaminants and is therefore easier to market. Since the founding of the Purple Can Club in 2019, the network has expanded to other Northern Virginia localities, Fredericksburg and Williamsburg regions of the state.

Another difficult to dispose of material is paint. The District of Columbia recently became a member of PaintCare, a national product stewardship program for leftover paint that is funded by paint manufacturer association. PaintCare collects leftover and unwanted paints and coatings from residents and businesses for proper management. PaintCare is funded by a fee on every paint product purchased and this product stewardship program has reduced the District's costs for disposing/recycling paints. The District's PaintCare program was established in 2016 with nine collection locations, which to date, have collected about 200,000 gallons of paint for reuse (DC Program Plan 2021, paintcare.org). In addition to the District of Columbia, PaintCare has also been successfully implemented in ten states throughout the country.

The product stewardship model, where manufacturers or consumers identify end of life solutions for materials, offers a framework to improve waste management for many challenging items in the waste stream. The Northern Virginia Waste Management Board supports this approach to waste management, which has been implemented successfully in several other states. In 2022, several product stewardship bills were introduced in the General Assembly to explore this approach.

ABOUT NVRC AND THE NORTHERN VIRGINIA WASTE MANAGEMENT BOARD

The Northern Virginia Regional Commission (NVRC) is a regional council of thirteen-member local governments in the Northern Virginia suburbs of Washington DC. According to Virginia's Regional Cooperation Act, NVRC is a political subdivision (a government agency) within the Commonwealth.
https://www.novaregion.org

Since 1989, solid waste managers and public works directors from each of NVRC's member jurisdictions promote regional approaches and solutions to recycling and waste management through the Northern Virginia Waste Management Board. **https://www.novaregion.org/204/Solid-Waste-and-Recycling**

For more information, contact Debbie Spiliotopoulos at dspilio@novaregion.org

nvrc
Northern Virginia Regional Commission

https://www.novaregion.org/583/Solid-Waste-Report

EXECUTIVE SUMMARY

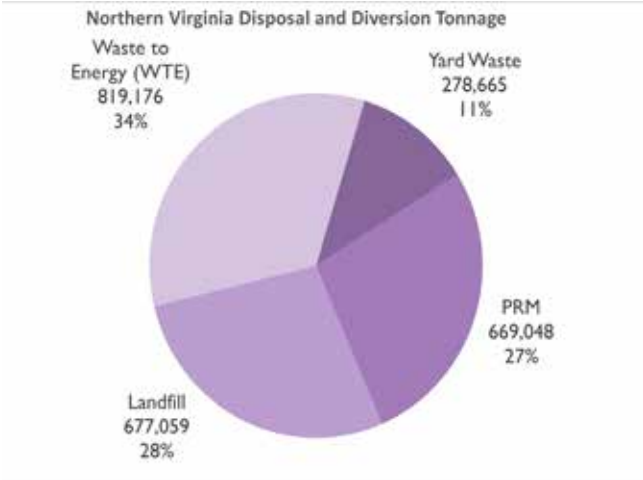
2021 STATE OF THE REGION

Public Solid Waste Services in Northern Virginia and the District of Columbia

This is a summary of the 2021 edition of the Northern Virginia Waste Management Board's Waste Report containing information on Northern Virginia and the District of Columbia solid waste management programs. The report is created by and for local waste managers, using local, state, and federal data. A dashboard, full report and earlier reports can be found here: https://www.novaregion.org/583/Solid-Waste-Report

Northern Virginia has cooperated for over 30 years in the management of solid waste generated by residents and businesses. The 2021 report reveals the following challenges and solutions.

- Population growth and employment has increased commercial and multi-family waste generation.
- Limited facility and capacity challenges limit the region's disposal and recycling options.
- The pandemic has negatively impacted local waste and recycling management and system economics.
- Hazardous and difficult to dispose of materials create a risk to the limited capacity of regional waste facilities.
- PaintCare offers an example of a product stewardship solution implemented in DC that could be replicated in Virginia.
- Purple Can Club glass recycling provides a regional solution to a challenging material.
- Jurisdictions are focused on reduction and reuse messaging to residents and businesses.



Waste Generation and Diversion in the region:

In 2020, Northern Virginia jurisdictions generated 1.5 million tons of waste. Given a regional average tip fee of $56 per ton for 2020, the disposal fee revenue generated in the region was approximately $87 million. In 2020, recycling reporting was required for all Virginia jurisdictions. The Virginia Department of Environmental Quality (DEQ) reports that Northern Virginia jurisdictions recycled 669K tons of Principal Recyclable Materials (PRM - The materials that comprise the largest recyclable fraction of the waste stream, such as paper, plastic bottles, cans), and composted 279K tons of yard waste.

Northern Virginia jurisdictions provide services for yard waste and organics management, with several

using the recently completed Balls Ford Road Compost Facility in Prince William County. Extensive local programs lead to organics representing approximately 30 percent of all materials diverted from disposal and 10 percent of all waste managed in the region.

Growth and how waste sectors are managed

Continued population growth in the Northern Virginia and DC metro region affects the types of wastes generated and the facilities needed for waste management, either disposal or recycling. Waste generation from commercial and multi-family sectors represent approximately 50 percent of the municipal solid waste generated in 2020. Businesses and institutions may continue to affect the types of waste management services needed in the future. All jurisdictions require that collection of waste generated by commercial and business entities meet local and state requirements. While waste must be collected for disposal, six of 13 jurisdictions implement regulations requiring businesses to recycle: the City of Alexandria, Arlington County, the District of Columbia, Fairfax County, City of Falls Church, and Prince William County.

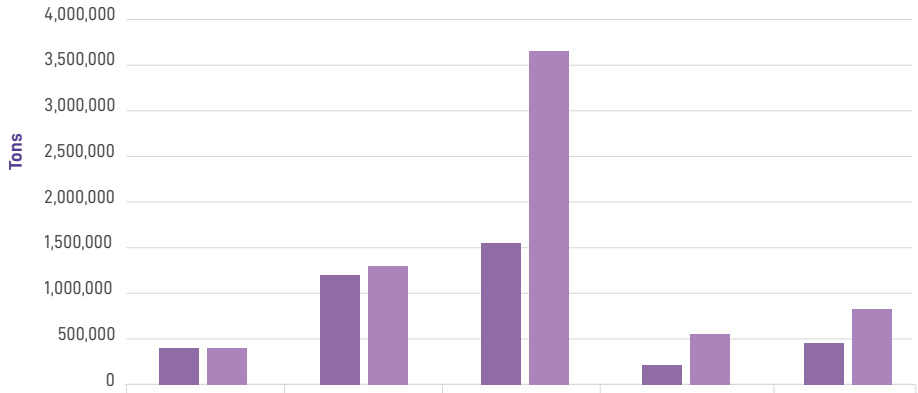
CONTINUED POPULATION GROWTH IN THE NORTHERN VIRGINIA AND DC METRO REGION AFFECTS THE TYPES OF WASTES GENERATED AND THE FACILITIES NEEDED FOR WASTE MANAGEMENT, EITHER DISPOSAL OR RECYCLING.

Localities collect waste and recycling from 245K households, or 43 percent of single-family households out of the 642K single family households in Northern Virginia. Out of 922K total households (single- and multi-family), 23 percent are served. Loudoun and Prince William Counties do not provide household collection services, so individuals and homeowner associations contract with privately owned refuse and recycling collection companies. Fairfax County, the largest county in Virginia with over 286K single family households, provides public collection service to 44K household, or 15 percent.

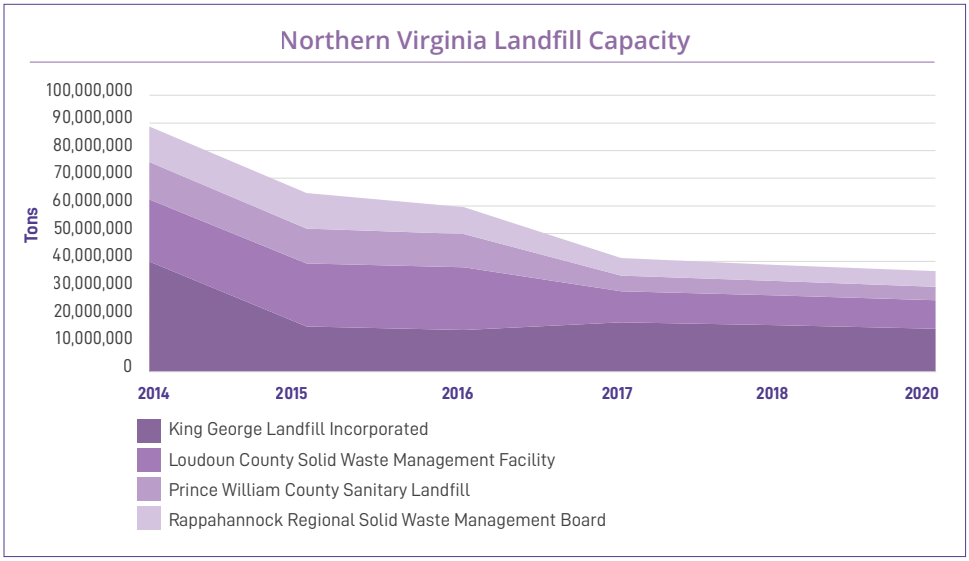
Limited capacity for waste and recycling in the region

A very limited number of disposal and recycling facilities are used by all Northern Virginia jurisdictions and the District of Columbia. With respect to disposal, only four local facilities are available for the management of 1.5 million tons generated in 2020 by the region's residents, institutions, and local businesses. Back-up waste disposal is provided only

Waste Received vs. Annual Permitted Capacity for Northern Virginia Facilities 2020



	Covanta Alexandria Arlington Limited Liability Co	Covanta Fairfax Limited Liability Company	King George Landfill Incorporated	Loudoun County Solid Waste Management Facility	Prince William County Sanitary Landfill
Waste Received	351,482	1,195,606	1,549,910	218,719	451,511
Permitted Capacity	355,875	1,292,100	3,650,000	547,500	830,375
Percent Permitted	98.8%	92.5%	42.5%	39.9%	54.4%

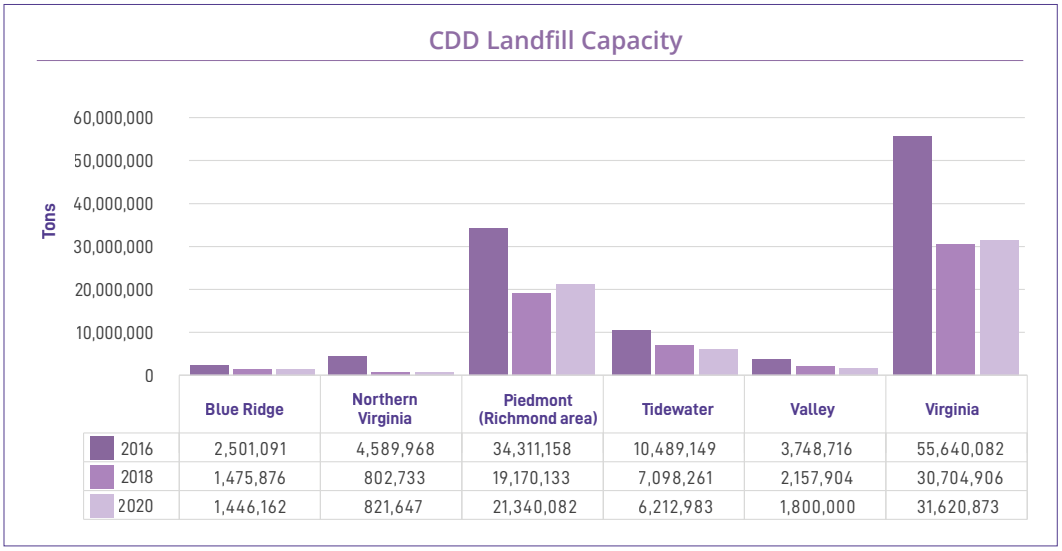


by privately-owned landfills located anywhere from 60 to 130 miles south of the Northern Virginia area. The main haul route is on I-95, one of the most congested roads on the east coast of the U.S. Travel distances and time to these landfills complicate the management and delivery of waste from Northern Virginia in addition to increasing transportation costs.

The Northern Virginia Waste Management Board members cite several reasons to focus on regional disposal capacity issues. Population and employment continue to increase, resulting in increased waste generation, while land use pressures limit opportunities to locate solid waste management facilities in Northern Virginia. The advanced composting system enhancements by Free State Farms at Prince William County's Balls Ford Road Compost facility represents the most significant solid waste infrastructure investment in the past 20 years in Northern Virginia. Fairfax and Alexandria/Arlington waste-to-energy facility hosting agreements end in 2031 and 2038, respectively. This is likely to affect the cost and capacity of disposal in the region in the future. Per ton disposal fees noted in the report do not include transportation costs.

Northern Virginia jurisdictions are totally reliant on the private sector for recyclables processing and sale. Northern Virginia jurisdictions and the District of Columbia use three privately owned Material Recovery Facilities (MRF) in Northern Virginia and one in Maryland which process recyclables generated within the region (paper, cardboard, plastic, cans, etc.).

Two construction and demolition debris (CDD) landfills in Northern Virginia closed in the past five years, with jurisdictions reporting decreased opportunities for this material's disposal. With continued growth in construction sector employment and related construction waste generation, the capacity for CDD management has reduced in other regions as well. DEQ reports that remaining permitted CDD disposal lifespan statewide has dropped from 21.4 years in 2019 to 16 years in 2020.



	Blue Ridge	Northern Virginia	Piedmont (Richmond area)	Tidewater	Valley	Virginia
2016	2,501,091	4,589,968	34,311,158	10,489,149	3,748,716	55,640,082
2018	1,475,876	802,733	19,170,133	7,098,261	2,157,904	30,704,906
2020	1,446,162	821,647	21,340,082	6,212,983	1,800,000	31,620,873