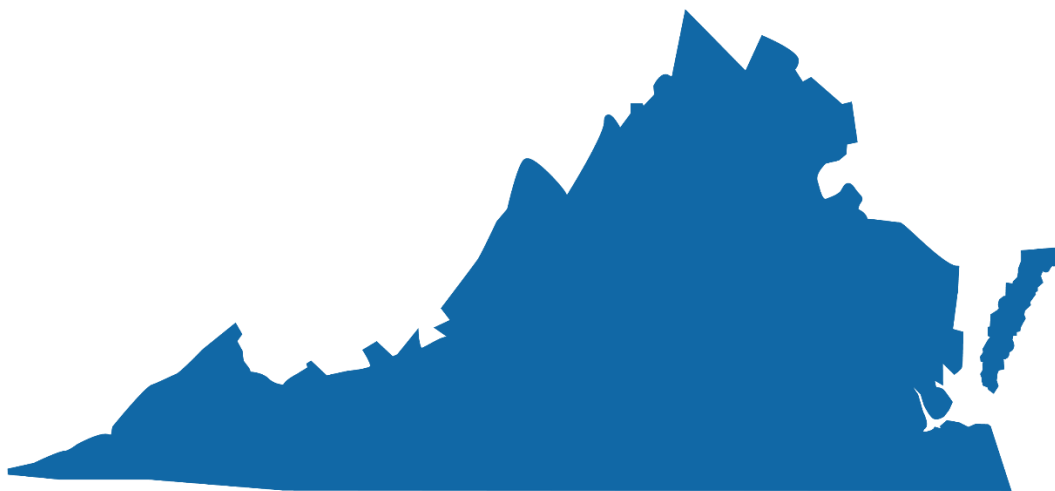




Virginia Annual Recycling Summary Report

Calendar Year 2020



November 2021

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Virginia's State Recycling Summary Report for Calendar Year 2020

Executive Summary

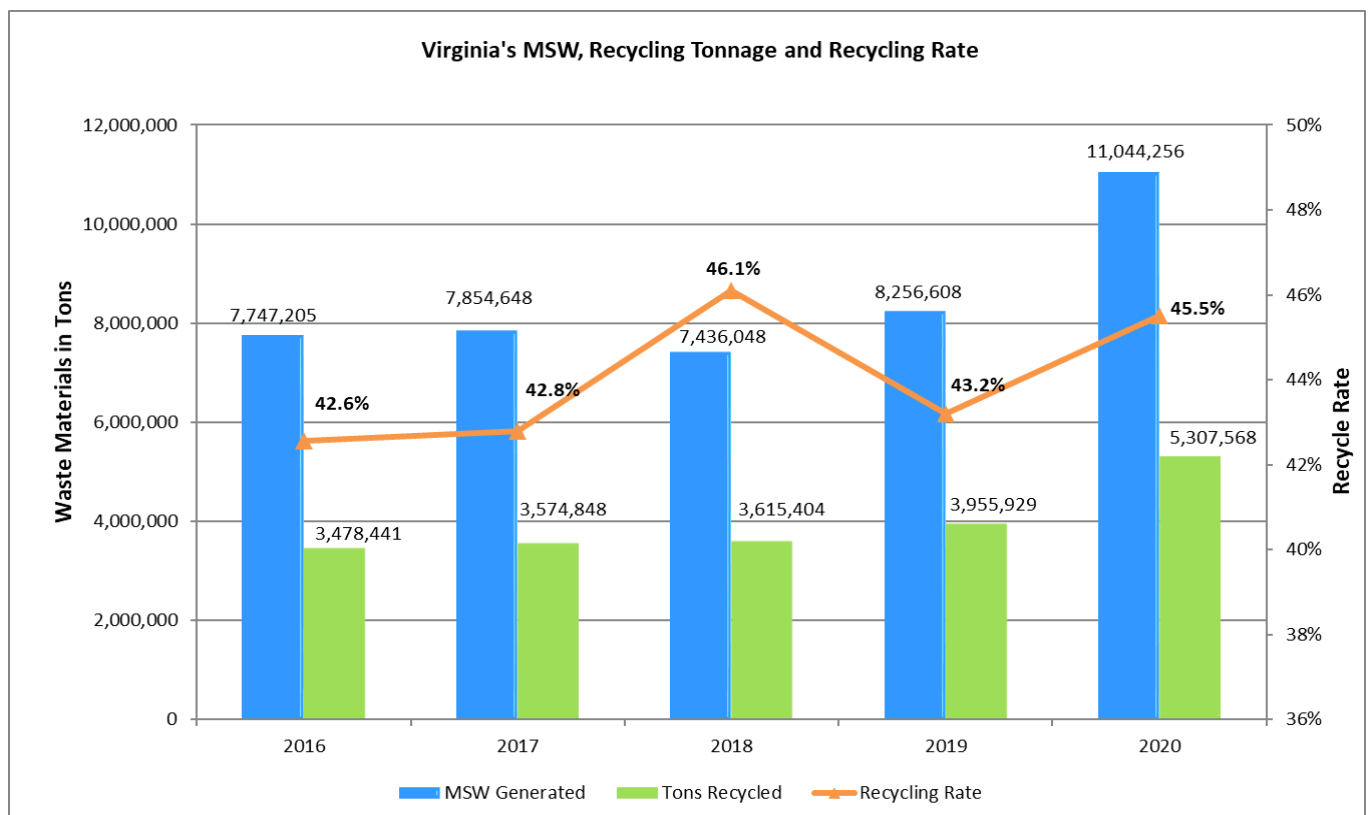
The calendar year 2020 Annual Recycling Rate reporting by all 71 Virginia Solid Waste Planning Units (SWPUs) established a calculated recycling rate for Virginia of 45.5%. This calculation included credits for solid waste reused, non-municipal solid waste (MSW) recycled, recycling residues, and source reduction programs. This rate was based on the data submitted by the 71 SWPUs required to report for 2020.

The CY2020 recycling rate increased from last year based on the information provided by the planning units. However, some planning units faced recycling challenges due to the COVID 19 pandemic, lack of recycling markets in their regions and difficulty in obtaining recycling information from private businesses.

Introduction

The Virginia Department of Environmental Quality (DEQ) has completed its review of the recycling rate data reported for calendar year 2020. DEQ has reviewed 71 submitted reports. The data on these reports represent recycling information from 324 Virginia cities, counties and towns.¹

Virginia's annual recycling rate for 2020 as seen on the graph below is based on data from the required reports submitted by all 71 SWPUs required to report for CY2020.



¹ Virginia Code §10.1-1411 was amended by legislation introduced during the 2012 Session of the Virginia General Assembly and requires annual recycling rate reporting by each SWPU or locality with a population of greater than 100,000 according to the most recent U.S. Census. Each SWPU or locality with a population of 100,000 or less according to the most recent U.S. Census must submit a recycling survey report once every four years. Planning units in this latter category will next report in 2025 for calendar year 2024.

Based on these reports, the state recycling rate is 45.5%, an increase from the CY2019 report. The 71 SWPUs reported recycling 3,899,330 tons of principal recyclable materials (PRMs), 1,408,238 tons of credits (includes recycling residue, reused solid waste, and non-MSW recycled) and disposal of 5,736,688 tons of MSW.

Mandated Recycling Rates

Pursuant to Virginia Code §10.1-1411.D, each SWPU is required to achieve and maintain a minimum 25 percent annual recycling rate *unless*:

- Its population density is less than 100 persons per square mile, *or*
- Its civilian unemployment rate is 50 percent or more above the state unemployment average.

SWPUs that meet the criteria above are required to achieve and maintain a minimum 15 percent recycling rate. Out of the 71 SWPUs required to report, 68 SWPUs met or exceeded their mandated recycling rate while 3 did not.

Solid Waste Management Planning and Recycling Action Plans

The Virginia Department of Environmental Quality (DEQ) continues to review the required solid waste management plans and any updates submitted by the SWPUs for completeness, including locality or regional recycling program information. All SWPUs are required to maintain or exceed the mandated recycling rate for their jurisdiction(s). If at any time the SWPU reports less than the required 15 percent or 25 percent recycling rate, DEQ will require that a Recycling Action Plan be developed and submitted as an amendment to the SWPU's solid waste management plan. Visit [DEQ's recycling webpage](#) for additional information.

State Recycling Rate Calculation for CY2020

71 recycling rate reports, representing 324 Virginia localities, were received pursuant to the requirements of § 10.1-1411 of the Code of Virginia. The chart represents data from all 71 SWPUs required to report for CY2020. This represents a return rate of 100 percent of the required reports. Totals for these reports are presented below:

Principal Recyclable Materials (PRM) Tons				
PRM Material	Tons Recycled		Credits	Tons Recycled
Paper	782,184		Recycling Residue	596,014
Metal	949,151		Solid Waste Reused	14,851
Plastic	63,415		Non-MSW Recycled	797,373
Glass	30,780		Total Credits	1,408,238
Commingled	842,020			
Yard Waste	596,784		MSW Disposed	Tons
Waste Wood	289,235		Household Waste	4,169,182
Textiles	32,154		Commercial Waste	1,477,348
Waste Tires	61,627		Institutional Waste	87,567
Used Oil	43,314		Other	2,592
Used Oil Filters	3,769		Total MSW Tons	5,736,688
Used Antifreeze	4,449			
Batteries	25,692		Source Reduction Credits	0.93%
Electronics	7,081			
Inoperative Motor Vehicles	1,751			
Other	165,925			
Total PRM in Tons	3,899,330			

State Final Recycling Rate Calculation:

The recycling rate is calculated using the following formula:

$$\left(\frac{\text{PRM} + \text{Credits}}{\text{PRM} + \text{Credits} + \text{MSW Disposed}} \right) \times 100 + \text{Source Reduction Credit} = \text{Final Recycle Rate}$$

Using the PRMs, credits and MSW disposed tonnage totals above, the state recycling rate is calculated as:

$$\left(\frac{3,899,330 + 1,408,238}{3,899,330 + 1,408,238 + 5,736,688} \right) \times 100 + 0.93\% = \mathbf{45.5\%*}$$

*The final state recycling rate has been adjusted so that the aggregate of all credits does not exceed five percentage points of the base recycling rate.

Calculated Recycling Rates for CY2020

REPORTING ENTITY (71 Solid Waste Planning Units required to report for CY2020)	2020 Recycling Rate	2020 Total Recycled Tons (PRMs + Credits)	2020 Total MSW Generation Tons (PRMs + Credits + MSW disposed)
Accomack County SWMP (Accomack County, Towns of Accomac, Belle Haven, Bloxom, Chincoteague, Hallwood, Keller, Melfa, Onancock, Onley, Painter, Parksley, Saxis, Tangier and Wachapreague)	40.2%	24,096	63,083
Alleghany Highlands SWPU (Alleghany County, City of Covington, Towns of Iron Gate and Clifton Forge)	56.2%	21,198	39,102
Amelia County SWPU (Amelia County)	16.3%	1,470	10,244
Amherst County SWPU (Amherst County and Town of Amherst)	96.6%	424,094	448,238
Arlington County SWPU (Arlington County)	51.2%	105,423	204,849
Augusta-Staunton-Waynesboro SWPU (Augusta County, Cities of Staunton and Waynesboro, Town of Craigsville)	31.6%	44,797	151,450
Bath County SWPU (Bath County)	17.8%	760	4,826
Bedford County SWPU (Bedford County and Town of Bedford)	43.2%	30,533	74,046
Botetourt County SWPU (Botetourt County, Towns of Buchanan, Fincastle and Troutville)	16.0%	3,220	20,185
Brunswick County SWPU (Brunswick County, Towns of Alberta, Brodnax and Lawrenceville)	13.1%*	2,433	18,613
Buckingham County SWPU (Buckingham County and Town of Dillwyn)	27.8%	2,965	11,510
Caroline County SWPU (Caroline County, Towns of Bowling Green and Port Royal)	41.2%	11,115	21,499
Carroll-Grayson-Galax SWPU (Carroll and Grayson Counties, City of Galax, Towns of Fries, Hillsville, Independence and Troutdale)	29.1%	16,515	44,932
Alexandria (City) SWPU (City of Alexandria)	52.1%	120,701	205,750
Bristol (City) SWPU (City of Bristol)	29.0%	4,822	17,851
Danville (City) SWPU (City of Danville)	36.4%	9,474	26,002
Fairfax (City) SWPU (City of Fairfax)	48.6%	15,386	33,005

Falls Church (City) SWPU (City of Falls Church)	49.4%	5,566	11,278
Harrisonburg (City) SWPU (City of Harrisonburg)	41.9%	21,506	53,844
Manassas (City) SWPU (City of Manassas)	53.6%	30,589	54,731
Manassas Park (City) SWPU (City of Manassas Park)	30.3%	3,531	12,456
Newport News (City) SWPU (City of Newport News)	53.3%	266,244	413,001
Roanoke (City) SWPU (City of Roanoke)	22.2%**	10,542	52,213
Salem (City) SWPU (City of Salem)	32.1%	7,680	25,531
Craig County SWPU (Craig County)	21.0%	758	3,610
Culpeper County SWPU (Culpeper County)	25.5%	11,366	38,495
Cumberland Plateau Regional Waste Management Authority SWPU (Buchanan, Dickenson and Russell Counties, Towns of Grundy, Clincho, Clintwood, Haysi, Cleveland, Honaker and Lebanon)	16.2%	10,471	64,546
Central Virginia Waste Management Authority SWPU (Charles City, Chesterfield, Goochland, Hanover, Henrico, New Kent, Powhatan and Prince George Counties; Cities of Richmond, Hopewell, Colonial Heights and Petersburg, Town of Ashland)	58.1%	677,561	1,166,688
Fairfax County SWPU (Fairfax County and Town of Clifton)	49.6%	560,204	1,140,587
Fauquier County SWPU (Fauquier County, Towns of Remington, Plains and Warrenton)	28.5%	20,368	71,351
Floyd County SWPU (Floyd County and Town of Floyd)	20.6%	3,580	17,350
Franklin County SWPU (Franklin County, Towns of Boones Mill and Rocky Mount)	35.5%	22,422	63,126
Gloucester County SWPU (Gloucester County)	25.9%	9,412	39,454
Greater Rockingham SWPU (Rockingham County, Towns of Bridgewater, Broadway, Dayton, Elkton, Grottoes, Mount Crawford and Timberville)	61.9%	122,908	205,221
City of Martinsville & Henry County SWPU (Henry County, City of Martinsville, Town of Ridgeway)	44.5%	79,129	177,770
Highland County SWPU (Highland County and Town of Monterey)	15.4%	290	1,881

King George County SWPU (King George County)	31.8%	73,314	87,276
Lee County SWPU (Lee County, Towns of Saint Charles, Jonesville and Pennington Gap)	10.4%*	1,383	16,537
Loudoun County SWPU (Loudoun County, Towns of Hamilton, Hillsboro, Leesburg, Lovettsville, Middleburg, Purcellville and Round Hill)	32.2%	145,733	451,887
Louisa County SWPU (Louisa County, Towns of Louisa and Mineral)	29.5%	10,349	32,601
Lunenburg County SWPU (Lunenburg County, Towns of Kenbridge and Victoria)	78.8%	27,268	34,625
Madison County SWPU (Madison County and Town of Madison)	16.2%	936	5,780
Mount Rogers PDC SWPU (Bland, Smyth, Washington and Wythe Counties, Towns of Abingdon, Chilhowie, Damascus, Glade Spring, Marion, Saltville, Rural Retreat and Wytheville)	23.6%	20,366	86,238
Montgomery Regional Solid Waste Authority SWPU (Montgomery County, Towns of Blacksburg and Christiansburg)	38.2%	37,980	93,699
Northampton County SWPU (Northampton County, Towns of Cape Charles, Cheriton, Eastville, Exmore and Nassawadox)	20.0%	3,275	16,342
Northern Neck PDC SWPU (Lancaster, Northumberland, Richmond and Westmoreland Counties, Towns of Colonial Beach, Irvington, Kilmarnock, Montross, Warsaw and White Stone)	22.2%	9,706	48,057
Northern Shenandoah Valley Regional Commission SWPU (Clarke, Frederick, Shenandoah, Warren and Page Counties, City of Winchester, Towns of Berryville, Boyce, Edinburg, Front Royal, Luray, Middletown, Mount Jackson, New Market, Shenandoah, Stanley, Strasburg, Stephens City, Toms Brook and Woodstock)	37.0%	95,665	273,239
Nottoway County SWPU (Nottoway County, Towns of Blackstone, Burkeville, Crewe)	32.2%	6,385	19,823
New River Resource Authority SWPU (Giles and Pulaski Counties, City of Radford, Towns of Dublin, Glen Lyn, Pearisburg, Pembroke, Pulaski, Rich Creek and Narrows)	44.6%	48,130	107,991
Orange County SWPU (Orange County, Towns of Orange and Gordonsville)	15.7%	4,524	28,889

Patrick County SWPU (Patrick County and Town of Stuart)	68.5%	21,477	31,366
Pittsylvania County SWPU (Pittsylvania County, Towns of Chatham, Hurt and Gretna)	26.3%	15,911	65,476
Prince Edward/Cumberland Counties SWPU (Prince Edward and Cumberland Counties, Town of Farmville)	21.2%	9,324	43,904
Prince William County SWPU (Prince William County, Towns of Dumfries, Haymarket, Occoquan and Quantico)	33.5%	180,695	518,533
Rappahannock County SWPU (Rappahannock County and Town of Washington)	15.6%	704	4,516
Rappahannock Regional Solid Waste Management Board SWPU (Stafford County and City of Fredericksburg)	34.5%	67,402	207,610
Region 2000 SWPU (Nelson, Appomattox and Campbell Counties, City of Lynchburg, Towns of Altavista, Appomattox, Brookneal and Pamplin City)	47.6%	132,837	291,118
Roanoke County SWPU (Roanoke County)	30.0%	17,083	61,048
Rockbridge-Lexington-Buena Vista SWPU (Rockbridge County, Cities of Buena Vista and Lexington, Towns of Glasgow and Goshen)	16.9%	8,391	45,311
Scott County SWPU (Scott County, Towns of Clinchport, Duffield, Dungannon, Gate City, Nickelsville and Weber City)	15.1%	2,168	16,570
Southern Crater PDC SWPU (Dinwiddie, Greensville, Sussex and Surry Counties, City of Emporia, Towns of Claremont, Dendron, Jarratt, McKenney, Stony Creek, Surry, Wakefield and Waverly)	55.3%	26,643	49,995
Spotsylvania County SWPU (Spotsylvania County)	48.8%	94,447	201,914
Southeastern Public Service Authority SWPU (Isle of Wight and Southampton Counties, Cities of Chesapeake, Franklin, Norfolk, Portsmouth, Suffolk and Virginia Beach, Towns of Boykins, Branchville, Capron, Courtland, Ivor, Newsoms, Smithfield and Windsor)	35.8%	1,284,093	2,359,231

Southside Regional Public Service Authority SWPU (Charlotte, Halifax and Mecklenburg Counties, Towns of Charlotte Court House, Drakes Branch, Keysville, Phenix, Halifax, Scottsburg, South Boston, Virgilina, Boydton, Chase City, Clarksville, LaCrosse and South Hill)	25.7%	22,365	87,114
Tazewell County SWPU (Tazewell County, Towns of Bluefield, Cedar Bluff, Pocahontas, Richlands and Tazewell)	29.3%	30,338	111,095
Thomas Jefferson PDC SWPU (Albemarle, Fluvanna and Greene Counties, City of Charlottesville, Towns of Columbia, Scottsville and Standardsville)	41.9%	73,664	175,914
Herndon (Town) SWPU (Town of Herndon)	27.8%	8,106	29,155
Vienna (Town) SWPU (Town of Vienna)	28.2%	3,897	13,833
Vinton (Town) SWPU (Town of Vinton)	53.7%	4,641	8,642
Virginia Peninsulas Public Service Authority SWPU (Essex, James City, King and Queen, Mathews, Middlesex and York Counties, Cities of Hampton, Poquoson and Williamsburg, Towns of Tappahannock, Urbanna and West Point)	27.9%	101,328	358,963
Wise County SWPU (Wise County, City of Norton, Towns of Appalachia, Big Stone Gap, Coeburn, Pound, St. Paul and Wise)	26.9%	13,911	51,643
TOTALS	45.5%	5,307,568	11,044,256

*SWPU calculated recycling rate is below the 15% mandated rate required by the statute and regulations.

**SWPU calculated recycling rate is below the 25% mandated rate required by the statute and regulations.

All data is based on adjustments by DEQ for consistency with 9VAC-20-130-125, with a 5 percent maximum percentage allowed for credits to the base recycling rate calculated by a solid waste planning unit. A 2 percent source reduction credit has been added to the calculated recycling rates for those planning units with a documented source reduction program in their solid waste management plans.

Principal Recyclable Materials (PRMs): Paper, metal, plastic, glass, commingled materials, yard waste, waste wood, textiles, waste tires, used oil, used oil filters, used antifreeze, inoperative automobiles, batteries, electronics and other.

Credits: Recycling residues, solid waste reused, non-MSW recycled (includes construction and demolition material, ash and debris) and source reduction initiatives. Source reduction initiatives must be documented as SWPU policy and promoted across the SWPU.

Municipal Solid Waste (MSW) disposed: Municipal solid waste delivered to sanitary landfills or incinerators for disposal.

Recycling Success Stories and Related Report Information

The information below was provided by localities or comes from web-based resources or other data sources.

Arlington County- Change in Glass Recycling Program:

CY2020 was the first full year of Arlington's efforts to divert glass from the residential curbside, single-stream recycling system to ensure that the material was actually being recycled. Previously, glass collected in the residential curbside single-stream recycling system was not able to be successfully recycled due to cross contamination with other materials in the recycling stream. The glass processed at the Material Recovery Facility (MRF) was instead shipped to a landfill for use as daily cover. To enable recycling of glass in Arlington County, a source-separated program was instituted for glass recycling. Five glass drop-off locations were established throughout the County. Over 1,429 tons of clean glass was collected at the County's five drop-off locations in CY2020 as a result of this change. This number reflects that roughly 43.5% of the glass previously collected through the County's residential collection program was now being diverted for recycling. The removal of glass from the residential curbside recycling program had the added benefit of boosting the overall value of a ton of the single-stream recycling significantly because the percentage of glass (a zero value commodity under the contract with the MRF) in the reference ton was significantly reduced. As a result of the change in Arlington's glass recycling program, Arlington recycled more glass and strengthened the economics of its curbside recycling program. For more information, please visit <https://www.arlingtonva.us/Government/Programs/Recycling-and-Trash/Residential/Curbside-Trash-Recycling/Glass-Recycling>

City of Alexandria:

The City of Alexandria has been working to reduce contamination in the recycling stream through the Recycle Right Alexandria campaign and the Glass Recycling Purple Can program. A 2020 MRF recycling sort showed that contamination rate has dropped from 15% to roughly 10% compared to a sort conducted in 2018. As part of the ongoing Recycle Right efforts, the City of Alexandria revamped its "oops" tag initiative to message to residents directly at the cart to reduce contamination. The City also launched a new "[What Goes Where](#)" tool, a new web application that enables residents to find information on which items—such as rechargeable batteries, plastic bags, clothing and glass bottles—can be donated, repaired, recycled, composted, disposed of, and more. The markets for recycled materials are constantly changing, and "What Goes Where" provides the most up-to-date information on the recyclability of items. The City's Glass Recycling Purple Can program has also been a continued success. Since launching the Purple Can Club initiative in 2019 with neighboring jurisdictions, the City has recycled over 5 million pounds of glass and prevented them from landfills. For more information, please visit <https://www.alexandriava.gov/Recycling>

Electronics Recycling:

Although not included in the state recycling rate report, computer manufacturers are required to report to DEQ the amount of electronics recovered through their recycling networks. For calendar year 2020, they reported 907,796 pounds (454 tons) of electronics recovered. For more information about this program, visit [DEQ's Electronics Recycling](#) webpage.

Private Sector Reporting:

Walmart, Sam's Club, Target, Best Buy, Weis Markets and Kohl's provided 2020 recycling data for their Virginia stores to DEQ. This information was made available to all SWPUs on DEQ's recycling webpage for inclusion in their recycling reporting. Their reports can be found on the [DEQ Recycling Rate Report webpage](#).