



VIRGINIA ANNUAL
RECYCLING
SUMMARY REPORT

CALENDAR YEAR
2017

NOVEMBER 2018

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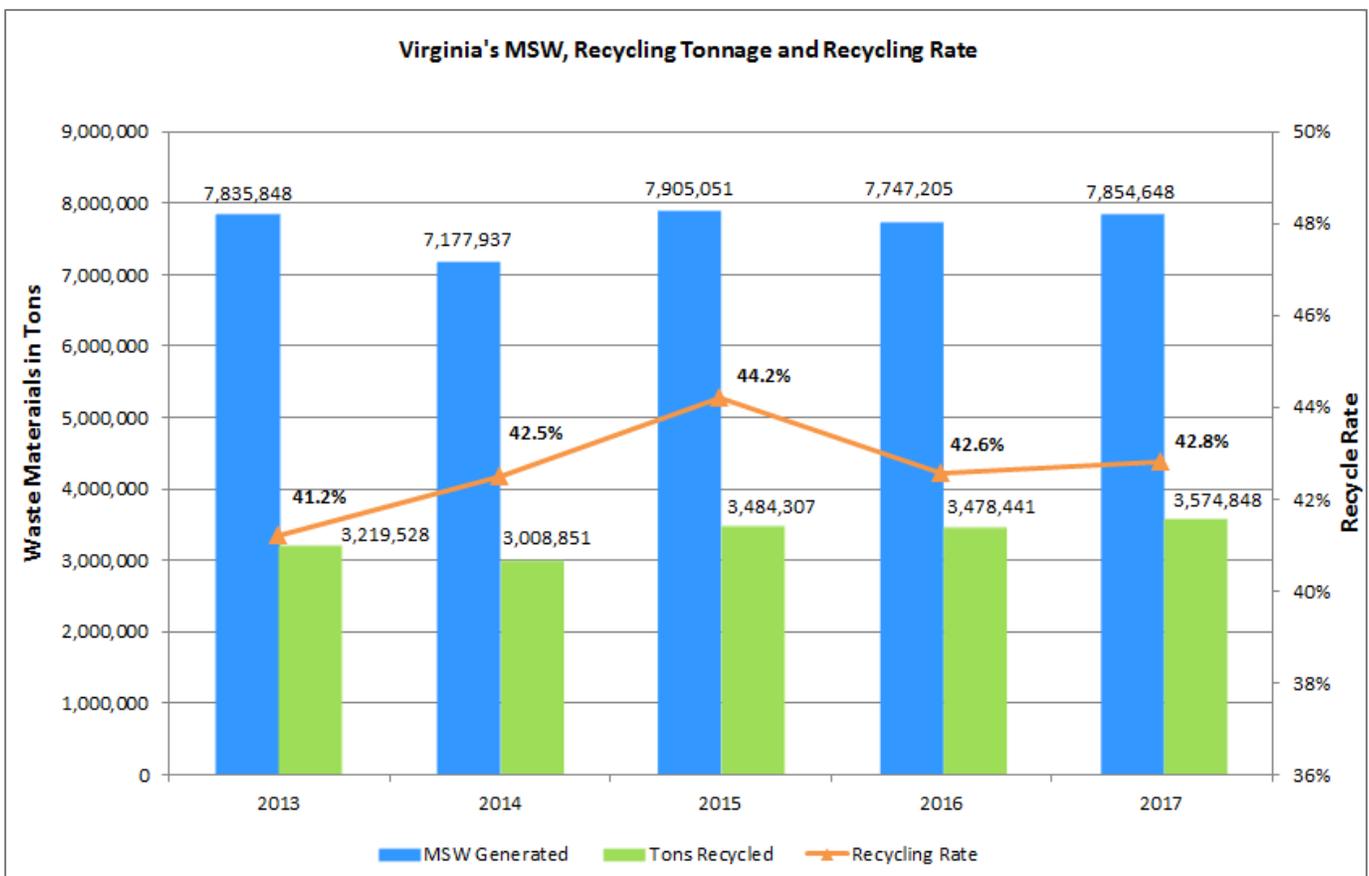
Executive Summary

The calendar year 2017 Annual Recycling Rate reporting by Virginia Solid Waste Planning Units (SWPUs) with populations above 100,000¹ established a calculated recycling rate for Virginia of 42.8%. 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 17 SWPUs required to report for 2017.

Introduction

The Virginia Department of Environmental Quality (DEQ) has completed its review of the recycling rate data reported for calendar year 2017. DEQ has reviewed 38 submitted reports. The data on these reports represent recycling information from 117 Virginia cities, counties and towns.¹ Recycling rate reports were also submitted by 21 SWPUs that were not required to report for 2017.

Virginia's annual recycling rate for 2017 as seen on the graph below is based only on data from the required reports submitted by the 17 SWPUs with populations above 100,000.



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 2021 for calendar year 2020.

Based on these reports, the state recycling rate is 42.8%, a slight increase from the CY2016 report. The 17 SWPUs reported recycling 2,596,863 tons of principal recyclable materials (PRMs), 977,985 tons of credits (includes recycling residue, reused solid waste, and non-MSW recycled) and disposal of 4,279,801 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.

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 2017

Seventeen recycling rate reports, representing 117 Virginia localities, were received pursuant to the requirements of § 10.1-1411 of the Code of Virginia. The chart represents data only from the 17 SWPUs required to report for CY 2017. This represents a return rate of 100 percent of the required reports. Totals for these reports are presented below:

Principal Recyclable Material	Tons Recycled
Paper	428,312
Metal	699,681
Plastic	103,172
Glass	7,628
Commingled	473,334
Yard Waste	504,350
Waste Wood	182,064
Textiles	13,409
Waste Tires	37,005
Used Oil	42,611
Used Oil Filters	1,232
Used Antifreeze	4,417
Batteries	12,388
Electronics	8,157
Inoperative Motor Vehicles	2,022
Other	77,083
Total PRM in Tons	2,596,863

Credits	Tons Recycled
Recycling Residue	27,073
Solid Waste Reused	479,282
Non-MSW Recycled	471,631
Total Credits	977,985

MSW Disposed	Tons
Household Waste	2,805,900
Commercial Waste	774,733
Institutional Waste	61,899
Other	637,269
Total MSW Disposed	4,279,801

Source Reduction Credit	1.65%
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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:

$$\left(\frac{2,596,863 + 977,985}{2,596,863 + 977,985 + 4,279,801} \right) \times 100 + 1.65\% = \mathbf{42.8\%} *$$

*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 2017

REPORTING ENTITY (17 Solid Waste Planning Units required to report annually)	2017 Recycling Rate	2017 Total Recycled Tons (PRMs + Credits)	2017 Total MSW Generation Tons (PRMs + Credits + MSW disposed)
Alexandria (City) SWPU	49.8%	90,799	169,231
Arlington County SWPU	49.0%	94,150	195,930
Augusta-Staunton-Waynesboro SWPU	33.0%	49,939	150,417
Central Virginia Waste Management Authority SWPU (Counties of Charles City, Chesterfield, Goochland, Hanover, Henrico, New Kent, Powhatan and Prince George; Cities of Richmond, Hopewell, Colonial Heights and Petersburg)	59.0%	642,402	1,083,897
Fairfax County SWPU	48.8%	620,255	1,254,532
Loudoun County SWPU	37.1%	159,376	398,560
Montgomery Regional Solid Waste Authority SWPU (Montgomery County, Towns of Blacksburg and Christiansburg)	37.8%	34,826	93,977
Mount Rogers PDC SWPU (Counties of Bland, Smyth, Washington and Wythe)	27.5%	20,346	79,721
Newport News (City) SWPU	44.4%	171,219	283,361
Northern Shenandoah Valley Regional Commission SWPU (Counties of Clarke, Frederick, Shenandoah, Warren and Page; City of Winchester)	56.6%	133,018	243,822
Prince William County SWPU	34.6%	228,512	576,594
Rappahannock Regional Solid Waste Management Board SWPU (Stafford County and City of Fredericksburg)	40.1%	81,588	204,843
Region 2000 (Counties of Nelson, Appomattox and Campbell; City of Lynchburg)	40.1%	120,047	315,347
Southeastern Public Service Authority SWPU (Counties of Isle of Wight and Southampton; Cities of Chesapeake, Franklin, Norfolk, Portsmouth, Suffolk and Virginia Beach)	36.7%	822,933	1,941,243
Spotsylvania County SWPU	35.0%	69,915	177,803
Thomas Jefferson PDC SWPU (Counties of Albemarle, Fluvanna and Greene; City of Charlottesville)	32.2%	135,024	304,848
Virginia Peninsulas Public Service Authority SWPU (Counties of Essex, James City, King and Queen, Mathews, Middlesex and York; Cities of Hampton, Poquoson and Williamsburg)	26.4%	100,499	380,522
State Totals	42.8%	3,574,848	7,854,648

REPORTING ENTITY (20 SWPUs with populations 100,000 or less not required to report, but voluntarily reporting)	2017 Recycling Rate	2017 Total Recycled Tons (PRMs + Credits)	2017 Total MSW Generation Tons (PRMs + Credits + MSW disposed)
Accomack County SWPU	54.8%	40,620	76,956
Bedford County SWPU (Bedford County and Town of Bedford)	42.5%	33,911	83,813
Botetourt County SWPU	17.3%	2,875	16,632
Brunswick County SWPU	24.6%	2,280	10,023
Caroline County	35.2%	4,447	13,406
Carroll-Grayson-Galax SWPU	32.2%	12,565	39,006
Craig County SWPU	19.7%	483	2,732
Cumberland Plateau Regional Waste Management Authority SWPU (Buchanan, Dickenson and Russell Counties)	31.2%	18,249	62,475
Danville (City) SWPU	54.7%	14,840	28,176
Falls Church (City) SWPU	58.4%	7,203	12,342
Floyd County SWPU	23.1%	3,402	14,742
Fauquier County SWPU	41.3%	36,278	87,719
Franklin County SWPU	41.8%	24,061	60,480
Greater Rockingham SWPU	31.7%	33,569	105,813
Herndon (Town) SWPU	41.9%	9,519	23,879
Lunenburg County SWPU	21.4%	2,256	7,344
New River Resource Authority SWPU (Counties of Pulaski and Giles; City of Radford)	40.0%	32,897	86,607
Rappahannock County SWMP	15.2%	598	4,529
Roanoke City SWPU	29.1%	14,722	54,418
Salem (City) SWPU	35.5%	9,152	27,360
Vinton (Town) SWPU	64.0%	5,744	9,262

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.

PRMs (principal recyclable materials): 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.

Solid Waste Planning Units Not Reporting for CY2017

33 SWPUs with populations of 100,000 or less and not required to report for CY 2017.

1. Alleghany Highlands SWPU
2. Amelia County SWPU
3. Amherst County SWPU
4. Bath County SWPU
5. Buckingham County SWPU
6. City of Bristol SWPU
7. City of Fairfax SWPU
8. City of Harrisonburg SWPU
9. City of Manassas SWPU
10. City of Manassas Park SWPU
11. City of Martinsville SWPU
12. Culpeper County SWPU
13. Gloucester County SWPU
14. Highland County SWPU
15. King George County SWPU
16. Lee County SWPU
17. Louisa County SWPU
18. Madison County SWMP
19. Northampton County SWPU
20. Northern Neck PDC SWPU (counties of Lancaster, Northumberland, Richmond and Westmoreland)
21. Nottoway County SWPU
22. Orange County SWMP
23. Patrick County SWPU
24. Pittsylvania County SWPU
25. Prince Edward-Cumberland County SWPU
26. Roanoke County SWPU
27. Rockbridge – Lexington – Buena Vista SWPU
28. Scott County SWPU
29. Southern Crater Region SWPU (counties of Dinwiddie, Greensville, Surry, and Sussex; city of Emporia)
30. Southside Regional PSA SWPU (counties of Charlotte, Halifax and Mecklenburg)
31. Tazewell County SWPU
32. Town of Vienna SWMP
33. Wise County SWPU

Recycling Success Stories and Related Report Information

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

Bedford County:

Bedford County's second busiest convenience center was constructed into a gated full service center in January 2017, adding metal and appliance recycling, household recycling (cardboard, mixed paper, plastic bottles #1 & #2, aluminum and steel cans, and newspapers), household alkaline and rechargeable battery recycling, and textiles recycling. The response to adding these services was well received with an additional 262 tons of recyclable items being collected from the additional recycling services offered. The County is in the process of upgrading and constructing another gated convenience center that will offer household, textile, and battery recycling. This convenience center is expected to open in January 2019. After this addition, the County will operate 15 recycling centers out of the collection system. For more information, visit [Bedford County's](#) website.

City of Salem:

City of Salem provides a free cardboard collection system for businesses that manage larger quantities of cardboard in their waste streams. In 2017, approximately 60 businesses took advantage of this free service. Currently, eight-yard front-load dumpsters are provided by the City, solely for clean cardboard and are emptied weekly by the City employees or when called to do so. The City of Salem also stages three residential drop-off sites where citizens can discard separated recyclables. At each site, the cardboard pans are emptied with greater frequency because they reach capacity faster than the other materials. These operations netted 571.55 tons of clean recyclable cardboard in 2017 and 793.59 tons in 2016. For more information, visit [City of Salem's Recycling Information](#) webpage.

Cumberland Plateau Regional Waste Management Authority

Since the inception of the Cumberland Plateau Regional Waste Management Authority (Buchanan, Dickenson and Russell Counties) in 1992, great strides have been made in the areas of recycling within the region. Innovative programs for their rural communities have been developed such as E-Waste drop off sites in each county, annual paper shredding/recycling day in each county, school recycling programs from plastic bag collection drives and aluminum can roundups, paper and plastic, recycling drop off locations for the public and educational events highlight some of the successes of the Authority. The Authority's programs are regional based and developed and implemented by all three counties' recycling coordinators. These efforts are a result of the partnership of the Authority Board of Directors and the three county boards of supervisors. For more information, visit the [Authority's](#) webpage.

Frederick County:

Students at Admiral Byrd Middle School's Conservation classes constructed Edible Landfill Sundaes. The activity included a short video tour of the regional landfill and details about how each layer of the landfill works together to protect soil, air and water quality while safely managing waste and leading waste reduction efforts. In 2017, Frederick County Recycling provided landfill tours and in-class activities on recycling and solid waste to over 1,100 pupils. The Kindness Team at Indian Hollow Elementary School collected a record-breaking 667 pairs of used shoes, book bags, hats and belts to benefit Save-a-Sole in 2017. The County's shoe recycling program benefits adults and children around the world that cannot afford to buy new footwear. The project is one of several conducted each year by the team. For more information, visit [Frederick County's Recycling](#) webpage.

Prince William County:

Prince William Recycles Day reminds the community that recycling matters. This event has been held annually since 1995. In 2017, they had 775 guests, 40 exhibitors, 40 volunteers, numerous sponsors and 500 landfill tourists. Families enjoyed a fall festival with an environmentally conscious twist at the annual Prince William Recycles Day celebration. The county landfill was given a seasonal makeover with hay bales, pumpkins and scarecrow decorations welcoming attendees to the event. County employees and local environmental organizations led activities educating the community on why recycling matters and how it can be practiced in Prince William. A favorite activity was taking the tour of the landfill. The tour bus was full all day driving throughout the landfill giving families a chance to see waste management in action. “What’s humbling to me is that every year we can fill a circus tent with people for an education event about recycling,” says Scott MacDonald, the County’s Recycling Manager. For more information and photos, visit [Prince William’s](#) webpage.

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 2017, they reported 1,712,479 pounds (856 tons) of electronics recovered. For more information about this program, visit [DEQ’s Electronics Recycling](#) webpage.

Private Sector Reporting:

Walmart and Target provided 2017 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 Litter Prevention and Recycling webpage](#).