

VIRGINIA ANNUAL RECYCLING SUMMARY REPORT

Calendar Year 2015



September 2016

Table of Contents

Virginia’s State Recycling Summary Report for Calendar Year 2015

Executive Summary	3
Introduction	3
Areas Reporting Highest Rates	4
Mandated Recycling Rates	4
Solid Waste Management Planning and Recycling Action Plans	4
Recycling Success Stories and Related Report Information	5
Private Sector Reporting	5
Calculated Recycling Rates for 2015	6
Solid Waste Planning Units Not Reporting	8
Recycling Rate Calculation – 2015	9

Virginia's State Recycling Summary Report for Calendar Year 2015

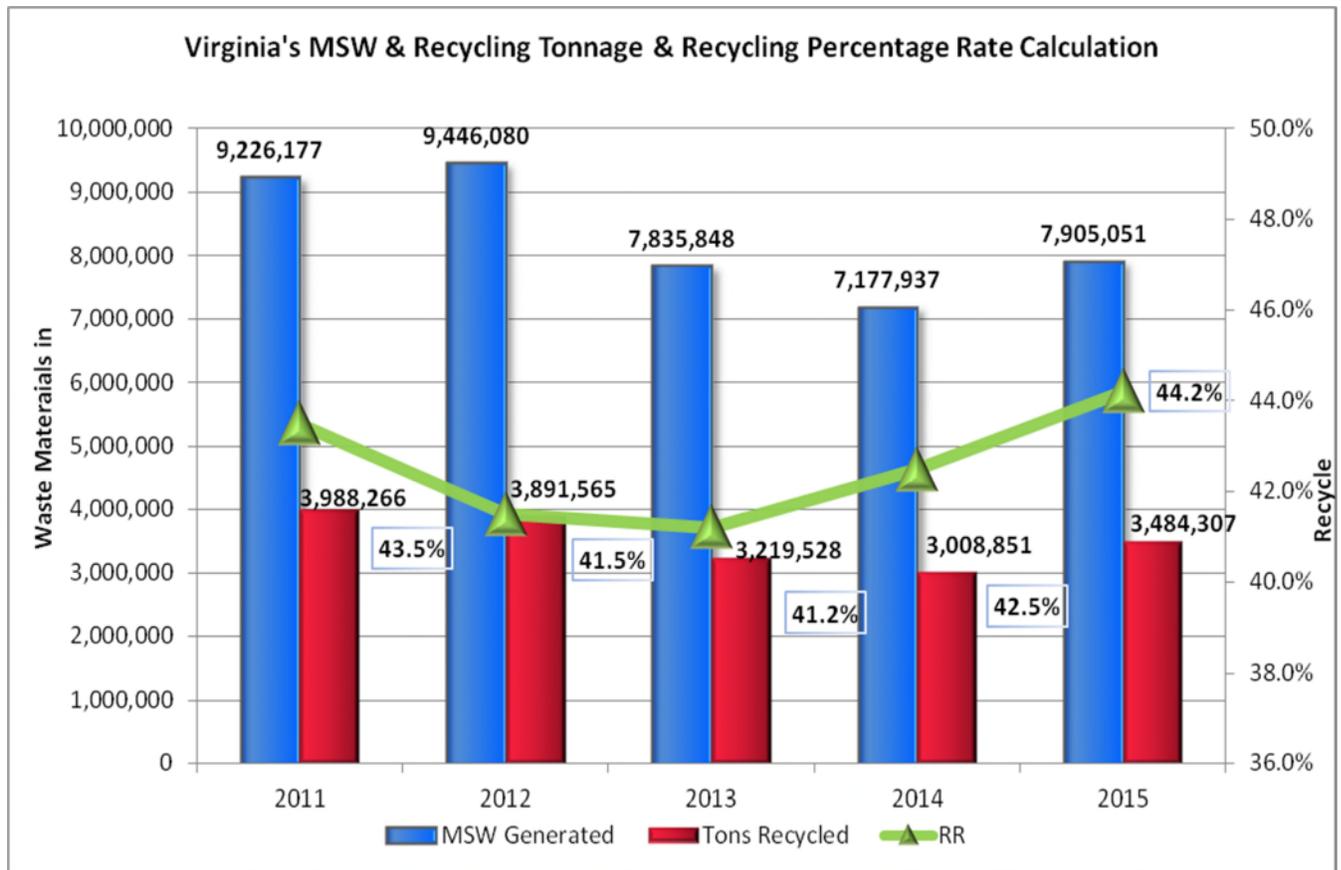
Executive Summary

The calendar year 2015 Annual Recycling Rate reporting by Virginia Solid Waste Planning Units (SWPUs) with populations above 100,000¹ established a calculated recycling rate for Virginia of 44.2%. This calculation included credits for solid waste reused, non-MSW recycled, and recycling residues. This rate was based on the data submitted by the 17 SWPUs required to report for 2015.

Introduction

The Virginia Department of Environmental Quality (DEQ) has completed its review of the recycling rate data reported for calendar year 2015. DEQ has reviewed 41 submitted reports. The data represent recycling information from 113 Virginia cities, counties and towns.¹ Recycling rate reports were also submitted by 26 SWPUs that were not required to report for 2015.

Virginia's annual recycling rate for 2015 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 2017 for calendar year 2016.

Areas Reporting Highest Rates

Historically, higher recycling rates have been reported in the more densely populated areas of the state. These areas are represented primarily by the 17 SWPUs with populations over 100,000.¹ These areas include:

Calculated Regional Recycling Rate by Year			
<u>Area</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
Fredericksburg Area	46.2%	43.6%	46.3%
Hampton Roads/Tidewater Area	33.7%	31.3%	33.5%
Lynchburg Area	40.1%	41.5%	38.9%
Northern Shenandoah Valley	49.7%	41.4%	40.4%
Northern Virginia	47.4%	45.4%	46.0%
Richmond Area	62.7%	57.5%	57.4%
Roanoke Area	39.0%	27.8%	35.4%

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 meeting these criteria are required to achieve and maintain a minimum 15 percent recycling rate.

Solid Waste Management Planning and Recycling Action Plans

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

<http://www.deq.virginia.gov/Programs/LandProtectionRevitalization/RecyclingandLitterPreventionPrograms/MandatoryRecyclingRates.aspx> for additional information.

Recycling Success Stories and Related Report Information

Information provided by localities, from web-based resources, or other data sources.

City of Richmond: In July 2015, the City of Richmond enhanced its recycling program by going to 95 gallon recycling carts citywide. This led to a 50 percent increase in waste diversion, collection efficiencies, and an overall reduction in its carbon footprint.

City of Alexandria: The City of Alexandria has been testing the feasibility of asking residents to separate food waste for special collection and composting. The city offered free food waste collection services for some of its curbside collection customers and the program proved popular. However, residents of selected apartment buildings who were given this opportunity were much less willing to give it a try. City staff is evaluating the costs and environmental benefits of these two pilot efforts. According to the U.S. Environmental Protection Agency, 30 percent of the material in a residential trash can is food waste after traditional recyclables and yard waste have been removed. For more information visit <https://www.alexandriava.gov/FoodWaste>

Central Virginia Waste Management Authority (CVWMA): CVWMA made significant changes in its curbside and drop-off recycling programs. Items added to the program now include plastics #1 - #7 – bottles and containers, caps and lids (all free of food and residue). Also added are waxy coated cartons: milk, juice, juice boxes, soup, wine, cream, egg substitutes, and cat food boxes. Henrico County and CVWMA held a seminar in June 2016 on debris management and monitoring in the event of a FEMA-declared storm. Contracts in place will assist member jurisdictions with storm debris management. Information from **CVWMA Regional Waste Line** - http://cvwma.com/wp-content/uploads/2013/08/RWL_Aug_2016-1.pdf

Montgomery Regional Solid Waste Authority (MRSWA): During the last year, MRSWA updated its website: www.mrswa.com and on the homepage there is a video of the Recycling and Disposal Solutions of Virginia (RDS) facility in Roanoke. RDS has state of the art equipment to handle single stream recycling needs for numerous jurisdictions. MRSWA offers universal waste recycling to the public at no charge and household hazardous waste collection day, on the third Saturday each month.

Electronics Recycling: Though not included in the recycling rate, computer manufacturers are required to report to DEQ the amount of electronics recovered through their recycling networks. For calendar year 2015 they reported 2,218,416 pounds (1,109 tons) of electronics recovered. For more information about this program, visit <http://www.deq.virginia.gov/Programs/LandProtectionRevitalization/RecyclingandLitterPreventionPrograms/ElectronicsRecycling/VirginiasComputerRecoveryandRecyclingAct.aspx> .

Private Sector Reporting: Wal-Mart and Target provided 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. Visit their links on the following webpage under Featured Topics: <http://www.deq.virginia.gov/Programs/LandProtectionRevitalization/RecyclingandLitterPreventionPrograms.aspx>

Calculated Recycling Rates for 2015

Solid Waste Planning Unit Recycling Rates and Data

REPORTING ENTITY (17 Solid Waste Planning Units required to report annually)	2015 Recycling Rate (%)	2015 Total Recycled Tons (PRMs + Credits)	2015 Total MSW Generation Tons (PRMs + Credits + MSW disposed)
State Totals	44.2	3,484,307 tons	7,905,051 tons
Alexandria (City) SWPU	48.6	96,739	186,943
Arlington County SWPU	44.5	145,792	265,120
Augusta –Staunton-Waynesboro SWPU	45.6	71,825	164,205
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)	58.8	722,877	1,153,152
Fairfax County SWPU	49.6	585,849	1,230,415
Loudoun County SWPU	44.5	168,054	373,611
Montgomery Regional Solid Waste Authority SWPU (Montgomery County, Blacksburg and Christiansburg)	27.5	23,371	84,568
Mount Rogers PDC SWPU (counties of Bland, Smyth, Washington and Wythe)	20.5	15,137	132,391
Newport News (City) SWPU	40.7	88,182	194,703
Northern Shenandoah Valley Regional Commission SWPU (counties of Clarke, Frederick, Shenandoah, Warren and Page; City of Winchester)	49.7	138,682	278,805
Prince William County SWPU	33.7	230,563	561,108
Rappahannock Regional Solid Waste Management Board SWPU (Stafford County and city of Fredericksburg)	58.4	94,640	167,785
Region 2000 (counties of Nelson, Appomattox and Campbell; city of Lynchburg and town of Bedford)	39.1	131,965	329,060
Southeastern Public Service Authority SWPU (counties of Isle of Wight and Southampton; cities of Chesapeake, Franklin, Norfolk, Portsmouth, Suffolk and Virginia Beach)	31.7	593,372	1,863,291
Spotsylvania County SWPU	34.6	68,961	186,156
Thomas Jefferson PDC SWPU (counties of Albemarle, Fluvanna and Greene; city of Charlottesville)	40.3	158,442	318,208
Virginia Peninsulas Public Service Authority SWPU (counties of Essex, James City, King and Queen, Mathews, Middlesex and York; cities of Hampton, Poquoson and Williamsburg)	36.5	152,556	418,230
The calculated recycling rate is based only on data from the 17 SWPUs above required to report for CY 2015.	2015 Recycling Rate (44.2 %)	2015 Total Recycled Tons (PRMs + Credits)	2015 Total MSW Generation Tons (PRMs + Credits + MSW disposed)

REPORTING ENTITY (26 SWPUs with populations 100,000 or less not required to report, but Voluntarily Reporting)	2015 Recycling Rate (%)	2015 Total Recycled Tons (PRMs + Credits)	2015 Total MSW Generation Tons (PRMs + Credits + MSW disposed)
Accomack County SWPU	41.6	16,617	39,942
Amherst County SWPU	27.4	8,782	32,106
Bedford County SWPU	44.9	33,695	78,505
Botetourt County SWPU	19.2	4,012	20,895
Brunswick County SWPU	18.6	2,485	13,354
Carroll-Grayson-Galax SWPU	21.9	7,601	34,682
Craig County SWPU	18.8	494	2,622
Cumberland Plateau Regional Waste Management Authority SWPU (Buchanan, Dickenson and Russell counties)	30.2	18,832	62,293
Danville (City) SWPU	41.2	9,788	23,778
Fairfax (City) SWPU	59.3	33,038	55,730
Falls Church (City) SWPU	68.3	9,845	14,845
Fauquier County SWPU	40.3	30,903	76,643
Floyd County SWPU	22.6	3,190	14,110
Franklin County SWPU	33.2	16,742	50,380
Greater Rockingham SWPU	27.7	20,822	75,280
Harrisonburg City SWPU	39.0	17,799	48,073
Herndon (Town) SWPU	44.4	11,289	25,425
Lunenburg County SWPU	15.5	1,300	7,905
Manassas (City) SWPU	44.8	24,866	55,497
Martinsville (City) SWPU	18.7	12,330	65,971
New River Resource Authority SWPU (counties of Pulaski and Giles; city of Radford)	30.9	34,349	118,841
Patrick County SWPU	39.6	3,596	9,081
Rappahannock County SWMP	22.8	1,450	6,365
Roanoke City SWPU	62.6	64,590	103,179
Salem (City) SWPU	38.2	11,511	30,115
Vinton (Town) SWPU	58.7	5,077	8,644

All data 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

28 SWPUs with populations of 100,000 or less and not required to report for CY 2015.

Alleghany Highlands SWPU
Amelia County SWPU
Bath County SWPU
Bristol (City) SWPU
Buckingham County SWPU
Caroline County SWPU
Craig County SWMP
Culpeper County SWPU
Gloucester County SWPU
Highland County SWPU
King George County SWPU
Lee County SWPU
Louisa County SWPU
Lunenburg County SWMP
Madison County SWMP
Manassas Park SWMP
Northampton County SWPU
Northern Neck PDC SWPU (counties of Lancaster, Northumberland, Richmond and Westmoreland)
Orange County SWMP
Pittsylvania County SWPU
Prince Edward-Cumberland County SWPU
Roanoke County SWPU
Rockbridge – Lexington – Buena Vista SWPU
Scott County SWPU
Southern Crater Region SWPU (counties of Dinwiddie, Greensville, Surry, and Sussex; city of Emporia)
Southside Regional PSA SWPU (counties of Charlotte, Halifax and Mecklenburg)
Vienna (Town) SWMP
Wise County SWPU

Recycling Rate Calculation – 2015

Seventeen recycling rate reports, representing 113 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 2015. 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
Paper	758,223
Metal	405,521
Plastic	21,477
Glass	12,247
Commingled	530,711
Yard Waste	455,890
Waste Wood	258,970
Textiles	21,978
Waste Tires	33,270
Used Oil	30,063
Used Oil Filters	2,365
Used Antifreeze	2,988
Batteries	11,291
Electronics	7,522
Inoperative Motor Vehicles	309
Other	103,072
Total PRM in Tons	2,655,897

Credits	Tons Recycled
Recycling Residue	18,061
Solid Waste Reused	480,600
Non-MSW Recycled	329,749
TOTAL CREDITS	828,410

MSW Disposed Tons

Household Waste	3,700,831
Commercial Waste	611,602
Institutional Waste	49,200
Other	59,111
Total MSW Tons	4,420,744

2% Source Reduction Credit	0.14% overall
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State Rate Calculation

$$\left(\frac{\text{PRM} + \text{Credits}}{\text{PRM} + \text{Credits} + \text{MSW Disposed}} \right) \times 100 + \text{Source Reduction Credit} \\
 \left(\frac{3,484,307}{7,905,051} \right) \times 100 + 0.14\% = 44.2\%$$