



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bureau of Radiation Protection



Appalachian Compact LLRW Disposal Data Calendar Year 2020

Appalachian Compact Commission Meeting
November 5, 2021

Tom Wolf, Governor

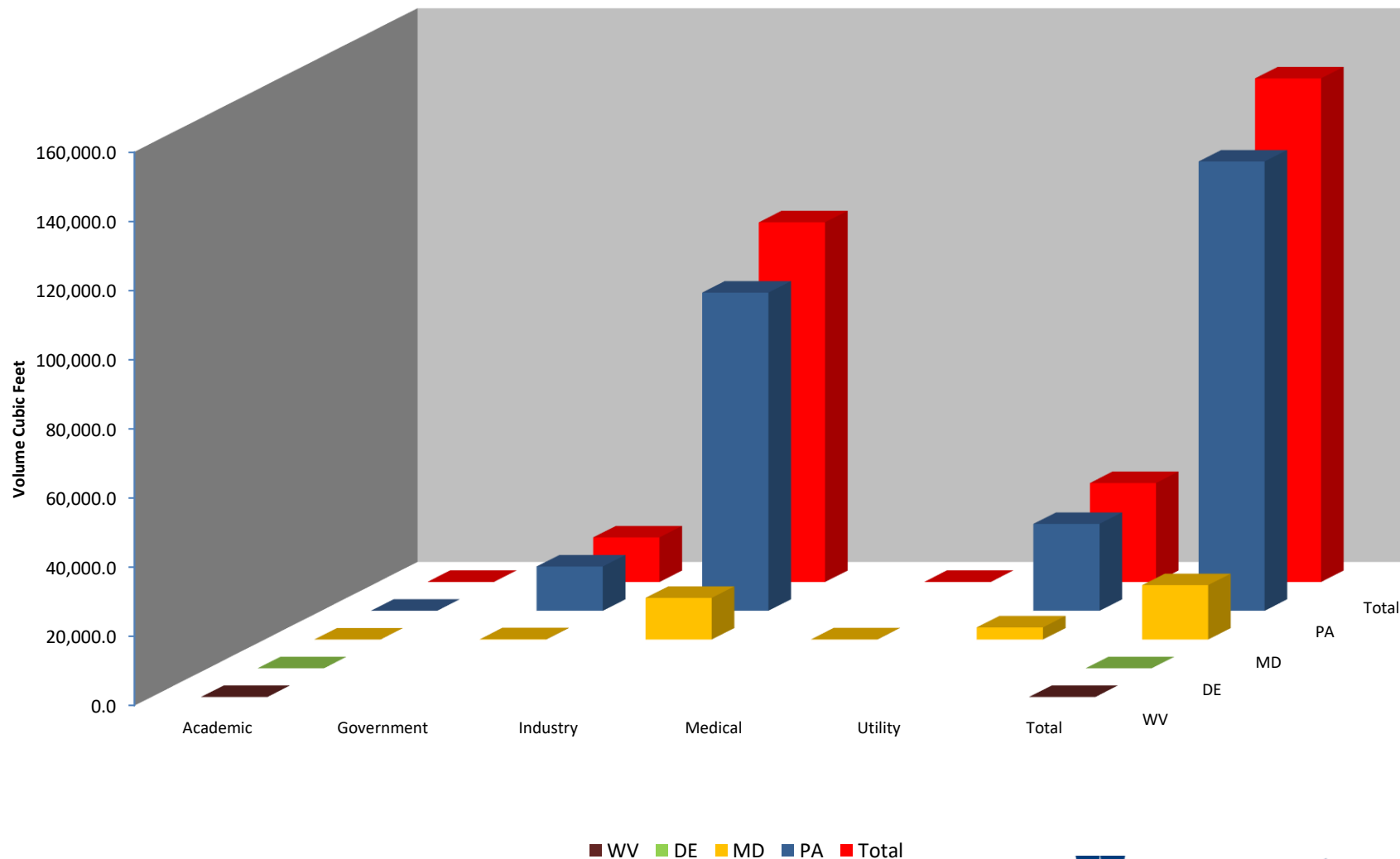
Patrick McDonnell, Secretary

Appalachian Compact Disposed LLRW Volume by State and Facility Type - 2020

Facility Type/State	WV	DE	MD	PA	Total
Academic	22	3	11	24	59
Government	0	0	100	12,783	12,883
Industry	0	0	12,028	91,914	103,942
Medical	0	0	64	0	64
Utility	0	0	3,506	25,091	28,597
Total	22	3	15,709	129,811	145,545

Volume is in cubic feet. This data is for LLRW disposal at *EnergySolutions* in Clive, Utah, and Waste Control Specialists in Andrews, Texas, for the calendar year 2020. It does not include TENORM waste volumes for PA or WV.

Appalachian Compact Disposed LLRW Volume by State and Facility Type - 2020

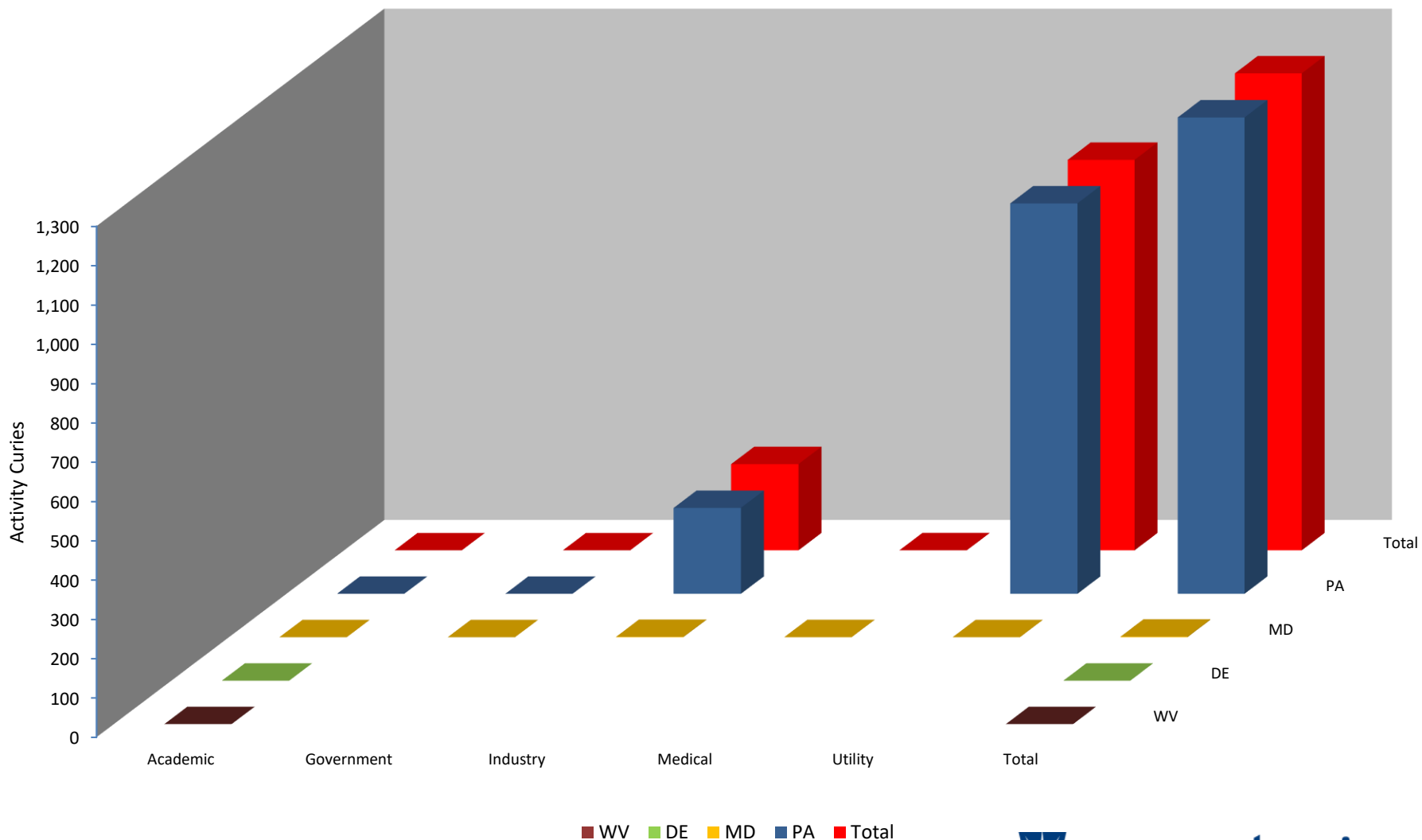


Appalachian Compact Disposed LLRW Activity by State and Facility Type - 2020

Facility Type/State	WV	DE	MD	PA	Total
Academic	<0.1	<0.1	<0.1	<0.1	<0.1
Government	0	0	<0.1	0	<0.1
Industry	0	0	1.0	219	220
Medical	0	0	0.3	0	0.3
Utility	0	0	0.2	993	993
Total	<0.1	<0.1	1.5	1,212	1,213

Activity is in curies. This data is for LLRW disposal at EnergySolutions in Clive, Utah, and Waste Control Specialists in Andrews, Texas, for the calendar year 2020. This table does not include curie activity from TENORM waste.

Appalachian Compact Disposed LLRW Activity by State and Facility Type - 2020

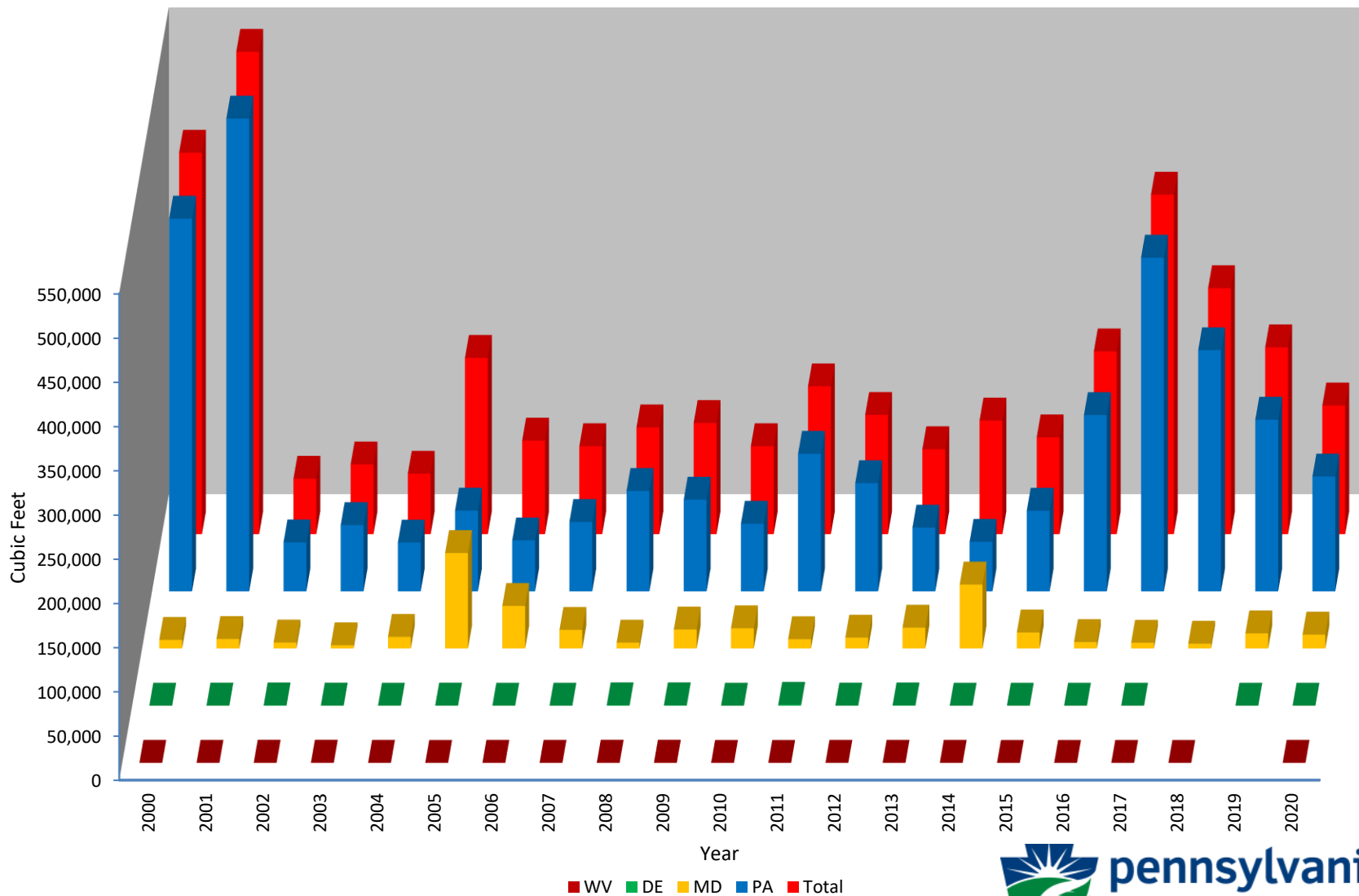


Appalachian Compact Disposed LLRW Volume in Cubic Feet from 2000 to 2020

Year	WV	DE	MD	PA	Total
2000	53	28	9,767	421,398	431,246
2001	44	76	10,760	534,429	545,310
2002	183	366	6,753	55,371	62,674
2003	152	74	3,703	74,901	78,829
2004	35	49	13,178	55,136	68,397
2005	2	74	107,956	91,293	199,326
2006	38	59	48,132	57,628	105,857
2007	49	43	21,016	78,455	99,562
2008	132	415	6,703	113,483	120,733
2009*	134	431	21,451	103,667	125,684
2010*	11	29	22,958	76,519	99,518
2011*	19	1,061	10,569	155,509	167,157
2012*	21	75	12,364	122,380	134,841
2013*	45	340	23,597	72,067	96,048
2014**	25	43	72,334	56,040	128,442
2015**	19	45	18,203	91,223	109,490
2016**	2	5	7,351	199,292	206,649
2017**	1	34	6,588	377,234	383,857
2018**	17	0	5,498	272,620	278,135
2019**	0	26	17,193	194,052	211,271
2020**	22	3	15,709	129,811	145,545
Total 2000 to 2020	1,004	3,275	461,782	3,332,508	Grand Total
					3,798,570

* 2009 to 2013 LLRW volume only includes disposal at EnergySolutions in Clive, Utah. ** 2014 to 2020 includes disposal at EnergySolutions in Clive, Utah, and Waste Control Specialists in Andrews, Texas. Years 1999 to 2008 include disposal at Barnwell, South Carolina, and Energy Solutions, Clive, Utah. Past LLRW Annual Reports, years 2016 to 2020, do not include TENORM waste volumes.

Appalachian Compact Disposed LLRW Volume in Cubic Feet from 2000 to 2020

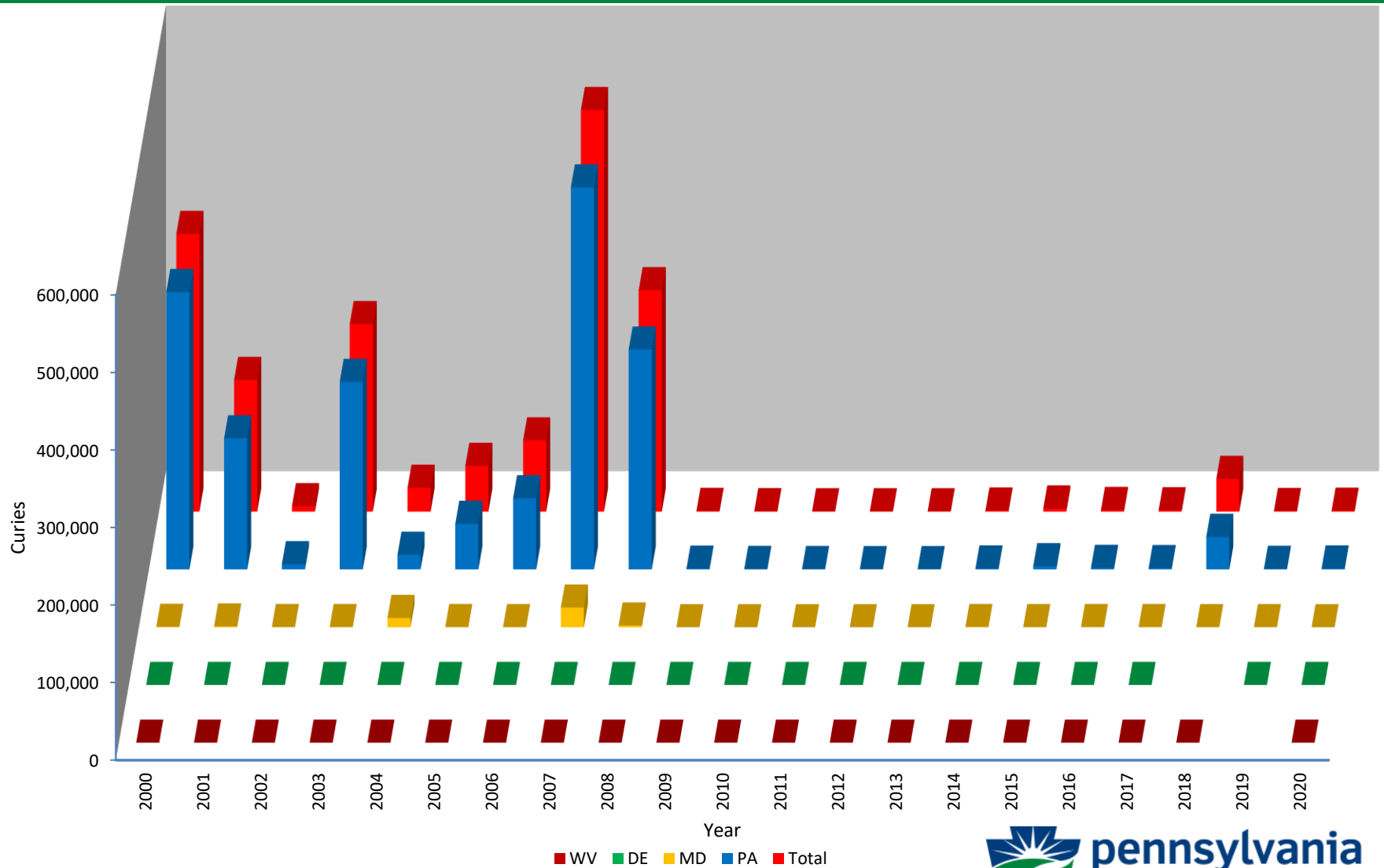


Appalachian Compact Disposed LLRW Activity in Curies from 2000 to 2020

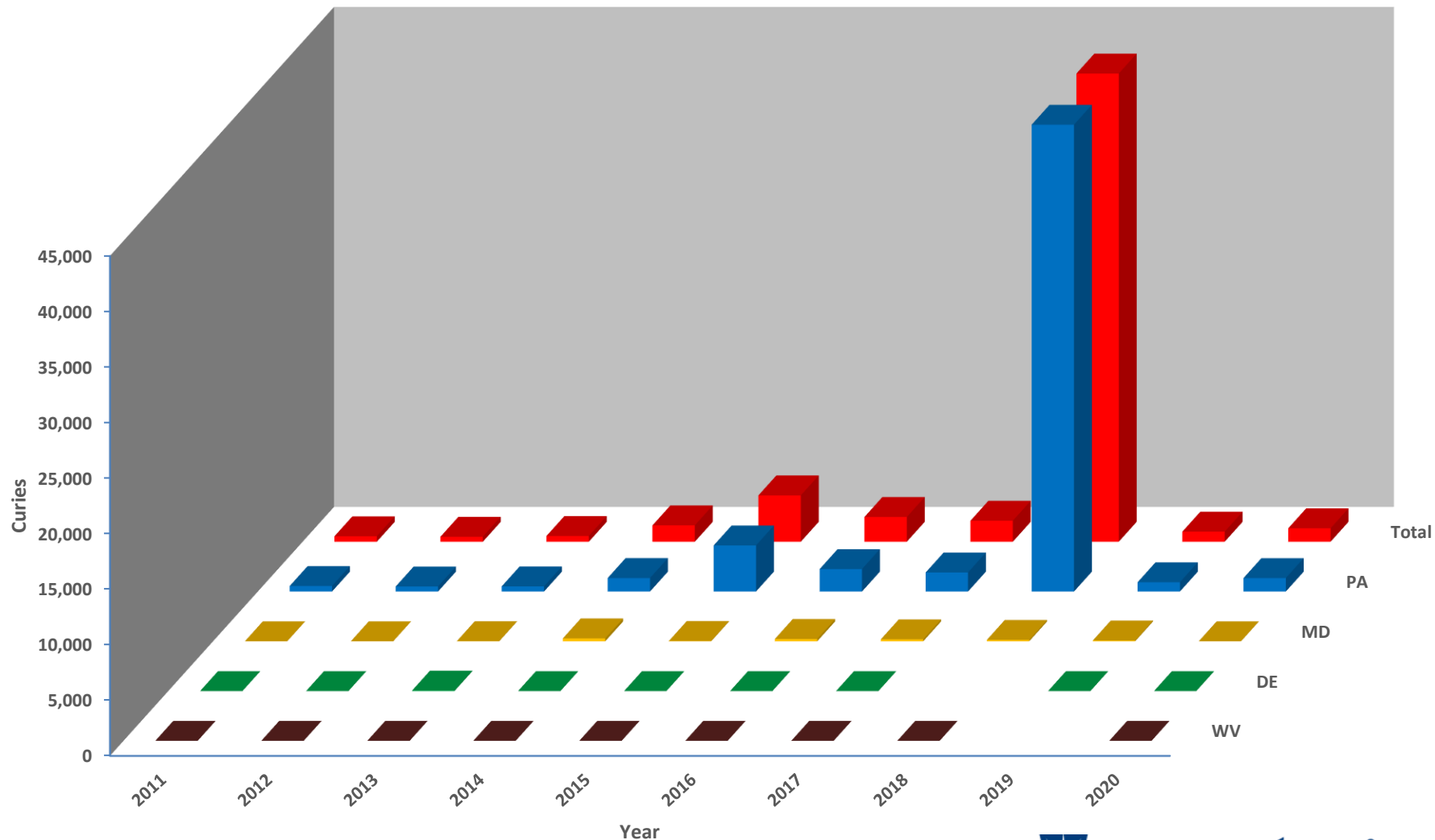
Year	WV	DE	MD	PA	Total
2000	2.2	<0.1	484	357,624	358,111
2001	<0.1	<0.1	903.3	168,920	169,823
2002	0.1	0.5	244.5	6,777	7,023
2003	0.2	24.7	166.3	241,650	241,841
2004	0.8	0.2	11,831	18,890	30,722
2005	0.7	31.3	156.8	58,786	58,975
2006	<0.1	11.9	60.1	91,719	91,791
2007	0.2	12.9	25,305	492,579	517,897
2008	0.1	12.2	2,182	283,329	285,523
2009*	<0.1	0.5	4.7	1,001	1,007
2010*	<0.1	<0.1	1.4	656	658
2011*	<0.1	1	1.8	493	496
2012*	<0.1	<0.1	2.1	449	451
2013*	<0.1	45.3	15.7	459	520
2014**	<0.1	<0.1	260.7	1,213	1,474
2015**	<0.1	<0.1	27.8	4,147	4,175
2016**	0.4	<0.1	209	2,020	2,229
2017**	<0.1	<0.1	178.5	1,711	1,890
2018**	<0.1	0	125.3	42,027	42,153
2019**	0	<0.1	72.6	834	907
2020**	<0.1	<0.1	1.5	1,212	1,213
Total 2000 to 2020	4.8	140.6	42,233.1	1,776,498	Grand Total
					1,818,876

* 2009 to 2013 LLRW activity only includes disposal at EnergySolutions in Clive, Utah. ** 2014 to 2020 includes disposal at EnergySolutions in Clive, Utah, and Waste Control Specialists in Andrews, Texas. Years 1999 to 2008 include disposal at Barnwell, South Carolina, and EnergySolutions, Clive, Utah. Past LLRW Annual Reports, years 2016 to 2020, do not include TENORM waste volumes.

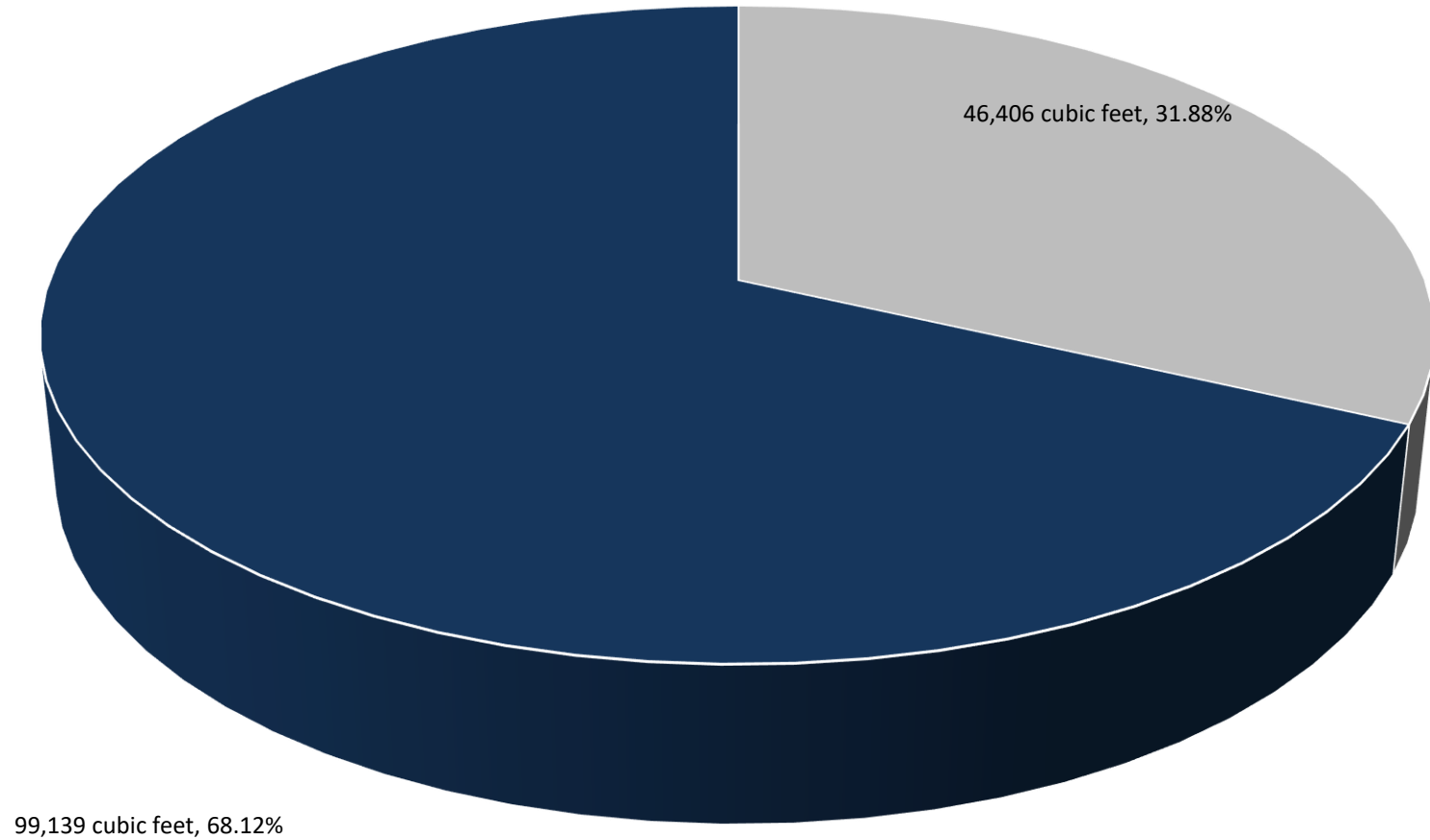
Appalachian Compact Disposed LLRW Activity in Curies from 2000 to 2020



Appalachian Compact Disposed LLRW Activity in Curies from 2011 to 2020

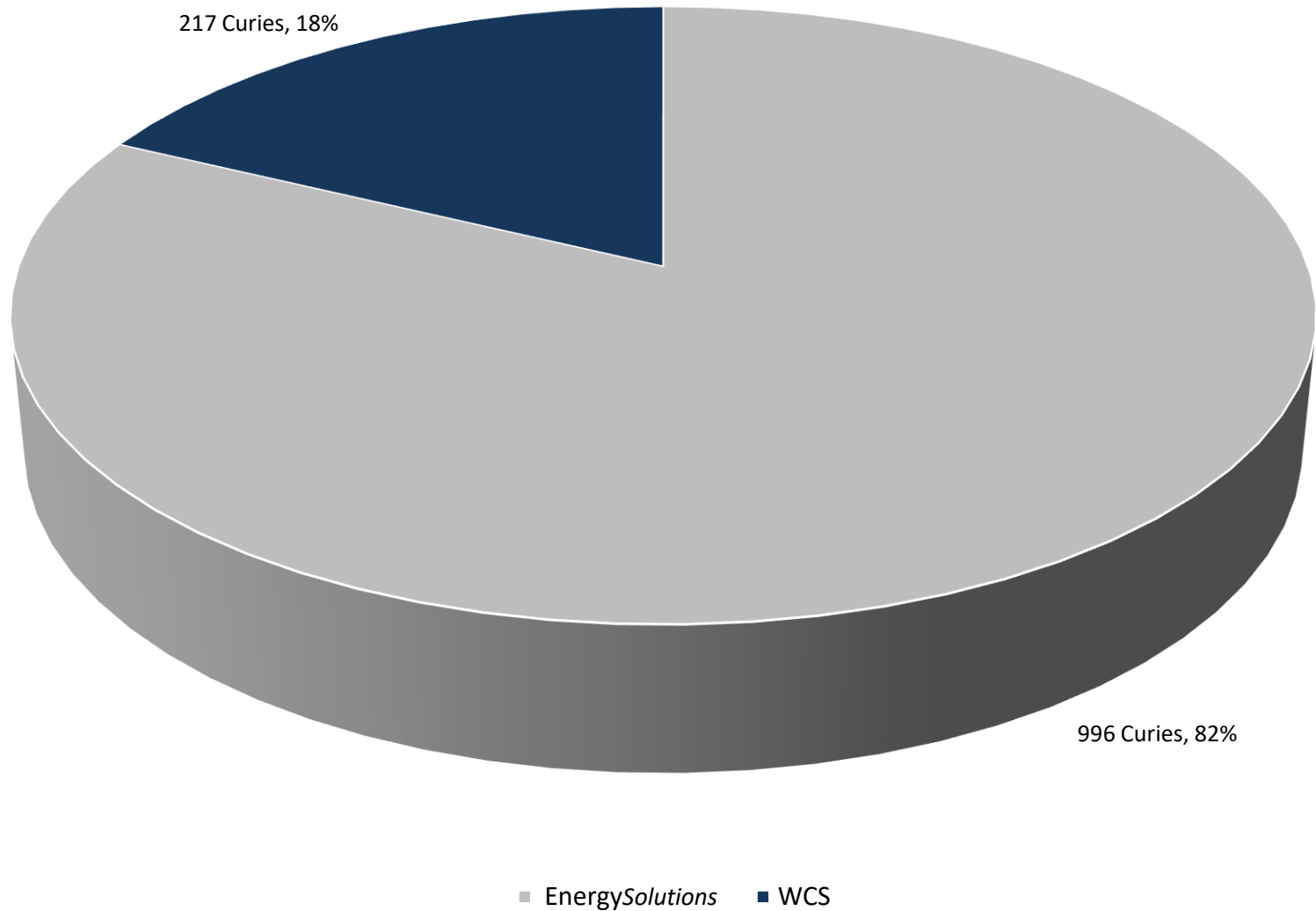


Appalachian Compact Percent Disposed LLRW Volume by Disposal Site - 2020



■ EnergySolutions ■ WCS

Appalachian Compact Percent Disposed LLRW Activity by Disposal Site - 2020

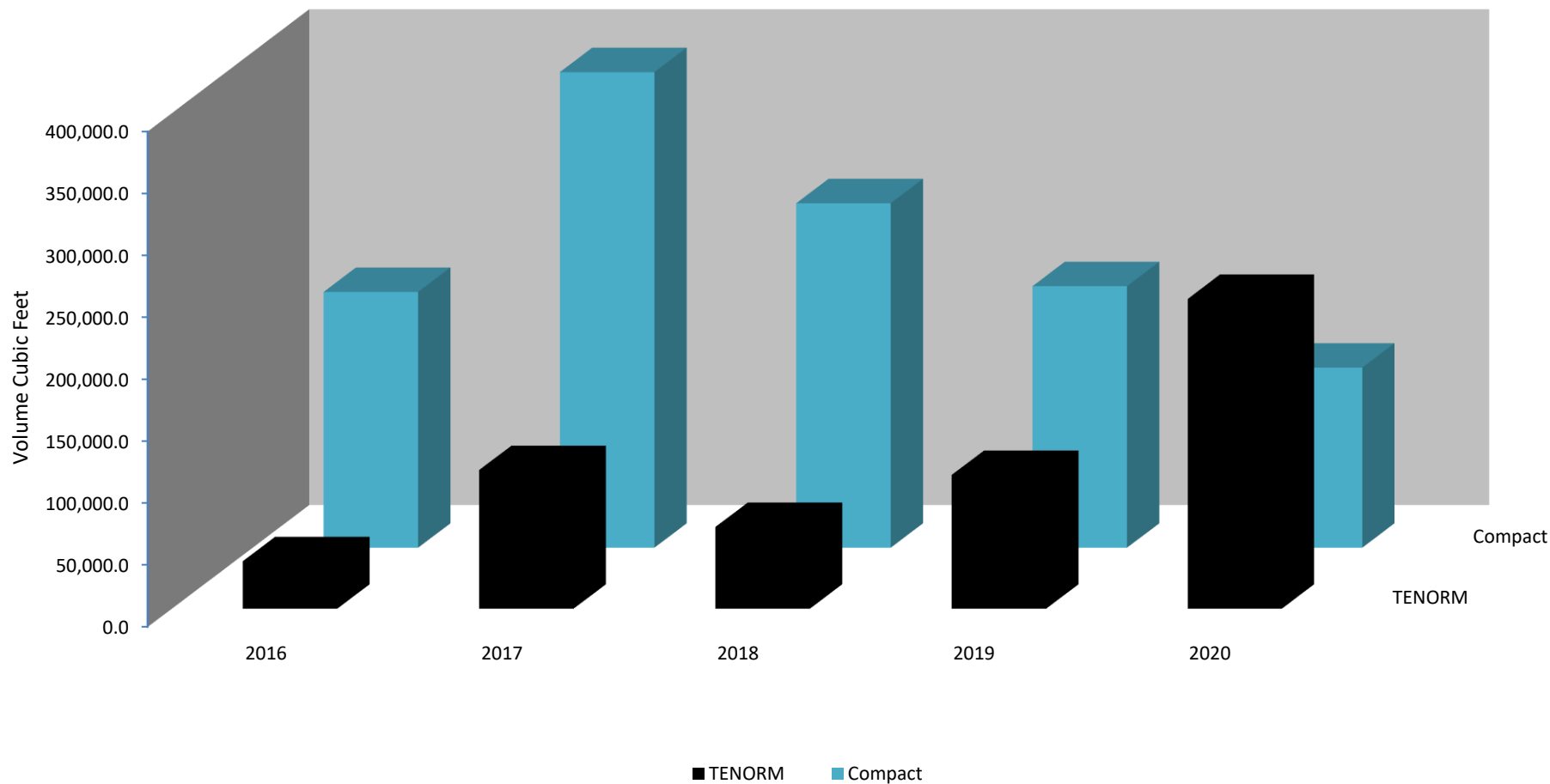


Disposed Compact LLRW and TENORM 2016 - 2020

	TENORM		LLRW	
Years	Volume (ft ³)	Activity (Ci)	Volume (ft ³)	Activity (Ci)
2016	38400	0.9123	206649	2229
2017	112032	2.73	383856	1890
2018	66048	1.88	278136	42153
2019	108096	2.86	211271	907
2020	250344	3.50	145545	1213
Total	574,920	12.0	1,225,457	48,392

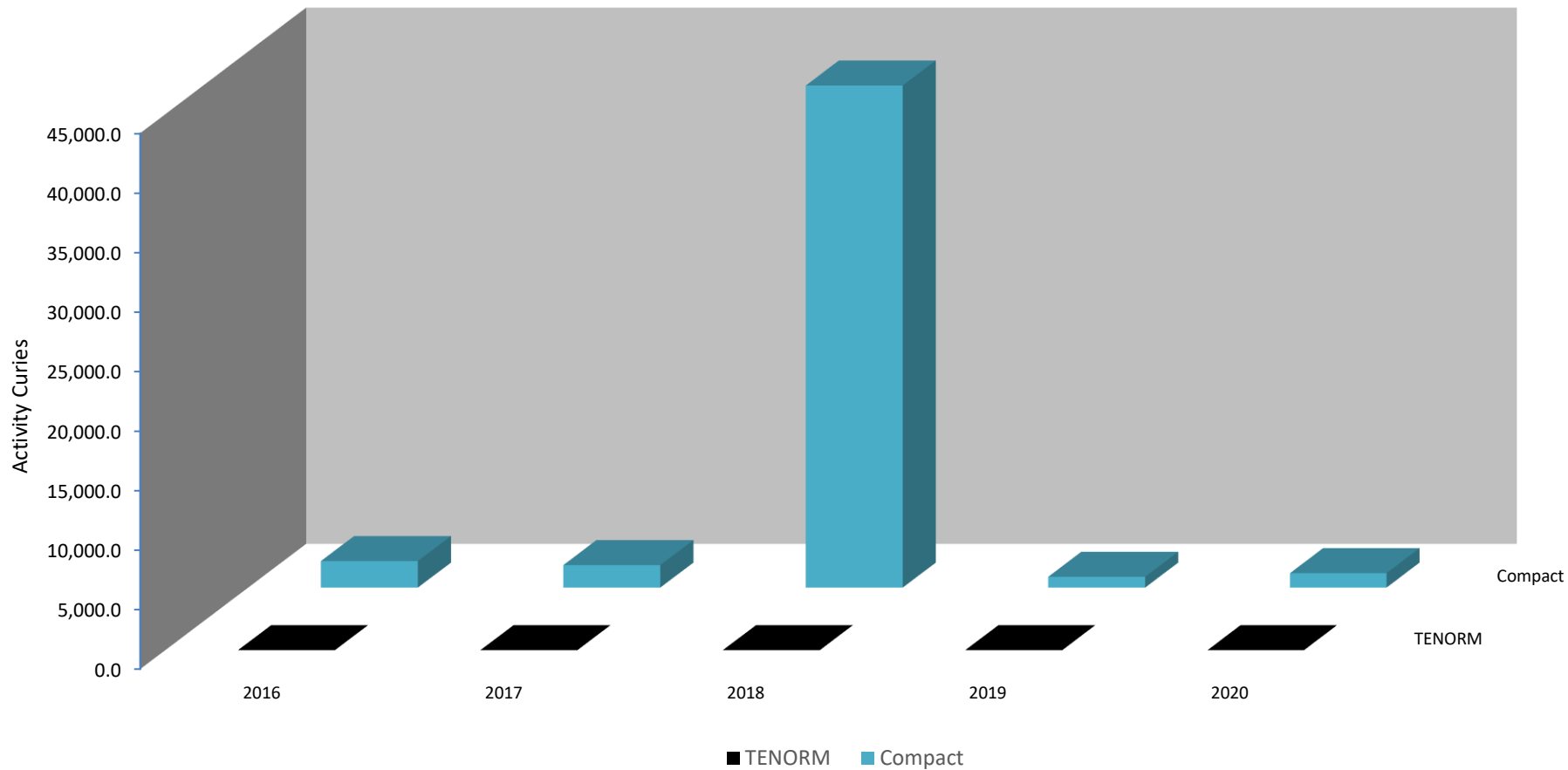
This table separates waste that is considered TENORM and compares the values to the rest of the waste generated within the Compact. It compares both volume and activity.

Disposed Compact LLRW and TENORM by Volume 2016 - 2020



* Waste data is given with TENORM waste that was included in the Compact. This chart separates waste that is considered TENORM and compares the values to the rest of the waste generated within the Compact.

Disposed Compact LLRW and TENORM by Activity 2016 - 2020



* Waste data is given with TENORM waste that was included in the Compact. This chart separates waste that is considered TENORM and compares the values to the rest of the waste generated within the Compact.

Thank you. Questions?

Rich Janati
Bureau of Radiation Protection

Phone: 717-787-2163
rjanati@pa.gov