

Mineral Industry Surveys

For information, contact:

Lori E. Apodaca, Sulfur Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-7724, Fax: (703) 648-7757
E-mail: lapodaca@usgs.gov

Maria Arguelles (Data)
Telephone: (703) 648-7990
Fax: (703) 648-7975
E-mail: marguell@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

SULFUR IN DECEMBER 2013

During December 2013, production of recovered elemental sulfur was 810,000 metric tons (t), which was 6% higher than that of November 2013 and 11% higher than that of December 2012. Shipments were 801,000 t, which was 3% higher than those of November 2013. Producers' ending stocks for December 2013 were 160,000 t.

Imports of recovered sulfur for December 2013 were estimated to be 260,000 t; exports were 236,000 t. Imports of sulfuric acid for December 2013 were 180,000 t; exports were 14,000 t.

U.S. sulfur consumption, calculated as shipments minus exports plus imports, was 825,000 t in December 2013. This was 8% lower than that of November 2013 and 5% more than that of December 2012.

Significant adjustments have been made to the sulfur import data. The U.S. Census Bureau appears to underreport sulfur imports, especially material from Canada. The revised figures are based on Census information and other published data.

TABLE 1
SALIENT SULFUR STATISTICS¹

(Thousand metric tons)

Period	Production			Shipments, all sources	Stocks, end of period ³
	Petroleum ²	Natural gas	Total		
2012:					
January–December	7,370	1,040	8,410	8,450	132
December	653	76	729	730	132
2013:					
January	615	85	700	703	127
February	527	89	617	621	122
March	593	92	685	677	134
April	595	91	686	696	124
May	629	85	714	707	130
June	603	73	676	667	137
July	679	85	764	757	148
August	684	80	764	775	136
September	654	75	729	718	148
October	669	89 ^r	758	758 ^r	151
November	669 ^r	92	761 ^r	774 ^r	140
December ^p	724	86	810	801	160
January–December	7,640	1,020	8,660	8,650	160

^pPreliminary. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes a small quantity from coking operations.

³Subject to inventory adjustments.

TABLE 2
U.S. IMPORTS OF SULFUR¹

(Thousand metric tons and thousand dollars)

Period	Canada		Mexico		Venezuela		Total, all countries ²	
	Quantity ^e	Value ³	Quantity	Value ³	Quantity ^e	Value ³	Quantity ^e	Value ³
2012:								
January–December	2,440	163,000	366	56,000	115	14,200	2,930	238,000
December	200	13,500	16	2,840	15	1,840	233	18,900
2013:								
January	190	15,300	2	122	--	--	193	16,000
February	170	11,800	63	8,040	20	2,580	254	22,700
March	190	14,100	30	3,730	--	--	222	18,500
April	210	15,300	31	3,660	30	2,520	271	21,800
May	220	10,600	51	6,530	--	--	271	17,800
June	210	13,800	51	6,530	14	1,600	275	22,200
July	200	15,400	50	5,420	8	967	260	22,400
August	200	12,600	44	4,040	14	1,550	259	18,900
September	200	6,760	34	3,170	--	--	234	10,300
October	200	7,210	35	2,600	--	--	235	10,400
November	200	6,820	48	2,880	1	43	249	9,940
December	200	5,340	29	1,460	28	4,150	260	11,400
January–December	2,390	135,000	468	48,200	115	13,400	2,980	202,000

^eEstimated. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other countries not listed.

³Declared customs valuation.

Sources: U.S. Census Bureau data as adjusted by U.S. Geological Survey and ICIS PentaSul North America Sulphur Service.

TABLE 3
U.S. IMPORTS OF SULFURIC ACID¹

(Thousand metric tons and thousand dollars)

Period	Canada			Mexico			Total, all countries ²		
	Quantity	Sulfur content	Value ³	Quantity	Sulfur content	Value ³	Quantity	Sulfur content	Value ³
2012:									
January–December	1,980	646	155,000	471	154	33,700	2,850	933	239,000
December	153	50	11,900	40	13	2,840	230	75	19,600
2013:									
January	170	56	13,500	38	12	2,500	236	77	18,000
February	162	53	13,000	39	13	2,460	201	66	15,500
March	186	61	14,700	45	15	2,930	269	88	19,500
April	179	59	12,100	51	17	3,170	280	92	17,600
May	173	57	10,900	47	15	2,870	286	93	16,700
June	149	49	9,380	62	20	3,950	232	76	16,100
July	178	58	12,600	60	20	3,810	265	87	20,100
August	187	61	12,900	55	18	3,500	254	83	19,500
September	183	60	12,500	45	15	2,800	270	88	20,500
October	160	52	10,700	48	16	2,950	257	84	17,700
November	173	57	11,400	40	13	2,500	245	80	15,900
December	154	50	10,400	25	8	1,330	180	59	13,200
January–December	2,050	673	144,000	555	182	34,800	2,980	973	210,000

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other countries not listed.

³Declared customs valuation.

Source: U.S. Census Bureau.

TABLE 4
U.S. EXPORTS OF SULFUR AND SULFURIC ACID¹

(Thousand metric tons and thousand dollars)

Period	Sulfur		Sulfuric acid		
	Quantity	Value ²	Quantity	Sulfur content	Value ²
2012:					
January–December	1,850	366,000	161	53	33,000
December	174	31,300	12	4	3,530
2013:					
January	77	15,900	15	5	2,900
February	130	22,600	8	3	1,820
March	155	30,000	20	7	3,090
April	227	35,200	11	4	2,290
May	64	14,400	17	6	3,100
June	116	19,500	12	4	2,430
July	111	18,600	15	5	3,360
August	257	18,100	14	5	2,830
September	161	14,100	15	5	2,520
October	94	8,960	16	5	2,110
November	126	9,700	11	4	1,800
December	236	28,300	14	5	1,860
January–December	1,750	235,000	168	58	30,100

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Declared f.a.s. (free alongside ship) valuation.

Source: U.S. Census Bureau.

TABLE 5
U.S. CONSUMPTION OF SULFUR¹

(Thousand metric tons)

Period	Domestic sources ²	Imports ³	Consumption
2012:			
January–December	6,600	2,930	9,520
December	546	233	789
2013:			
January	626	193	819
February	491	254	745
March	522	222	744
April	469	271	740
May	643	271	914
June	551	275	826
July	646	260	906
August	518	259	777
September	557	234	791
October	664 ^r	235	899 ^r
November	648 ^r	249	897 ^r
December ^p	565	260	825
January–December	6,900	2,980	9,880

³Estimated. ^pPreliminary. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Calculated as shipments minus exports.

TABLE 6
RECOVERED SULFUR PRODUCED AND SHIPPED IN THE UNITED STATES,
BY PAD (PETROLEUM ADMINISTRATION FOR DEFENSE) DISTRICT¹

(Thousand metric tons)

District and source	January–December 2012 ²		November 2013		December 2013 ^p		January–December 2013 ^{p, 2}	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	132	136	10	11	12	12	170	171
Natural gas	13	13	1	1	1	1	13	13
Total	145	150	11	12	13	13	184	184
PAD 2:								
Petroleum and coke	1,080	1,080	93	94	99	100	1,070	1,070
Natural gas	18	18	1	1	--	--	13	13
Total	1,100	1,100	94	95	99	100	1,090	1,080
PAD 3: ³								
Petroleum and coke	4,810	4,850	457 ^r	472 ^r	475	467	5,070	5,050
Natural gas	446	426	36	35	37	36	435	435
Total	5,250	5,280	493 ^r	507 ^r	512	503	5,500	5,490
PAD 4 and 5								
Petroleum and coke	1,350	1,360	109	106	138	138	1,330	1,340
Natural gas	562	560	54	55	48	46	561	559
Total	1,910	1,920	162	160	186	184	1,890	1,900
Grand total	8,410	8,450	761 ^r	774 ^r	810	801	8,660	8,650

^pPreliminary. ^rRevised. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revisions to previously published data.

³Includes the U.S. Virgin Islands.

TABLE 7
COMPARATIVE SULFUR AND SULFURIC ACID STATISTICS¹

(Million metric tons per year [annualized basis] and dollars per metric ton for period shown)

	2013			
	2012	November	December	January– December
Production	8.41	9.26 ^r	9.54 ^p	8.66
Shipments	8.45	9.42 ^r	9.43 ^p	8.65
Exports of sulfur	1.85	1.53	2.78	1.75
Imports of sulfur:				
Canada ^e	2.44	2.43	2.35	2.39
Mexico	0.37	0.58	0.34	0.47
Venezuela ^e	0.12	0.01	0.33	0.12
Total ^{e, 2}	2.93	3.03	3.06	2.98
Exports of H ₂ SO ₄	0.16	0.13	0.16	0.17
Imports of H ₂ SO ₄ :				
Canada	1.98	2.10	1.81	2.05
Mexico	0.47	0.49	0.29	0.56
Total ²	2.85	2.98	2.12	2.98
Consumption:				
Domestic sources	6.60	7.87	6.65	6.90
Imports ^e	2.93	3.03	3.06	2.98
Total	9.52	10.90	9.71	9.88
Sulfur export values ³	198	77	120	134
Sulfur import values: ³				
Canada	67	34	27	56
Mexico	153	60	50	103
Venezuela	123	43	148	117
Average ²	81	40	44	68
H ₂ SO ₄ export values ³	205	163	133	179
H ₂ SO ₄ import values: ³				
Canada	79	66	68	70
Mexico	71	63	53	63
Average ²	84	65	73	71

^eEstimated. ^pPreliminary. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes other countries not listed.

³Average value per ton.