

Mineral Industry Surveys

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SULFUR IN SEPTEMBER 2016

During September 2016, production of recovered elemental sulfur was 742,000 metric tons (t), which was 8% lower than that of August 2016 and slightly higher than that of September 2015. Shipments were 739,000 t, which were 11% lower than those of August 2016. Producers' ending stocks for September 2016 were 134,000 t.

Imports of recovered sulfur for September 2016 were estimated to be 201,000 t; exports were 128,000 t. Imports of sulfuric acid for September 2016 were 253,000 t; exports were 23,000 t.

U.S. sulfur consumption, calculated as shipments minus exports plus imports, was 812,000 t in September 2016. This was slightly lower than that of August 2016 and 18% higher than that of September 2015.

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TABLE 1
SALIENT SULFUR STATISTICS¹

(Thousand metric tons)

Period	Production			Shipments, all sources	Stocks, end of period ³
	Petroleum ²	Natural gas	Total		
2015:					
January–December	7,910	984	8,890	8,910 ^r	138
January–September	5,840 ^r	736	6,580 ^r	6,610 ^r	131
September	641	84	725	737	131
October	644	80	724	707	148
November	682	80	762	753	158
December	739	86	825 ^r	845 ^r	138
2016:					
January	680	81	761	760	141
February	616	79	695	692	145
March	679	81	760	781	127
April	660	71	731	730	128
May	710	67	777	764	142
June	694	58	752	748	145
July	740	71	811	812	145
August	735	67	803	826	127
September ^p	685	58	742	739	134
January–September	6,200	632	6,830	6,850	134

^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
2015:								
January–December	1,860	87,100	190	16,500	20	425	2,240	136,000
January–September	1,390 ^r	62,600 ^r	146 ^r	12,500	20	425 ^r	1,680 ^r	99,300 ^r
September	160	7,520	--	--	--	--	161	7,870
October	160	7,850	29	1,640	--	--	236	16,100
November	150	8,840	--	--	--	--	151	9,310
December	160	7,800	14	2,310	--	--	176	10,800
2016:								
January	150	8,050	15	471	(4)	33	167	9,530
February	140	4,780	29	795	--	--	171	6,650
March	150	4,430	15	278	(4)	19	166	5,450
April	80 ^r	2,400	--	--	--	--	82 ^r	4,040
May	80 ^r	2,050	15	282	--	--	96 ^r	3,650
June	80 ^r	2,250	--	--	3	242	83 ^r	2,960
July	150	2,720	--	--	--	--	165	7,160
August	150	3,680	--	--	--	--	152	4,770
September	140	6,000	--	--	--	--	201	11,600
January–September	1,120	36,400	74	1,830	3	294	1,280	55,800

^eEstimated. ^rRevised. -- 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.

⁴Less than ½ unit.

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
2015:									
January–December	2,070	677	124,000	768	252	41,000	3,540	1,160	208,000
January–September	1,520	498 ^r	91,500	551 ^r	181 ^r	29,400	2,630	860 ^r	157,000
September	167	55	9,610	70	23	3,700	276	90	14,600
October	186	61	11,000	73	24	3,920	310	101	17,400
November	187	61	11,000	73	24	3,940	328	107	18,100
December	175	57	9,970	69	23	3,810	273	89	15,700
2016:									
January	157	51	7,640	60	20	2,540	277	91	12,900
February	164	54	7,600	55	18	2,190	247	81	11,400
March	175	57	7,640	62	20	2,720	291	95	13,000
April	186	61	6,900	54	18	2,140	274	90	10,600
May	170	56	5,810	60	20	2,360	258	84	9,560
June	165	54	5,640	58	19	2,240	254	83	9,440
July	199	65	8,360	77	25	2,670	300	98	12,300
August	171	56	7,540	60	20	2,420	289	94	12,200
September	166	54	7,800	34	11	1,380	253	83	10,600
January–September	1,550	508	64,900	520	171	20,700	2,440	799	102,000

^rRevised.

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
2015:					
January–December	1,850	281,000	172	56	30,700
January–September ^r	1,310	214,000	142	47	23,600
September	209	32,200	11	4	2,080
October	166	15,200	11	4	2,100
November	128	16,500	9	3	2,440
December	244	34,500	8	3	2,560
2016:					
January	225	28,900	9	3	2,480
February	130	16,200	12	4	2,710
March	174	18,700	8	2	1,740
April	165	16,700	14	5	2,200
May	187	17,500	16	5	2,250
June	168	14,900	13	4	2,730
July	204	20,000	14	4	3,420
August	153	15,300	14	5	2,580
September	128	13,000	23	8	3,280
January–September	1,530	161,000	123	39	23,400

^rRevised.

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 ^c	Consumption
2015:			
January–December	7,070	2,240	9,310
January–September ^f	5,300	1,680	6,980
September	528	161	689
October	541	236	777
November	625	151	776
December	602	176	778
2016:			
January	535	167	702
February	562	171	733
March	607	166	773
April	565	82 ^r	647 ^r
May	577	96 ^r	673 ^r
June	580	83 ^r	663 ^r
July	608	165	773
August	673	152	825
September ^p	611	201	812
January–September	5,320	1,280	6,600

^cEstimated. ^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–September 2015 ²		August 2016		September 2016 ^p		January–September 2016 ^{p,2}	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	147	148	17	16	15	15	130	130
Natural gas	10	10	1	1	1	1	10	10
Total	157	158	18	18	16	16	140	139
PAD 2:								
Petroleum and coke	991	995	128	131	117	120	1,080	1,070
Natural gas	10	10	1	1	1	1	7	7
Total	1,000	1,010	129	132	118	121	1,080	1,080
PAD 3:								
Petroleum and coke	3,710	3,710	459	465	430	425	3,960	3,950
Natural gas	295	296	19	20	15	14	212	215
Total	4,000	4,010	478	485	445	439	4,170	4,170
PAD 4 and 5:								
Petroleum and coke	999	1,010	132	143	123	124	1,040	1,060
Natural gas	420	424	46	49	41	40	403	405
Total	1,420	1,440	177	192	164	163	1,440	1,460
Grand total	6,580	6,610	803	826	742	739	6,830	6,850

^pPreliminary.

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

²May include revisions to previously published data.

TABLE 7
COMPARATIVE SULFUR AND SULFURIC ACID STATISTICS¹

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

	2015	2016		
		August	September	January– September
Production	8.89	9.48	9.05 ^p	9.12
Shipments	8.91 ^r	9.75	9.02 ^p	9.15
Exports of sulfur	1.85	1.81	1.57	2.04
Imports of sulfur:				
Canada ^e	1.86	1.77	1.71	1.50
Mexico	0.19	--	--	0.10
Venezuela ^e	0.02	--	--	(2)
Total ^{e,3}	2.24	1.79	2.46	1.71
Exports of H ₂ SO ₄	0.17	0.17	0.28	0.16
Imports of H ₂ SO ₄ :				
Canada	2.07	2.02	2.03	2.07
Mexico	0.77	0.71	0.41	0.69
Total ³	3.54	3.41	3.09	3.26
Consumption:				
Domestic sources	7.07	7.95	7.45	7.11
Imports ^e	2.24	1.79	2.46	1.71
Total	9.31	9.74	9.91	8.82
Sulfur export values ⁴	152	100	101	105
Sulfur import values: ⁴				
Canada	47	25	43	33
Mexico	87	XX	XX	25
Venezuela	21	XX	XX	98
Average ³	61	31	57	43
H ₂ SO ₄ export values ⁴	178	184	143	190
H ₂ SO ₄ import values: ⁴				
Canada	60	44	47	42
Mexico	53	40	41	40
Average ³	59	42	42	42

^eEstimated. ^pPreliminary. ^rRevised. XX Not applicable. -- Zero.

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

²Less than ½ unit.

³Includes other countries not listed.

⁴Average value per ton.