



# Mineral Industry Surveys

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**For information, contact:**

Joyce A. Ober, Sulfur Commodity Specialist  
U.S. Geological Survey  
989 National Center  
Reston, VA 20192  
Telephone: (703) 648-7717, Fax: (703) 648-7757  
E-mail: [jober@usgs.gov](mailto:jober@usgs.gov)

Robin C. Kaiser (Data)  
Telephone: (703) 648-7948  
Fax: (703) 648-7792  
E-mail: [rkaiser@usgs.gov](mailto:rkaiser@usgs.gov)

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

## SULFUR IN JUNE 2009

During the first 6 months of 2009, sulfur production was 9% higher and shipments were 8% higher than they were during the corresponding time period of 2008. Consumption, however, was 21% lower in January through June 2009 than it was in the first half of 2008. These differences were reflected in decreased imports and increased exports.

During the month, production of recovered elemental sulfur was 749,000 metric tons (t), according to the U.S. Geological Survey. Production was about the same as that of May 2009 and 7% higher than that of June 2008. Shipments were 740,000 t, 5% higher than those of May 2009. Producers' ending stocks for June 2009 were 285,000 t.

Imports of recovered sulfur for June 2009 were estimated to be 125,000 t; exports were 199,000 t. Imports of sulfuric acid for June 2009 were 64,000 t; exports were 25,000 t.

U.S. sulfur consumption, calculated as shipments minus exports plus imports, was 666,000 t in June 2009. This was 13% lower than that of May 2009 and 22% lower than that of June 2008. During the first 3 months of 2009, sulfur consumption remained low compared with levels reached during most of 2008 because phosphate fertilizer producers curtailed production at most operations as a result of decreased demand for fertilizer products. Consumption increased in April and May, but declined again in June. Data from the third quarter 2009 may be required before new trends can be identified.

Significant adjustments have been made to the sulfur import data. Reports from the U.S. Census Bureau appear to underreport sulfur imports, especially material from Canada. The revised figures are based on Census information and data from personal communications with industry experts.

TABLE 1  
SALIENT SULFUR STATISTICS<sup>1</sup>

(Thousand metric tons)

Period	Production			Shipments, all sources	Ending stocks <sup>3</sup>
	Petroleum <sup>2</sup>	Natural gas	Total		
2008:					
January-December	7,370	1,170	8,540	8,510	XX
January-June	3,580	556	4,140	4,130	XX
June	601	96	697	678	182
July	652	101	753	771	174
August	634	105	739	724	182
September	500	94	596	574	209
October	656	106	760	767	198
November	636	100	736	720	209
December	713	110	823	828	205
2009:					
January	687	89	776	776	205
February	583	92	675	671	215
March	678	112	790	767	252
April	697	93	790	810	239
May	651	96 <sup>r</sup>	747 <sup>r</sup>	703 <sup>r</sup>	289
June <sup>p</sup>	654	95	749	740	285
Total	3,950	576	4,530	4,470	XX

<sup>p</sup>Preliminary. <sup>r</sup>Revised. XX Not applicable.

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

<sup>2</sup>Includes a small quantity from coking operations.

<sup>3</sup>Subject to inventory adjustments.

TABLE 2  
U.S. IMPORTS OF SULFUR<sup>1</sup>

(Thousand metric tons and thousand dollars)

Period	Canada		Mexico		Venezuela		Total, all countries <sup>2</sup>	
	Quantity <sup>e</sup>	Value <sup>3</sup>	Quantity	Value <sup>3</sup>	Quantity <sup>e</sup>	Value <sup>3</sup>	Quantity <sup>e</sup>	Value <sup>3</sup>
2008:								
January-December	2,180	415,000	365	140,000	360	134,000	3,000	753,000
January-June	1,200	167,000	187	57,400	167	38,100	1,590	285,000
June	190	36,800	29	9,840	23	8,230	253	64,700
July	200	62,900	14	5,940	20	8,230	261	102,000
August	200	55,900	29	11,600	60	39,100	309	119,000
September	195	52,000	29	13,800	49	22,800	273	88,700
October	130	55,200	49	25,400	40	15,100	232	99,500
November	125	17,600	29	16,300	9	5,250	164	39,500
December	130	4,900	27	9,210	15	5,260	172	19,500
2009:								
January	65	3,360	--	--	10	200	75	3,900
February	59	1,650	14	805	--	--	73	2,750
March	65	2,020	8	157	10	164	83	2,670
April	120 <sup>r</sup>	3,260	--	--	8	142	128 <sup>r</sup>	3,690
May	125 <sup>r</sup>	3,810	20	98	14	294	161 <sup>r</sup>	4,400
June	120	5,080	--	--	5	100	125	5,490
Total	554	19,200	42	1,060	47	900	646	22,900

<sup>e</sup>Estimated. <sup>r</sup>Revised. -- Zero.

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

<sup>2</sup>May include other countries not listed.

<sup>3</sup>Declared customs valuation.

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

TABLE 3  
U.S. IMPORTS OF SULFURIC ACID<sup>1</sup>

(Thousand metric tons and thousand dollars)

Period	Canada			Mexico			Total, all countries <sup>2</sup>		
	Quantity	Sulfur content	Value <sup>3</sup>	Quantity	Sulfur content	Value <sup>3</sup>	Quantity	Sulfur content	Value <sup>3</sup>
2008:									
January-December	2,350	765	233,000	296	97	55,700	3,440	1,130	459,000
January-June	1,270	412	104,000	118	39	13,400	1,760	576	166,000
June	192	63	18,100	12	4	1,370	357	117	33,300
July	196	64	21,000	21	7	2,970	241	79	29,000
August	237	77	28,400	41	13	13,500	324	106	57,100
September	186	61	21,400	24	8	5,360	319	104	61,600
October	164	54	21,900	34	11	7,480	278	91	55,200
November	151	49	18,600	25	8	5,320	257	84	45,200
December	146	48	18,000	33	11	7,690	265	87	44,400
2009:									
January	142	46	24,500	23	8	3,590	196	64	35,800
February	172	56	31,700	14	5	458	206	67	32,600
March	192	63	34,700	18	6	334	281	92	40,600
April	70	23	9,290	2	1	97	105	34	10,200
May	32	10	3,440	1	( <sup>4</sup> )	12	43	14	3,630
June	18	6	1,860	8	3	41	64	21	3,780
Total	626	204	105,000	66	23	4,530	895	292	127,000

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

<sup>2</sup>May include other countries not listed.

<sup>3</sup>Declared customs valuation.

<sup>4</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 4  
U.S. EXPORTS OF SULFUR AND SULFURIC ACID<sup>1</sup>

(Thousand metric tons and thousand dollars)

Period	Sulfur		Sulfuric acid		
	Quantit	Value <sup>2</sup>	Quantity	Sulfur content	Value <sup>2</sup>
2008:					
January-December	954	272,000	261	85	42,700
January-June	345	110,000	129	43	20,600
June	74	24,800	18	6	2,130
July	69	16,700	15	5	1,900
August	104	53,900	20	7	2,670
September	37	18,700	24	8	3,430
October	125	36,800	37	10	8,490
November	101	14,800	14	5	1,350
December	173	20,400	22	7	4,240
2009:					
January	116	10,500	16	5	1,550
February	114	4,790	17	6	1,720
March	247	9,960	11	4	1,500
April	119	5,820	17	6	1,740
May	99	5,490	19	6	1,980
June	199	10,400	25	8	2,420
Total	894	47,000	105	35	10,900

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

<sup>2</sup>Declared f.a.s. (free alongside ship) valuation.

Source: U.S. Census Bureau.

TABLE 5  
U.S. CONSUMPTION OF SULFUR<sup>1</sup>

(Thousand metric tons)

Period	Domestic sources <sup>2</sup>	Imports <sup>e</sup>	Consumption
2008:			
January-December	7,560	3,000	10,600
January-June	3,780	1,590	5,370
June	604	253	857
July	702	261	963
August	620	309	929
September	537	273	810
October	642	232	874
November	619	164	783
December	655	172	827
2009:			
January	660	75	735
February	557	73	630
March	520	83	603
April	691	128 <sup>f</sup>	819 <sup>f</sup>
May <sup>f</sup>	604	161	765
June	541	125	666
Total	3,570	646	4,220

<sup>e</sup>Estimated. <sup>f</sup>Revised.

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

<sup>2</sup>Calculated as shipments minus exports.

TABLE 6  
RECOVERED SULFUR PRODUCED AND SHIPPED IN THE UNITED STATES,  
BY PAD (PETROLEUM ADMINISTRATION FOR DEFENSE) DISTRICT<sup>1</sup>

(Thousand metric tons)

District and source	January-June 2008 <sup>2</sup>		May 2009		June 2009 <sup>p</sup>		January-June 2009 <sup>p,2</sup>	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	125	120	16	15	16	15	95	92
Natural gas	7	7	1	1	1	1	5	5
Total	132	127	17	16	17	16	101	98
PAD 2:								
Petroleum and coke	498	502	71	69	70	72	430	419
Natural gas	17	17	2	2	2	3	15	16
Total	515	519	73	71	72	75	445	435
PAD 3: <sup>3</sup>								
Petroleum and coke	2,290	2,290	466	439	478	470	2,830	2,810
Natural gas	264	266	40	38	38	39	245	220
Total	2,550	2,560	506	477	515	509	3,080	3,030
PAD 4 and 5: <sup>4</sup>								
Petroleum and coke	673	655	99	90	90	89	596	585
Natural gas	268	270	52	48	54	52	310	317
California	549	524	83	76	73	73	487	481
Total	941	926	151	138	144	140	906	902
Grand total	4,140	4,130	747	703	749	740	4,530	4,470

<sup>p</sup>Preliminary.

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

<sup>2</sup>May include revisions.

<sup>3</sup>Includes the U.S. Virgin Islands.

<sup>4</sup>Quantities produced and shipped in California included in petroleum and coke. California total shown for information purpose only

TABLE 7  
COMPARATIVE SULFUR AND SULFURIC ACID STATISTICS<sup>1</sup>

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

	2008	2009		
	total	May	June	Total
Production	8.54	8.80 <sup>r</sup>	9.11 <sup>p</sup>	9.13
Shipments	8.51	8.28 <sup>r</sup>	9.00 <sup>p</sup>	9.01
Exports of sulfur	0.95	1.17	2.42	1.80
Imports of sulfur:				
Canada <sup>e</sup>	2.18	1.47 <sup>r</sup>	1.46	1.12
Mexico	0.37	0.23	--	0.08
Venezuela <sup>e</sup>	0.36	0.16	0.06	0.09
Total <sup>e,2</sup>	3.00	1.90 <sup>r</sup>	1.52	1.30
Exports of H <sub>2</sub> SO <sub>4</sub>	0.26	0.22	0.30	0.21
Imports of H <sub>2</sub> SO <sub>4</sub> :				
Canada	2.35	0.38	0.22	1.26
Mexico	0.30	0.01	0.10	0.13
Total <sup>2</sup>	3.44	0.51	0.78	1.80
Consumption:				
Domestic sources	7.56	7.11 <sup>r</sup>	6.58	7.21
Imports <sup>e</sup>	3.00	1.90 <sup>r</sup>	1.52	1.30
Total	10.60	9.01 <sup>r</sup>	8.10	8.51
Sulfur export values <sup>3</sup>	285	55	52	52
Sulfur import values: <sup>3</sup>				
Canada	191	31 <sup>r</sup>	42	35
Mexico	383	5	XX	25
Venezuela	372	21	20	19
Average <sup>2</sup>	251	27 <sup>r</sup>	44	35
H <sub>2</sub> SO <sub>4</sub> export values <sup>3</sup>	164	104	97	104
H <sub>2</sub> SO <sub>4</sub> import values: <sup>3</sup>				
Canada	99	108	103	169
Mexico	188	12	5	69
Average <sup>2</sup>	133	85	59	142

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised. XX Not applicable. -- Zero.

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

<sup>2</sup>Includes other countries not listed.

<sup>3</sup>Average value per ton.