

# Mineral Industry Surveys

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**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

Rym Ferahtia (Data)  
Telephone: (703) 659-9944 (TTY)  
Fax: (703) 648-7792  
E-mail: rferahtia@usgs.gov

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

## SULFUR IN NOVEMBER 2011

During November 2011, production of recovered elemental sulfur was 688,000 metric tons (t), the same as that of October 2011 and 5% higher than that of November 2010. Shipments were 691,000 t, slightly higher than those of October 2011.

Producers' ending stocks for November 2011 were 159,000 t.

Imports of recovered sulfur for November 2011 were estimated to be 269,000 t; exports were 117,000 t. Imports of sulfuric acid for November 2011 were 188,000 t; exports were 23,000 t.

U.S. sulfur consumption, calculated as shipments minus exports plus imports, was 843,000 t in November 2011. This was 2% lower than that of October 2011 and about 8% higher than that of November 2010.

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 data from personal communications with industry experts.

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

(Thousand metric tons)

Period	Production			Shipments, all sources	Stocks, end of period <sup>3</sup>
	Petroleum <sup>2</sup>	Natural gas	Total		
2010:					
January–December	7,120	1,160	8,280	8,340	165
January–November <sup>f</sup>	6,510	1,060	7,570	7,590	208
November	575	81	656	667	208
December	607	96	703	746	165
2011:					
January	624	104	728	732	148
February	474	93	568	577	137
March	564	96	659	647	150
April	545	98	644	650	144
May	585	96	681	682	143
June	620	76	697	698	140
July	614	92	705	681	164
August	623	98	720	731	159
September	586	93	678	676	156
October	602	86	688	687	160
November <sup>p</sup>	593	95	688	691	159
January–November	6,430	1,030	7,460	7,450	159

<sup>p</sup>Preliminary. <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>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>
2010:								
January–December	2,320	122,000	379	37,400	41	4,200	2,950	214,000
January–November	2,110	113,000	350	32,900	41	4,200	2,700	199,000
November	210	7,400	29	3,870	--	--	273	18,000
December	215	9,050	29	4,470	--	--	254	15,100
2011:								
January	220	10,000	29	3,620	13	1,600	272	17,600
February	200	10,700	14	2,750	--	--	252	21,400
March	220	25,100	44	5,940	--	--	275	33,500
April	220	13,800	29	4,940	18	3,430	268	22,700
May	230	14,700	29	6,190	--	--	260	21,600
June	220	14,400	14	2,760	15	2,750	315	37,300
July	240	18,100	29	5,910	--	--	270	24,500
August	240	17,800	14	3,330	15	2,720	308	33,500
September	230	15,600	29	5,400	8	1,510	267	22,900
October	240	16,300	14	3,240	--	--	255	19,800
November	230	13,700	29	5,420	10	1,370	269	20,800
January–November	2,490	170,000	274	49,500	79	13,400	3,010	276,000

<sup>e</sup>Estimated. -- 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 ICIS 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>
2010:									
January–December	1,150	378	79,100	196	65	11,100	2,110	690	139,000
January–November	1,000	330	68,900	173 <sup>r</sup>	57	10,200 <sup>r</sup>	1,770	580 <sup>r</sup>	117,000
November	139	45	10,500	37	12	2,480	275	90	21,800
December	147	48	10,200	25	8	830	335	110	21,800
2011:									
January	150	49	11,500	27	9	1,620	206	67	17,500
February	152	50	11,400	14	5	989	234	76	19,800
March	146	48	11,700	58	19	3,310	254	83	22,200
April	145	47	8,780	47	15	3,400	229	75	18,100
May	135	44	7,460	40	13	2,950	229	75	17,000
June	116	38	7,670	39	13	2,750	221	72	18,100
July	157	51 <sup>r</sup>	16,000	23	8	1,570	205	68	23,800
August	169	55 <sup>r</sup>	18,500	46	15	3,250	237	78	25,600
September	141	46	15,600	30	10	2,130	175	57	19,600
October	179	59	17,600	35	11	2,440	230	75	21,600
November	155	51	14,600	31	10	2,180	188	61	17,100
January–November	1,650	538	141,000	390	128	26,600	2,410	787	220,000

<sup>r</sup>Revised.

<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.

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		
	Quantity	Value <sup>2</sup>	Quantity	Sulfur content	Value <sup>2</sup>
2010:					
January–December	1,450	171,000	215	70	26,400
January–November	1,350	156,000	200	65	24,300
November	159	19,000	12	4	2,030
December	94	15,000	16	5	2,090
2011:					
January	86	13,900	20	7	2,320
February	122	20,900	28	9	3,470
March	114	20,500	22	7	3,220
April	123	26,100	40	13	3,840
May	52	11,400	27	9	3,180
June	189	34,500	26	8	3,410
July	61	15,600	30	10	3,790
August	116	24,900	68	22	5,100
September	160	30,100	24	8	3,740
October	79	17,900	11	4	1,830
November	117	26,500	23	8	5,510
January–November	1,220	242,000	319	105	39,400

<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
2010:			
January–December	6,900	2,950	9,850
January–November	6,240 <sup>r</sup>	2,700	8,940 <sup>r</sup>
November	508	273	781
December	652	254	906
2011:			
January	646	272	918
February	455	252	707
March	533	275	808
April	527	268	795
May	630	260	890
June	509	315	824
July	620	270	890
August	615	308	923
September	516	267	783
October	608	255	863
November	574 <sup>p</sup>	269	843
January–November	6,230	3,010	9,240

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</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–November 2010 <sup>2</sup>		October 2011		November 2011 <sup>p</sup>		January–November 2011 <sup>p, 2</sup>	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	131	125	7	2	2	7	59	59
Natural gas	12	12	1	1	1	1	12	12
Total	143	137	8	3	3	8	71	71
PAD 2:								
Petroleum and coke	922	926	80	80	82	82	908	921
Natural gas	21	21	2	2	2	2	20	20
Total	944	947	82	82	84	84	928	941
PAD 3: <sup>3</sup>								
Petroleum and coke	4,260	4,240	410	411	413	411	4,310	4,290
Natural gas	447	471	37	37	38	38	421	422
Total	4,710	4,710	447	449	451	449	4,740	4,710
PAD 4 and 5: <sup>4</sup>								
Petroleum and coke	1,200	1,210	105	108	95	96	1,150	1,160
Natural gas	591	591	46	45	55	54	574	575
California	969	983	83	85	72	71	911	912
Total	1,790	1,800	151	153	149	150	1,720	1,730
Grand total	7,580	7,600	688	687	688	691	7,460	7,450

<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 to previously published data.

<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)

	2010	2011		
	total	October	November	Total
Production	8.28	8.10	8.37 <sup>P</sup>	8.15
Shipments	8.34	8.09	8.41 <sup>P</sup>	8.14
Exports of sulfur	1.45	0.93	1.42	1.33
Imports of sulfur:				
Canada <sup>e</sup>	2.32	2.83	2.80	2.73
Mexico	0.38	0.16	0.35	0.30
Venezuela <sup>e</sup>	0.04	--	0.12	0.09
Total <sup>e,2</sup>	2.95	3.00	3.27	3.30
Exports of H <sub>2</sub> SO <sub>4</sub>	0.22	0.13	0.28	0.35
Imports of H <sub>2</sub> SO <sub>4</sub> :				
Canada	1.15	2.11	1.89	1.80
Mexico	0.20	0.41	0.38	0.43
Total <sup>2</sup>	2.11	2.71	2.29	2.63
Consumption:				
Domestic sources	6.89	7.16	6.98	6.81
Imports <sup>e</sup>	2.95	3.00	3.27	3.30
Total	9.84	10.20	10.30	10.10
Sulfur export values <sup>3</sup>	119	226	227	199
Sulfur import values: <sup>3</sup>				
Canada	53	68	60	68
Mexico	99	231	187	181
Venezuela	103	XX	137	169
Average <sup>2</sup>	73	78	77	91
H <sub>2</sub> SO <sub>4</sub> export values <sup>3</sup>	123	166	240	124
H <sub>2</sub> SO <sub>4</sub> import values: <sup>3</sup>				
Canada	69	98	94	86
Mexico	56	70	70	68
Average <sup>2</sup>	66	94	91	92

<sup>e</sup>Estimated. <sup>P</sup>Preliminary. 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.