

# Mineral Industry Surveys

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**For information, contact:**

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

Sheema Merchant (Data)  
Telephone: (703) 659-9944  
Fax: (703) 648-7975  
Email: smerchant@usgs.gov

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

## SULFUR IN NOVEMBER 2015

During November 2015, production of recovered elemental sulfur was 733,000 metric tons (t), which was 5% higher than that of October 2015 and slightly lower than that of November 2014. Shipments were 727,000 t, which was 6% higher than those of October 2015. Producers' ending stocks for November 2015 were 153,000 t.

Imports of recovered sulfur for November 2015 were estimated to be 141,000 t; exports were 128,000 t. Imports of sulfuric acid for November 2015 were 328,000 t; exports were 9,000 t.

U.S. sulfur consumption, calculated as shipments minus exports plus imports, was 740,000 t in November 2015. This was slightly higher than that of October 2015 and also that of November 2014.

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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		
2014:					
January–December	8,040	1,000	9,040	9,080	142
January–November <sup>f</sup>	7,340	914	8,250	8,290	149
November	654	84	738	721	149
December	697	87	784	793	142
2015:					
January	648	83	731	738	137
February	588	81	669	671	137
March	643	82	725	729	137
April	631	81	713	725	127
May	647	81	728	711	148
June	668	78	746	752	143
July	688	83	771	780	134
August	649	81	730	726	142
September	636	85	720	732	131
October	619	80	700	683	145 <sup>r</sup>
November <sup>p</sup>	652	81	733	727	153
January–November	7,070	897	7,970	7,970	153

<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>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>
2014:								
January–December	1,880	83,600	318	28,500	106	7,480	2,370	134,000
January–November	1,710	75,200 <sup>r</sup>	296	26,800	96	7,020	2,170 <sup>r</sup>	123,000 <sup>r</sup>
November	160	7,180	15	1,630	9	711	185	10,000
December	170	8,360	22	1,700	9	464	202	11,200
2015:								
January	160	6,860	15	658	--	--	177	8,460
February	150	6,780	15	1,790	--	--	166	9,260
March	160	7,960	29	1,750	--	--	190	9,980
April	140	6,790	15	1,940	11	279	194	14,800
May	140	5,730	29	719	9	147	232	16,100
June	140	6,760	15	358	--	--	155	7,310
July	140	6,900	15	2,270	--	--	155	9,780
August	140	7,630	15	3,030	--	--	188	16,400
September	140	7,520	--	--	--	--	141	7,870
October	140	7,860	29	1,640	--	--	216	16,000
November	140	8,840	--	--	--	--	141	9,420
January–November	1,590	79,600	177	14,200	20	426	1,960	125,000

<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 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>
2014:									
January–December	2,040	667	126,000	658	215	35,800	3,240	1,060	200,000
January–November	1,750	573	109,000	594	194	32,300	2,840	929 <sup>r</sup>	175,000
November	118	39	7,080	55	18	2,970	200	65	12,000
December	290	95	17,700	65	21	3,490	400	131	25,600
2015:									
January	161	53	9,670	56	18	2,980	261	85	16,100
February	140	46	7,890	56	18	3,010	277	91	14,700
March	182	59 <sup>r</sup>	10,100	62	20	3,320	293	96	18,000
April	160	52	10,100	58	19	3,100	293	96	17,300
May	177	58	11,800	51	17	2,720	293	96	19,900
June	183	60	11,500	60	20	3,160	272	89	17,000
July	186	61	10,700	64	21	3,410	284	93	16,900
August	165	54	10,100	75	25	3,980	378	124	22,000
September	167	55	9,600	70	23	3,700	275	90	14,600
October	186	61	11,000	73	24	3,920	310	101	17,400
November	187	61	11,100	73	24	3,940	328	107	18,100
January–November	1,890	620	114,000	698	229	37,200	3,260	1,070	192,000

<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>
2014:					
January–December	2,000	314,000	158	52	21,800
January–November <sup>r</sup>	1,860	292,000	150	49	20,600
November	176	27,000	9	3	1,650
December	144	22,200	8	3	1,180
2015:					
January	66	11,500	9	3	1,390
February	162	29,000	11	4	1,680
March	131	23,800	17	6	2,840
April	142	24,900	12	4	1,910
May	201	32,800	16	5	2,110
June	144	21,200	21	7	3,000
July	93	14,700	13	4	5,540
August	131	21,700	17	6	2,770
September	209	32,200	11	4	2,070
October	166	15,700	15	5	2,100
November	128	16,500	9	3	2,440
January–November	1,570	244,000	151	49	27,900

<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>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
2014:			
January–December	7,080	2,370	9,450
January–November <sup>r</sup>	6,430	2,170	8,600
November	545	185	730
December	650	202	852
2015:			
January	672	177	849
February	509	166	675
March	598	190	788
April	583	194	777
May	510	232	742
June	608	155	763
July	687	155	842
August	595	188	783
September	523	141	664
October	517	216	733
November <sup>p</sup>	599	141	740
January–November	6,400	1,960	8,360

<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 2014 <sup>2</sup>		October 2015 <sup>P</sup>		November 2015 <sup>P</sup>		January–November 2015 <sup>P, 2</sup>	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
<b>PAD 1:</b>								
Petroleum and coke	199	199	11	11	15	14	164	164
Natural gas	12	12	1	1	1	1	12	12
<b>Total</b>	<b>211</b>	<b>211</b>	<b>12</b>	<b>12</b>	<b>17</b>	<b>15</b>	<b>176</b>	<b>176</b>
<b>PAD 2:</b>								
Petroleum and coke	1,160	1,150	92	91	110	108	1,190	1,190
Natural gas	7	7	1	1	1	1	12	12
<b>Total</b>	<b>1,170</b>	<b>1,160</b>	<b>93</b>	<b>92</b>	<b>111</b>	<b>108</b>	<b>1,210</b>	<b>1,210</b>
<b>PAD 3:</b>								
Petroleum and coke	4,680	4,700	414	402	424	423	4,530	4,520
Natural gas	378	379	31	31	33	32	360	359
<b>Total</b>	<b>5,060</b>	<b>5,070</b>	<b>446</b>	<b>433</b>	<b>457</b>	<b>455</b>	<b>4,890</b>	<b>4,880</b>
<b>PAD 4 and 5:</b>								
Petroleum and coke	1,290	1,320	101	99	102	101	1,180	1,190
Natural gas	517	518	47	46	46	47	514	517
<b>Total</b>	<b>1,810</b>	<b>1,840</b>	<b>148</b>	<b>146</b>	<b>148</b>	<b>148</b>	<b>1,700</b>	<b>1,710</b>
<b>Grand total</b>	<b>8,250</b>	<b>8,290</b>	<b>700</b>	<b>683</b>	<b>733</b>	<b>727</b>	<b>7,970</b>	<b>7,970</b>

<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.

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)

	2015			
	2014	October	November	January– November
Production	9.04	8.24	8.92 <sup>P</sup>	8.71
Shipments	9.08	8.04	8.85 <sup>P</sup>	8.71
Exports of sulfur	2.00	1.95	1.56	1.72
Imports of sulfur:				
Canada <sup>c</sup>	1.88	1.65	1.70	1.74
Mexico	0.32	0.34	--	0.19
Venezuela <sup>c</sup>	0.11	--	--	0.02
Total <sup>e,2</sup>	2.37	2.54	1.72	2.14
Exports of H <sub>2</sub> SO <sub>4</sub>	0.16	0.18	0.11	0.17
Imports of H <sub>2</sub> SO <sub>4</sub> :				
Canada	2.04	2.19	2.28	2.07
Mexico	0.66	0.86	0.89	0.76
Total <sup>2</sup>	3.24	3.65	3.99	3.57
Consumption:				
Domestic sources	7.08	6.09	7.29	6.97
Imports <sup>c</sup>	2.37	2.54	1.70	2.14
Total	9.45	8.63	9.00	9.14
Sulfur export values <sup>3</sup>	157	95	129	155
Sulfur import values: <sup>3</sup>				
Canada	44	56	63	50
Mexico	90	57	XX	80
Venezuela	71	XX	XX	21
Average <sup>2</sup>	56	74	67	64
H <sub>2</sub> SO <sub>4</sub> export values <sup>3</sup>	138	140	271	184
H <sub>2</sub> SO <sub>4</sub> import values: <sup>3</sup>				
Canada	62	59	59	60
Mexico	54	54	54	53
Average <sup>2</sup>	62	56	55	59

<sup>c</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.