

# Mineral Industry Surveys

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## SULFUR IN FEBRUARY 2021

During February 2021, production of recovered elemental sulfur was 450,000 metric tons (t), which was 21% lower than that of January 2021 and 31% lower than that of February 2020. Total production for January through February was 1.02 million metric tons (Mt), which was 26% lower than that in the same period of 2020. Shipments were 450,000 t, which was 20% lower than those of January 2021. Total shipments for January through February were 1.02 Mt, which were 27% lower than those in the same period of 2020. Producers' ending stocks for February 2021 were 113,000 t (table 1).

The cold weather that affected most of the central United States in mid-February disrupted energy systems resulting in several refineries fully or partially shutting down, leading to the largest reduction in Gulf Coast refining operations over the past several years.

Imports of recovered sulfur for February 2021 were estimated to be 181,000 t; exports were 97,000 t. Total imports of recovered sulfur for January through February were estimated to be 429,000 t, which were 58% higher than those in the same period of 2020. Total exports of recovered sulfur for January through February were 335,000 t, which were 17% higher than those in the same period of 2020 (tables 2, 4).

Imports of sulfuric acid for February 2021 were 233,000 t; exports were 12,000 t. Total imports for January through February were 544,000 t, which were 12% lower than those in the same period of 2020. Total exports of sulfuric acid for January through February were 23,000 t, which were 12% lower than those in the same period of 2020 (tables 3, 4).

U.S. sulfur consumption, calculated as shipments minus exports plus imports, was 534,000 t in February 2021. This was 7% lower than that of January 2021 and 11% lower than that of February 2020. Total consumption for January through February was 1.11 Mt, which was 19% lower than that in the same period of 2020 (table 5).

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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		
2020:					
January–December	7,030	276	7,300	7,320	109
January–February	1,330	53	1,380	1,390	119 <sup>r</sup>
February	628	25	653	645	119
March	642	27	669	688	100
April	578	24	602	593	110
May	574	22	595	592	113
June	566	20	585	580	119
July	605	20	625	644	100
August	561	19	580	565	115
September	525	21	546	557	104
October	546	23	569	570	103
November	546	22	568	566	105
December	557	25	582	578	109
2021:					
January	539	31	570	566	113
February <sup>p</sup>	404	46	450	450	113
January–February	943	77	1,020	1,020	113

<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		Total, all countries <sup>2</sup>	
	Quantity	Value <sup>3</sup>	Quantity	Value <sup>3</sup>
2020:				
January–December	1,600 <sup>r</sup>	63,600	2,230 <sup>r</sup>	121,000
January–February	231 <sup>r</sup>	6,170	272 <sup>r</sup>	11,800
February	104	3,200	143	7,580
March	131	4,710	183	9,320
April	159	5,150	252	13,700
May	148	8,230	149	8,700
June	145	4,960	181	8,610
July	130	5,320	271	17,000
August	108	4,800	161	10,200
September	130	4,370	186	9,290
October	137 <sup>r</sup>	6,990	189 <sup>r</sup>	10,900
November	144 <sup>r</sup>	6,080	199 <sup>r</sup>	10,600
December	136 <sup>r</sup>	6,830	189 <sup>r</sup>	11,300
2021:				
January	140 <sup>r, e</sup>	6,880	248 <sup>r, e</sup>	16,200
February	130 <sup>e</sup>	7,310	181 <sup>e</sup>	13,400
January–February	270 <sup>e</sup>	14,200	429 <sup>e</sup>	29,600

<sup>e</sup>Estimated. <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.

Sources: U.S. Census Bureau as adjusted by U.S. Geological Survey and Acuity Commodities.

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>
2020:									
January–December	1,920	629	121,000	733	240	53,200	3,660	1,200	241,000
January–February	296 <sup>r</sup>	97	21,700	108 <sup>r</sup>	35 <sup>r</sup>	9,020	617	202	45,000
February	147	48	10,500	51	17	4,350	311	102	21,600
March	178	58	12,700	51	17	4,390	310	101	22,500
April	154	50	11,300	50	16	4,980	284	93	22,100
May	193	63	13,900	43	14	3,700	332	109	22,100
June	158	52	12,100	38	12	1,710	217	71	16,800
July	153	50	8,250	73	24	4,390	313	102	18,200
August	159	52	8,010	47	15	3,610	319	104	18,100
September	156	51	7,840	91	30	5,760	334	109	18,900
October	166	54	8,880	59	19	4,620	328	107	20,200
November	148	48	8,010	85	28	5,470	300	98	18,700
December	162	53	8,810	89	29	5,530	301	98	18,100
2021:									
January	177	58	9,690	61	20	4,620	312	102	20,300
February	153	50	8,570	52	17	3,790	233	76	15,000
January–February	331	108	18,300	112	37	8,400	544	178	35,300

<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>
2020:					
January–December	1,320	92,400	195	64	24,900
January–February	287	14,800	26	9 <sup>r</sup>	4,890
February	190	10,100	10	3	2,240
March	210	14,100	18	6	3,410
April	87	7,520	31	10	2,350
May	136	9,040	17	6	2,780
June	67	6,020	11	4	1,400
July	98	6,740	22	7	1,610
August	125	8,200	17	6	2,020
September	77	5,400	16	5	2,040
October	65	6,700	16	5	2,000
November	57	4,940	13	4	1,220
December	105	8,990	9	3	1,230
2021:					
January	238	7,430	11	4	1,040
February	97	10,200	12	4	1,300
January–February	335	17,600	23	8	2,340

<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	Consumption
2020:			
January–December	6,010	2,230 <sup>r</sup>	8,240 <sup>r</sup>
January–February	1,100	272 <sup>r</sup>	1,370 <sup>r</sup>
February	455	143	598
March	478	183	661
April	506	252	758
May	456	149	605
June	513	181	694
July	546	271	817
August	440	161	601
September	480	186	666
October	505	189 <sup>r</sup>	694 <sup>r</sup>
November	509	199 <sup>r</sup>	708 <sup>r</sup>
December	473	189 <sup>r</sup>	662 <sup>r</sup>
2021:			
January	328	248 <sup>r, e</sup>	576 <sup>r</sup>
February <sup>p</sup>	353	181 <sup>e</sup>	534
January–February	681	429 <sup>e</sup>	1,110

<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–February 2020 <sup>2</sup>		January 2021 <sup>2</sup>		February 2021 <sup>p</sup>		January–February 2021 <sup>p, 2</sup>	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	40	39	15	14	13	14	28	28
Natural gas	2	2	1	1	1	1	2	2
Total	42	41	16	15	14	15	30	30
PAD 2:								
Petroleum and coke	245	243	106	103	88	88	194	191
Natural gas	--	--	--	--	--	--	--	--
Total	245	243	106	103	88	88	194	191
PAD 3:								
Petroleum and coke	797	799	326	329	215	222	541	551
Natural gas	18	18	8	9	8	8	16	17
Total	815	818	334	338	223	231	557	569
PAD 4 and 5:								
Petroleum and coke	248	253	93	93	89	83	182	176
Natural gas	33	32	21	18	36	33	57	51
Total	281	284	114	111	125	116	239	227
Grand total	1,380	1,390	570	566	450	450	1,020	1,020

<sup>p</sup>Preliminary. -- 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 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)

	2020	2021		
		January	February	January– February
Production	7.30	6.71	5.87 <sup>P</sup>	6.31
Shipments	7.31	6.66	5.87 <sup>P</sup>	6.29
Exports of sulfur	1.32	2.80	1.26	2.07
Imports of sulfur:				
Canada	1.60 <sup>r</sup>	1.65 <sup>r</sup>	1.69	1.67
Total <sup>2</sup>	2.23 <sup>r</sup>	2.92 <sup>r</sup>	2.36	2.65
Exports of H <sub>2</sub> SO <sub>4</sub>	0.20	0.13	0.16	0.14
Imports of H <sub>2</sub> SO <sub>4</sub> :				
Canada	1.92	2.08	1.99	2.05
Mexico	0.73	0.72	0.68	0.69
Total <sup>2</sup>	3.66	3.67	3.04	3.37
Consumption:				
Domestic sources	6.01	3.86	4.60	4.21
Imports	2.23 <sup>r</sup>	2.92 <sup>r</sup>	2.36	2.65
Total	8.24 <sup>r</sup>	6.78 <sup>r</sup>	6.96	6.87
Sulfur export values <sup>3</sup>	70	31	105	52
Sulfur import values: <sup>3</sup>				
Canada	40 <sup>r</sup>	49 <sup>r</sup>	56	53
Average <sup>3</sup>	54 <sup>r</sup>	65 <sup>r</sup>	74	69
H <sub>2</sub> SO <sub>4</sub> export values <sup>3</sup>	128	95	108	102
H <sub>2</sub> SO <sub>4</sub> import values: <sup>3</sup>				
Canada	63	55	56	55
Mexico	73	76	73	75
Average <sup>2</sup>	66	65	64	65

<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 other countries not listed.

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