

Mineral Industry Surveys

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SULFUR IN FEBRUARY 2023

During February 2023, production of recovered elemental sulfur was 629,000 metric tons (t), which was 5% lower than the revised amount of January 2023 and 4% higher than that of February 2022. Total production for January through February was 1.29 million metric tons (Mt), which was 4% higher than that in the same period of 2022. Shipments in February 2023 were 629,000 t, which was 6% lower than the revised amount of January 2023 and essentially unchanged from that of February 2022. Total shipments for January through February were 1.30 Mt, which were 4% higher than those in the same period of 2022. Producers' ending stocks for February 2023 were 116,000 t (table 1).

Imports of recovered sulfur for February 2023 were estimated to be 144,000 t; exports were 185,000 t. Total imports of recovered sulfur for January through February were estimated to be 245,000 t, which were 32% lower than those in the same period of 2022. Total exports of recovered sulfur for January through February were 360,000 t, which were 47% higher than those in the same period of 2022 (tables 2, 4).

Imports of sulfuric acid for February 2023 were 237,000 t; exports were 13,000 t. Total imports for January through

February were 510,000 t, which were 9% higher than those in the same period of 2022. Total exports of sulfuric acid for January through February were 235,000 t, which were more than 10 times greater than those in the same period of 2022 (tables 3, 4).

U.S. sulfur consumption, calculated as shipments minus exports plus imports, was estimated to be 588,000 t in February 2023. This was slightly lower than the revised amount of January 2023 and 11% higher than that of February 2022. Total consumption for January through February was estimated to be 1.19 Mt, which was 13% lower than that in the same period of 2022 (table 5).

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TABLE 1
SALIENT SULFUR STATISTICS¹

(Thousand metric tons)

Period	Production			Shipments, all sources	Stocks, end of period ²
	Petroleum ³	Natural gas	Total		
2022:					
January–December	7,500	504	8,000	7,990	125
January–February	1,170	81	1,250	1,250 ^r	112 ^r
February	566	39	605	622	112
March	623	44	668	665	115
April	613	40	653	652	116
May	636	33	670	665	121
June	640	34	674	682	112
July	651	47	697	688	122
August	651	48	699	707	114
September	623	43	666	661	119
October	629	45	673	671	121
November	650	45	696	691	126
December	615	43	658	659	125
2023:					
January	620 ^r	45	664 ^r	672 ^r	117
February ^p	587	42	629	629	116
January–February	1,210	86	1,290	1,300	116

^pPreliminary. ^rRevised.

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

²Subject to inventory adjustments.

³Includes a small quantity from coking operations.

TABLE 2
U.S. IMPORTS OF SULFUR¹

(Thousand metric tons and thousand dollars)

Period	Canada		Total, all countries ²	
	Quantity	Value ³	Quantity	Value ³
2022:				
January–December	1,490	283,000	1,670	338,000
January–February	250	39,900	361	69,800
February	103	17,600	105	18,700
March	144	26,900	197	43,700
April	146	23,300	147	24,400
May	141	32,800	141	33,800
June	144	37,300	146	38,500
July	145	43,900	146	44,800
August	151	35,800	152	36,500
September	85	11,200	86	12,100
October	85	12,100	87	13,100
November	98	9,360	98	10,000
December	106	10,400	106	11,300
2023:				
January	100 ^e	9,850	101 ^e	10,600
February	90 ^e	10,900	144 ^e	20,800
January–February	190 ^e	20,700	245 ^e	31,400

^eEstimated.

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.

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

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
2022:									
January–December	1,820	594	173,000	720	235	140,000	3,230	1,060	469,000
January–February	280	92	16,200	106	35	19,200	466	152	54,400
February	127	42	7,740	56	18	10,800	199	65	23,800
March	168	55	10,100	104	34	22,100	328	107	45,200
April	153	50	13,300	67	22	13,600	360	118	54,700
May	163	53	14,500	55	18	11,800	249	81	36,400
June	153	50	14,500	69	23	14,200	254	83	39,600
July	154	50	17,400	66	22	14,400	266	87	45,700
August	167	55	19,400	53	17	10,100	300	98	45,500
September	149	49	17,200	44	14	7,770	269	88	41,500
October	149	49	18,100	45	15	7,580	223	73	33,400
November	142	46	16,600	37	12	7,050	213	70	30,000
December	140	46	16,200	74	24	12,600	302	99	42,100
2023:									
January	147	48	23,200	59	19	9,950	273	89	45,100
February	157	51	26,800	47	15	7,310	237	77	36,700
January–February	304	99	50,000	107	35	17,300	510	167	81,800

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
2022:					
January–December	1,740	504,000	607	199	36,600
January–February	245	52,800	22	7	2,360
February	199	45,700	12	4	1,360
March	68	22,000	22	7	2,660
April	170	67,900	36	12	5,200
May	113	43,500	29	9	3,840
June	132	63,800	16	5	2,230
July	193	87,500	21	7	2,920
August	136	39,600	17	6	2,760
September	166	22,900	68	22	2,710
October	244	59,600	54	18	4,140
November	132	27,100	51	17	3,540
December	139	17,600	272	89	4,290
2023:					
January	176	23,100	222	73	3,650
February	185	27,300	13	4	3,620
January–February	360	50,400	235	77	7,260

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	Consumption
2022:			
January–December	6,250	1,670	7,920
January–February	1,000 ^r	361	1,360
February	423	105	528
March	597	197	794
April	481	147	628
May	552	141	694
June	550	146	695
July	495	146	640
August	571	152	722
September	494	86	580
October	427	87	514
November	559	98	657
December	520	106	626
2023:			
January	497 ^r	101 ^e	598 ^{r, e}
February ^p	445	144 ^e	588 ^e
January–February	941	245 ^e	1,190 ^e

^eEstimated. ^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–February 2022 ²		January 2023		February 2023 ^p		January–February 2023 ^{p,2}	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	28	29	15	15	14	13	28	28
Natural gas	2	2	1	1	1	1	2	2
Total	30	31	16	16	15	15	30	30
PAD 2:								
Petroleum and coke	250	248	118	118	111	112	230	230
Natural gas	--	--	--	--	--	--	--	--
Total	250	248	118	118	111	112	230	230
PAD 3:								
Petroleum and coke	664	666	372	380	359	359	730	739
Natural gas	12	11	7	8	7	7	14	15
Total	675	678	379	388	366	366	745	754
PAD 4 and 5:								
Petroleum and coke	226	225	115 ^r	116 ^r	104	102	219	219
Natural gas	67	67	36	34	33	34	69	68
Total	293	292	151 ^r	150 ^r	137	137	288	287
Grand total	1,250	1,250	664 ^r	672 ^r	629	629	1,290	1,300

^pPreliminary. ^rRevised. -- Zero.

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)

	2023			
	2022	January	February	January– February
Production	8.00	7.82 ^r	8.19 ^p	8.00
Shipments	7.99	7.91 ^r	8.20 ^p	8.05
Exports of sulfur	1.74	2.07	2.41	2.23
Imports of sulfur:				
Canada	1.49	1.18	1.17	1.18
Total ²	1.67	1.19	1.87	1.51
Exports of H ₂ SO ₄	0.61	2.61	0.17	1.45
Imports of H ₂ SO ₄ :				
Canada	1.82	1.73	2.05	1.88
Mexico	0.72	0.70	0.62	0.66
Total ²	3.23	3.22	3.09	3.16
Consumption:				
Domestic sources	6.25	5.85 ^r	5.80	5.82
Imports	1.67	1.19	1.87	1.51
Total	7.92	7.04 ^r	7.67	7.34
Sulfur export values ³	290	131	148	140
Sulfur import values: ³				
Canada	190	98	121	109
Average ³	203	105	145	128
H ₂ SO ₄ export values ³	60	16	283	31
H ₂ SO ₄ import values: ³				
Canada	95	158	171	165
Mexico	195	167	155	162
Average ²	145	165	155	160

^pPreliminary. ^rRevised.

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

²Includes other countries not listed.

³Average value per ton.