

Mineral Industry Surveys

For information, contact:

Wallace P. Bolen, Soda Ash Commodity Specialist
National Minerals Information Center
Telephone: (703) 648-7727
Email: wbolen@usgs.gov

Taylor L. Nelson (Data)
Telephone: (703) 648-4971
Email: tnelson@usgs.gov

Internet:

www.usgs.gov/centers/national-minerals-information-center/mineral-industry-surveys

SODA ASH IN SEPTEMBER 2023

In September, soda ash production was 874,000 metric tons (t), essentially unchanged compared with the previous month's production, and a 9% increase compared with that in September 2022 (tables 1, 4). For the first 9 months of 2023, soda ash production was 8.10 million metric tons (Mt), slightly less than the production for the first 9 months of 2022. Ending stocks in September were 254,000 t, 19% less than the ending stocks from the preceding month.

Wyoming trona production in September 2023 was 1.39 Mt, 4% more than the revised trona production in August 2023 and 10% more than the total in September 2022. For the first 9 months of 2023, trona production was 13.0 Mt, unchanged compared to the amount for the same period of 2022 (table 1).

Exports of soda ash increased by 11% in September 2023 to 583,000 t, compared with those in August 2023 and were 18% more than those in September 2022 (tables 2, 4). For the first 9 months of 2023, exports were 4.97 Mt, 3% more than the amount for the same period of 2022 (table 1). Imports of soda ash in September 2023 were 696 t compared with the total of 731 t in August 2023. Soda ash import tonnages can differ significantly from month to month, but generally are much smaller than soda ash export tonnages (tables 3, 4).

Apparent consumption for September 2023 was 351,000 t, 12% less than the total for August 2023 but 13% more than the total for September 2022. For the first 9 months of 2023, apparent consumption was 3.25 Mt, 9% less than the revised total for the same period of 2022. Apparent consumption can change significantly from month to month mostly owing to variation in the quantity of exports but usually stabilizes over the course of the year (table 4).

Table 5 provides reported U.S. soda ash consumption statistics. Reported consumption for the third quarter of 2023 was 1.11 Mt, slightly less than the reported consumption for the third quarter of 2022. During the third quarter of 2023, there was 492,000 t (44%) consumed for glassmaking and 336,000 t (30%) was consumed in the production of chemicals.

All percentages in this report were calculated using unrounded data.

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TABLE 1
SALIENT SODA ASH STATISTICS¹

(Thousand metric tons)

Period	Soda ash		Wyoming trona production
	Production ²	Stocks, end of period	
2022:			
January-September	8,250 ^r	236	13,000
September	805	236	1,260
October	1,030	298	1,530
November	1,010	346	1,440
December	968	364	1,520
January–December	11,300	364	17,500
2023:			
January	884	303	1,240
February	831	309	1,340
March	868	231	1,520
April	906	250	1,470
May	991	297	1,650
June	934	328	1,490
July	942	368	1,520
August	869	312	1,340 ^r
September	874	254	1,390
January-September	8,100	254	13,000

^rRevised.

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

²Production data include soda ash equivalent from soda liquors only. Soda ash equivalent from mine water is not included. Soda liquors are withheld to avoid disclosing company proprietary data.

TABLE 2
U.S. EXPORTS OF SODA ASH BY COUNTRY OR LOCALITY, IN 2023¹

(Metric tons unless otherwise specified)

Country or locality	January	February	March	April	May	June	July	August	September			January–September		
									Quantity	Value ² (thousand dollars)	Unit value	Quantity	Percent of total quantity	Value ² (thousand dollars)
Argentina	17,000	17,500	16,500	30,100	24,500	77	37,000	2,040	18,000	7,770	\$431	163,000	3	67,200
Australia	28,000	--	35,000	9	35,000	27,000	27	35,000	5,000	1,350	270	165,000	3	60,300
Brazil	122,000	32,800	59,300	24,000	74,500	63,400	71,300	--	83,100	24,400	--	530,000	11	182,000
Canada	15,500	18,300	16,800	16,600	14,500	14,700	12,000	14,900	12,500	3,630	291	136,000	3	36,300
Chile	38,100	82,100	64,900	47,300	74,300	61,600	91,600	60,000	56,100	24,300	432	576,000	12	191,000
China	14	4,800	61,900	--	20,000	--	--	35,000	74,400	14,700	197	196,000	4	41,500
Colombia	18,300	40,300	11,900	500	8,000	20,300	8,000	13,500	--	--	--	121,000	2	36,900
India	31,100	3,050	1,920	5,110	43,200	22,600	21,100	20,300	23,000	4,770	208	171,000	3	43,600
Indonesia	22,500	53,200	13,700	55,200	47,900	63,500	72,200	35,000	18,500	4,030	219	382,000	8	120,000
Japan	15,500	22,700	10,100	4,800	34,400	20,200	20,900	22,200	18,000	6,650	369	169,000	3	63,800
Korea, Republic of	15,000	32,000	10,900	7,220	40,100	5,010	29,500	16,100	31,100	7,060	227	187,000	4	58,100
Malaysia	19,800	22,200	26,800	--	27,500	20,100	9,000	36,000	65,200	15,500	238	227,000	5	67,500
Mexico	133,000	121,000	153,000	142,000	117,000	114,000	112,000	95,000	110,000	31,900	289	1,100,000	22	300,000
Peru	7,500	11,000	5,250	17,300	300	391	406	8,700	641	158	246	51,500	1	17,200
Taiwan	13,000	15,000	14,000	221	42,500	11,500	--	25,000	--	--	--	121,000	2	42,400
Thailand	28,500	15,500	10,200	24,100	507	41,300	27,900	2,400	16,900	4,230	250	167,000	3	52,700
United Arab Emirates	12,000	676	27	676	--	--	--	26,300	--	--	--	39,600	1	12,100
Vietnam	14,800	69,200	2,500	59,900	2,000	15,300	28,900	32,300	28,100	5,220	186	253,000	5	73,700
Other	25,600	11,800	8,150	13,400	9,910	40,000	41,000	46,900	21,700	6,300	290	219,000	4	62,800
Total	577,000	573,000	523,000	448,000	616,000	541,000	583,000	527,000	583,000	162,000	278	4,970,000	100	1,530,000

-- Zero.

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

²Free alongside ship values at U.S. ports.

Source: U.S. Census Bureau.

TABLE 3
U.S. IMPORTS OF SODA ASH BY COUNTRY OR LOCALITY, IN 2023¹

(Metric tons unless otherwise specified)

Country or locality	January	February	March	April	May	June	July	August	September	September		January–August		
										Value ² (thousand dollars)	Unit value	Quantity	Percent of total quantity	Value ² (thousand dollars)
Canada	173	175	239	167	171	163	190	248	292	48	\$164	1,820	28	260
France	20	241	139	100	20	--	113	39	20	50	--	691	11	1,160
Germany	80	51	2	(3)	2	22	2	6	28	57	2,050	192	3	559
India	56	30	6	26	1	1	4	29	20	10	501	172	3	262
Italy	72	72	60	72	36	72	90	36	90	82	916	600	9	549
Japan	5	1	20	2	22	2	2	18	--	--	--	72	1	388
Mexico	98	116	200	20	236	315	193	178	60	48	809	1,420	22	736
Turkey	--	70	--	70	70	--	--	--	--	--	--	211	3 [†]	74
United Kingdom	89	71	72	52	154	65	213	143	142	112	790	999	16	853
Other	10	20	48	29	45	5	30	35	45	181	3,990	267	4	642
Total	603	845	785	538	756	645	836	731	696	588	844	6,440	100	5,480

[†]Revised. -- Zero.

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

²Cost, insurance, and freight values at U.S. ports.

³Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 4
U.S. APPARENT CONSUMPTION OF SODA ASH¹

(Metric tons)

Period	Production	Exports	Imports	Net stock		Apparent consumption ²
				Increase	Decrease	
2022:						
January–December	11,300,000	6,490,000	61,500 °	85,900	--	4,740,000
January–September	8,250,000 °	4,800,000	59,600 °	--	41,700	3,550,000 °
September	805,000	496,000	458	--	1,200	311,000
October	1,030,000	569,000	686	62,200	--	402,000
November	1,010,000	541,000	624	48,300	--	416,000
December	968,000	577,000	608	17,100	--	374,000
2023:						
January-September	8,100,000	4,970,000	6,440	--	110,000	3,250,000
January	884,000	577,000	603	--	60,200	368,000
February	831,000	573,000	845	6,050	--	253,000
March	868,000	523,000	785	--	77,900	424,000
April	906,000	448,000	538	18,600	--	439,000
May	991,000	616,000	756	47,300	--	329,000
June	934,000	541,000	645	31,100	--	363,000
July	942,000	583,000	836	39,100	--	321,000
August	869,000	527,000	731	--	55,600	399,000
September	874,000	583,000	696	--	58,400	351,000

^eEstimated. ^rRevised. -- Zero.

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

²Production plus imports minus exports plus or minus stock changes.

TABLE 5
REPORTED CONSUMPTION OF SODA ASH IN THE UNITED STATES, BY END USE, BY QUARTER¹

(Thousand metric tons)

NAICS ² code	End use	2022					2023			
		1st quarter	2d quarter	3d quarter	4th quarter	1st quarter- 4th quarter	1st quarter	2d quarter	3d quarter	1st quarter- 3d quarter
3272	Glass:									
327213	Container	267	263	251	239	1,020	273	266	227	766
327211	Flat	249	249	253	251	999	225	230	215	670
327993	Fiber	44	39	43	43	169	40	36	35	111
327212	Other	17	18	16	11	62	13	15	15	43
	Total	574	569	564	543	2,250	551	547	492	1,590
32518	Chemicals	306	335	312	323	1,280	313	344	336	992
325611	Soaps and detergents	56	59	51	55	221	53	59 ^r	54	167
322	Pulp and paper	8	8	8	6	31	9	10 ^r	10	29
221310	Water treatment ³	10	10	11	9	40	10	12 ^r	10	32
56221	Flue gas desulfurization	42	38	44	39	163	36	29	41	106
4246	Distributors	61	62	62	65	250	70	59	65	194
	Other	116	86	89	115	406	101	97 ^r	105	303
	Total domestic consumption ⁴	1,170	1,170	1,140	1,160	4,640	1,140	1,160	1,110	3,410
	Exports ⁵	1,620	1,550	1,610	1,620	6,410	1,590 ^r	1,530	1,640	4,760
	Canada	49	44	44	44	181	45	40	39	124
	Total industry sales ⁶	2,790	2,720	2,760	2,780	11,000	2,740	2,690	2,760	8,190
	Total sales from plants	2,840	2,530	2,740	2,870	11,000	2,680	2,510	2,750	7,930
	Total production	2,820	2,690	2,740	3,010	11,300	2,580	2,830	2,690	8,100

^rRevised.

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

²North American Industry Classification System.

³Includes soda ash equivalent from soda liquors and purge liquors sold to power plants for water treatment. Sales of mine water are excluded.

⁴Imports reported by the producer/importer have been distributed into appropriate end-use categories listed above.

⁵As reported by producers; includes Canada. Data may not necessarily agree with those reported by the U.S. Census Bureau for the same periods.

⁶Represents soda ash from domestic origin (production and inventory changes) and imports and exports. Includes soda ash sold by coproducers and distributed by purchasers into appropriate end-use categories.