

SODA ASH SUPPLY-DEMAND RELATIONSHIPS 1970-2000 1/ 2/

(Thousand metric tons)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
World production:										
United States	6,440	6,480	6,830	6,860	6,860	6,470	6,770	7,290	7,520	7,490
Rest of world	12,700	13,300	13,600	14,500	15,600	16,900	19,300	19,200	19,700	20,700
Total	19,100	19,800	20,500	21,400	22,400	23,400	26,100	26,400	27,200	28,200
Components of U.S. supply:										
U.S. production capacity	7,190	6,820	7,890	7,350	7,350	7,780	8,690	8,690	8,730	8,000
Wyoming trona ore production	NA	NA	NA	5,640	6,610	7,100	8,460	10,000	10,200	11,600
Domestic sources	6,440	6,480	6,830	6,860	6,860	6,470	6,770	7,290	7,520	7,490
Imports	--	--	--	9	29	2	--	1	7	36
Industry stocks, Jan. 1 3/	58	51	24	48	47	33	49	93	92	69
Total U.S. supply	6,490	6,530	6,850	6,920	6,940	6,500	6,820	7,380	7,620	7,590
Distribution of U.S. supply:										
Industry stocks, Dec. 31 3/	51	24	48	47	33	49	93	92	69	62
Exports	305	396	435	386	512	480	585	689	707	904
Industrial demand 4/	6,140	6,110	6,370	6,480	6,400	5,970	6,140	6,610	6,840	6,630
U. S. demand pattern: 5/										
Glass:										
Container	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)
Flat	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)
Fiber	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)
Other	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)
Total	3,050	3,080	3,240	3,250	3,260	3,260	3,260	3,610	3,780	3,620
Chemicals	1,800	1,670	1,710	1,680	1,720	1,480	1,510	1,520	1,560	1,530
Soaps and detergents	172	272	290	299	299	299	308	308	318	327
Pulp and paper	272	254	236	245	244	218	236	236	236	229
Water treatment	181	181	191	191	200	181	200	200	200	193
Flue gas desulfurization	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)
Distributors	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)
Other 7/	647	667	705	799	680	721	723	738	747	724
Total U.S. consumption	6,120	6,130	6,370	6,460	6,400	6,160	6,230	6,610	6,840	6,630
Undistributed 8/	21	(20)	2	22	--	(181)	(92)	(2)	--	--
Total U.S. primary demand	6,140	6,110	6,370	6,480	6,400	5,970	6,140	6,610	6,840	6,630
Values: 9/										
Average annual value:										
Dollars per short ton	21.03	21.21	22.28	25.36	33.87	42.20	49.70	54.19	54.51	64.55
Dollars per metric ton	23.18	23.38	24.56	27.95	37.34	46.52	54.78	59.73	60.09	71.15

See footnotes at end of table.

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(Thousand metric tons)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
World production:										
United States	7,510	7,510	7,090	7,680	7,720	7,720	7,660	8,070	8,740	9,000
Rest of world	20,800	20,500	19,700	20,200	21,500	20,500	21,700	22,100	22,600	22,500
Total	28,300	28,000	26,800	27,900	29,200	28,200	29,400	30,200	31,100	31,500
Components of U.S. supply:										
U.S. production capacity	8,730	9,400	10,100	10,100	10,100	10,200	9,580	9,580	9,510	9,580
Wyoming trona ore production	11,700	11,300	9,830	10,400	10,600	10,700	12,000	12,600	13,700	14,800
Domestic sources	7,510	7,510	7,090	7,680	7,720	7,720	7,660	8,070	8,740	9,000
Imports	16	11	16	18	15	51	96	136	121	129
Industry stocks, Jan. 1 3/	62	121	239	294	279	292	355	267	235	261
Total U.S. supply	7,590	7,640	7,350	7,990	8,020	8,060	8,110	8,470	9,090	9,390
Distribution of U.S. supply:										
Industry stocks, Dec. 31 3/	121	239	294	279	292	355	267	235	261	221
Exports	992	953	1,010	1,480	1,500	1,580	1,860	2,020	2,240	2,650
Industrial demand 4/	6,470	6,450	6,050	6,230	6,230	6,130	5,980	6,220	6,600	6,520
U. S. demand pattern: 5/										
Glass:										
Container	2,520	2,380	2,270	2,180	2,090	2,000	1,950	2,110	2,130	1,960
Flat	559	503	454	522	544	635	680	821	852	907
Fiber	175	236	200	209	227	249	272	249	246	241
Other	244	234	254	222	227	204	249	166	164	185
Total	3,490	3,360	3,180	3,130	3,090	3,080	3,150	3,340	3,390	3,290
Chemicals	1,290	1,290	1,180	1,270	1,410	1,360	1,180	1,240	1,450	1,410
Soaps and detergents	453	454	454	562	544	544	590	684	718	781
Pulp and paper	227	191	249	181	227	318	181	63	111	114
Water treatment	227	227	209	209	272	272	227	72	110	92
Flue gas desulfurization	(6/)	(6/)	(6/)	(6/)	272	159	181	183	200	208
Distributors	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	(6/)	349	373	380
Other 7/	777	936	781	878	422	387	470	168	148	188
Total U.S. consumption	6,470	6,450	6,050	6,230	6,230	6,130	5,980	6,100	6,500	6,470
Undistributed 8/	2	--	--	--	--	--	--	117	100	47
Total U.S. primary demand	6,470	6,450	6,050	6,230	6,230	6,130	5,980	6,220	6,600	6,520
Values: 9/										
Average annual value:										
Dollars per short ton	89.85	91.19	88.35	76.95	67.00	67.82	65.29	66.78	66.96	77.07
Dollars per metric ton	99.04	100.52	97.39	84.82	73.85	74.76	71.97	73.61	73.81	84.96

See footnotes at end of table.

SODA ASH SUPPLY-DEMAND RELATIONSHIPS 1970-2000 1/ 2/

(Thousand metric tons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
World production:											
United States	9,160	9,010	9,380	8,960	9,320	10,100	10,200	10,700	10,100	10,200	10,200
Rest of world	22,900	22,200	21,300	20,600	20,000	20,200	21,600	22,300	22,300	22,900	23,900
Total	32,000	31,200	30,700	29,500	29,300	30,300	31,800	33,100	32,400	33,200	34,200
Components of U.S. supply:											
U.S. production capacity	9,950	9,950	10,700	11,000	11,000	11,300	12,100	12,100	12,100	13,200	14,500
Wyoming trona ore production	14,700	14,700	14,900	14,500	14,600	16,500	16,300	17,100	16,500	15,900	15,700
Domestic sources	9,160	9,010	9,380	8,960	9,320	10,100	10,200	10,700	10,100	10,200	10,200
Imports	146	134	72	89	79	83	107	101	83	92	75
Industry stocks, Jan. 1 3/	221	287	234	371	274	203	306	271	259	273	248
Total U.S. supply	9,520	9,430	9,690	9,420	9,670	10,400	10,600	11,100	10,500	10,600	10,600
Distribution of U.S. supply:											
Industry stocks, Dec. 31 3/	287	234	371	274	203	306	271	259	273	248	245
Exports	2,390	2,730	2,960	2,800	3,230	3,570	3,840	4,190	3,660	3,620	3,900
Industrial demand 4/	6,840	6,460	6,360	6,350	6,240	6,500	6,480	6,670	6,560	6,740	6,430
U. S. demand pattern: 5/											
Glass:											
Container	1,910	1,820	1,810	1,790	1,780	1,690	1,550	1,530	1,610	1,620	1,530
Flat	851	767	837	869	926	979	1,010	1,090	1,100	1,130	1,160
Fiber	228	206	214	220	220	214	237	257	260	263	247
Other	189	201	219	216	220	248	247	249	244	254	240
Total	3,180	3,000	3,080	3,100	3,150	3,130	3,040	3,130	3,220	3,270	3,170
Chemicals	1,570	1,510	1,540	1,480	1,370	1,650	1,690	1,700	1,760	1,670	1,720
Soaps and detergents	835	796	765	806	834	784	785	750	704	729	715
Pulp and paper	132	147	175	139	145	186	183	143	134	121	113
Water treatment	91	106	104	116	103	108	87	83	103	104	90
Flue gas desulfurization	207	171	144	151	138	130	152	209	214	130	121
Distributors	376	403	387	337	313	323	314	325	317	329	371
Other 7/	136	148	129	163	206	185	145	145	102	75	91
Total U.S. consumption	6,530	6,280	6,320	6,280	6,260	6,500	6,390	6,480	6,550	6,430	6,390
Undistributed 8/	317	180	36	64	24	6	85	182	4	317	35
Total U.S. primary demand	6,840	6,460	6,360	6,350	6,240	6,500	6,480	6,670	6,560	6,740	6,430
Values: 9/											
Average annual value:											
Dollars per short ton	82.85	84.18	80.93	74.34	70.44	74.50	82.60	77.25	75.30	69.11	66.23
Dollars per metric ton	91.33	92.79	89.21	81.95	77.65	82.12	91.05	85.15	83.00	76.00	73.00

NA Not available. -- Zero.

1/ Natural and synthetic except where noted.

2/ Data are rounded to three significant digits; may not add to totals shown.

3/ Natural soda ash only for 1987 and thereafter: natural and synthetic from yearend 1970-86.

4/ Also known as apparent consumption (production plus imports minus exports plus or minus stock changes) and is equal to "Total U.S. primary demand."

5/ Estimated consumption for 1970-86 was based on industry sources; reported consumption 1987 and thereafter were from quantitative and qualitative quarterly surveys of producers' sales. Other end-use categories were incorporated in the survey.

6/ Specific end-use data not available; included with "Other."

7/ Includes soda ash used in petroleum and metal refining, leather tanning, enamels, etc. Also includes data in categories indicated by "(6)."

8/ Because end-use data prior to 1987 were estimated, industrial demand and U.S. primary demand calculations (both based on production, trade, and inventory data) were assumed to be equal to total U.S. consumption. Beginning with 1987, reported consumption data by end use often disagreed with derived apparent consumption calculations that necessitated, including an "Undistributed" category to account for the discrepancies. These discrepancies are because of the fluctuating balance of inventory in transit from plants to domestic or export destinations, and unsold foreign inventories of U.S. producers.

9/ Values are the combined total revenue of California and Wyoming natural, bulk, dense soda ash sold on an f.o.b. plant basis, at list prices, spot prices, discount, long-term contracts, and for export, divided by the quantity of soda ash sold. This value may or not be synonymous with the posted list prices of the commodity.

Source: U.S. Geological Survey.