

## Industrial

27,100 million gallons per day

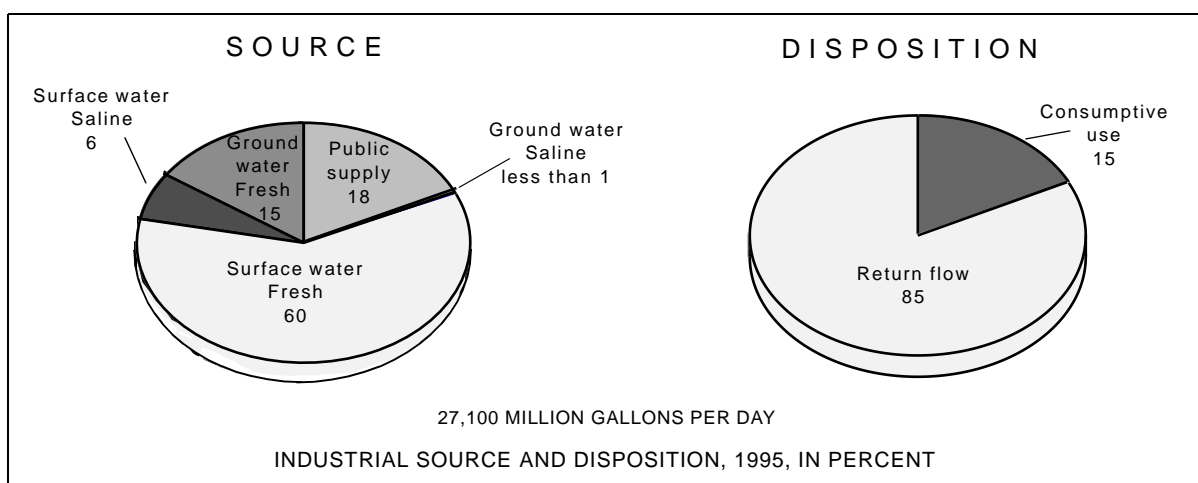
Total industrial water use during 1995 was an estimated 27,100 Mgal/d (tables 19, 20), or 2 percent less than during 1990. Most of the decrease, 1,620 Mgal/d, was in saline surface-water withdrawals. Industrial freshwater use was an estimated 25,500 Mgal/d during 1995, about 4 percent more than in 1990, and represents about 7 percent of freshwater use for all offstream categories. Self-supplied industrial withdrawals were an estimated 20,700 Mgal/d of freshwater and 1,660 Mgal/d of saline water. (See tables 19, 20.) Surface water was the source for 82 percent of self-supplied industrial withdrawals; ground water, 18 percent; and reclaimed wastewater less than 1 percent. Public-supply deliveries to industries were about 4,750 Mgal/d and accounted for 12 percent of total public-supply withdrawals.

The source and disposition of water for industrial purposes for 1995 are shown in the chart below. The consumptive use of freshwater for industrial purposes during 1995 was 3,370 Mgal/d, or 13 percent of freshwater withdrawals and deliveries; saline consumptive use was 665 Mgal/d, or 40 percent of saline withdrawals. Total consumptive use was 15 percent of combined fresh and saline withdrawals.

Industrial water use includes water for such purposes as processing, washing, and cooling in facilities that manufacture products. Major water-using industries include, but are not limited to, steel, chemical and allied products, paper and allied products, and petroleum refining.

Many States have developed permit programs that require reporting of industrial withdrawals and return flows. Information on deliveries from public suppliers to industrial users are estimated from a variety of methods if not available directly from the public suppliers. Consumptive-use estimates generally are based on coefficients, most ranging from 10 to 40 percent (depending on the type of industry) of withdrawals and deliveries.

In 1995, the Great Lakes and Ohio water-resources regions had the largest total (fresh, saline) withdrawals for industrial purposes as shown in figure 20. By State, Louisiana, Texas, Indiana, Michigan, and Pennsylvania reported the largest withdrawals for industries as shown in figure 21. Louisiana and Indiana, reported the largest freshwater use (figure 22), and Maryland and Texas reported the largest quantities of reclaimed wastewater used by industries.



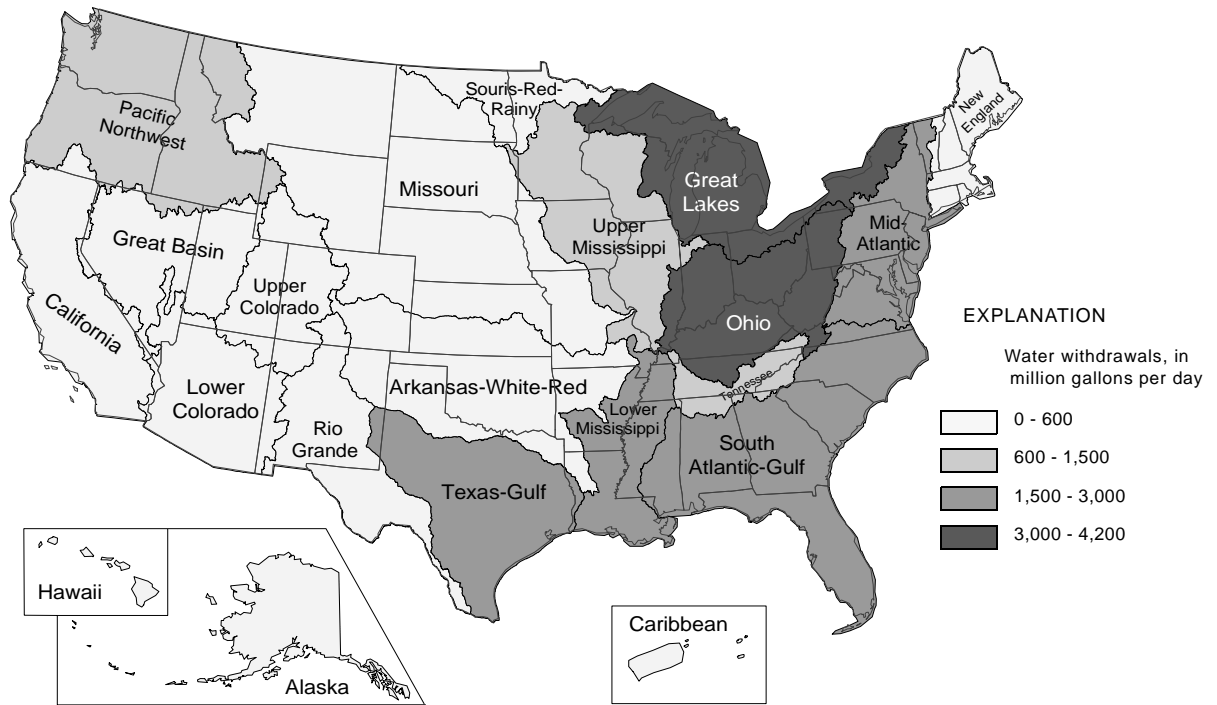
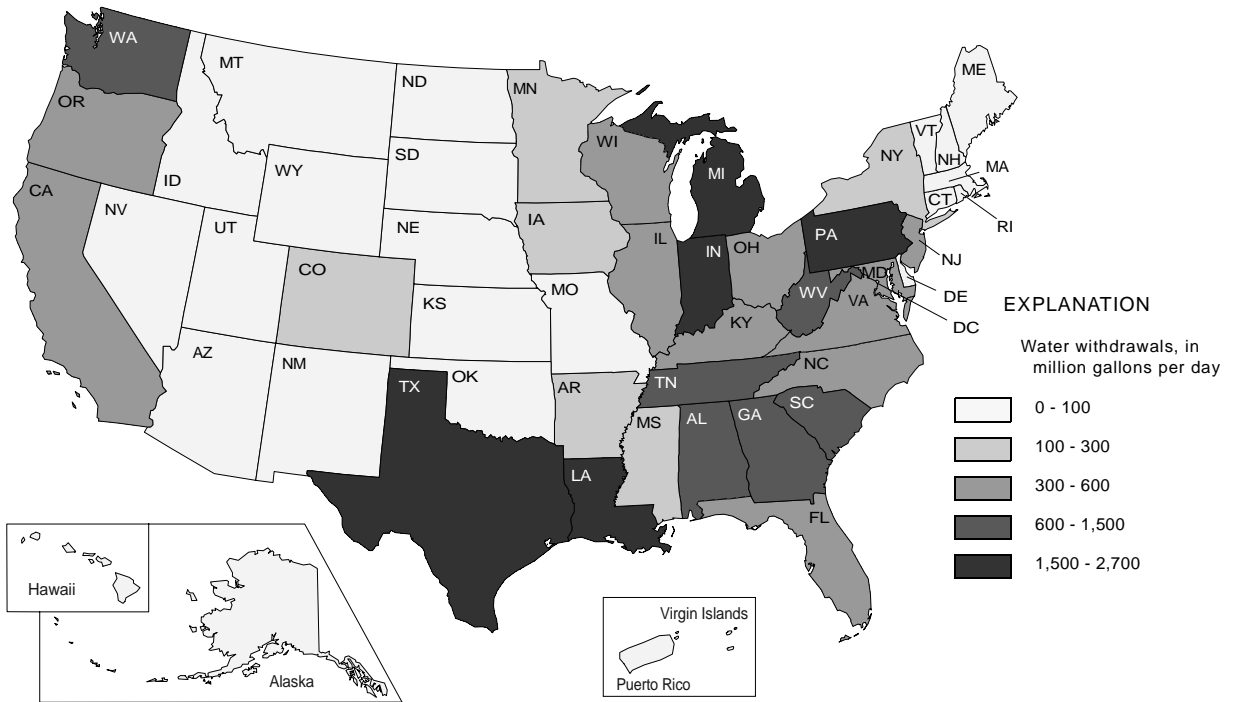


Figure 20. Industrial self-supplied water withdrawals (fresh, saline) by water-resources region, 1995.

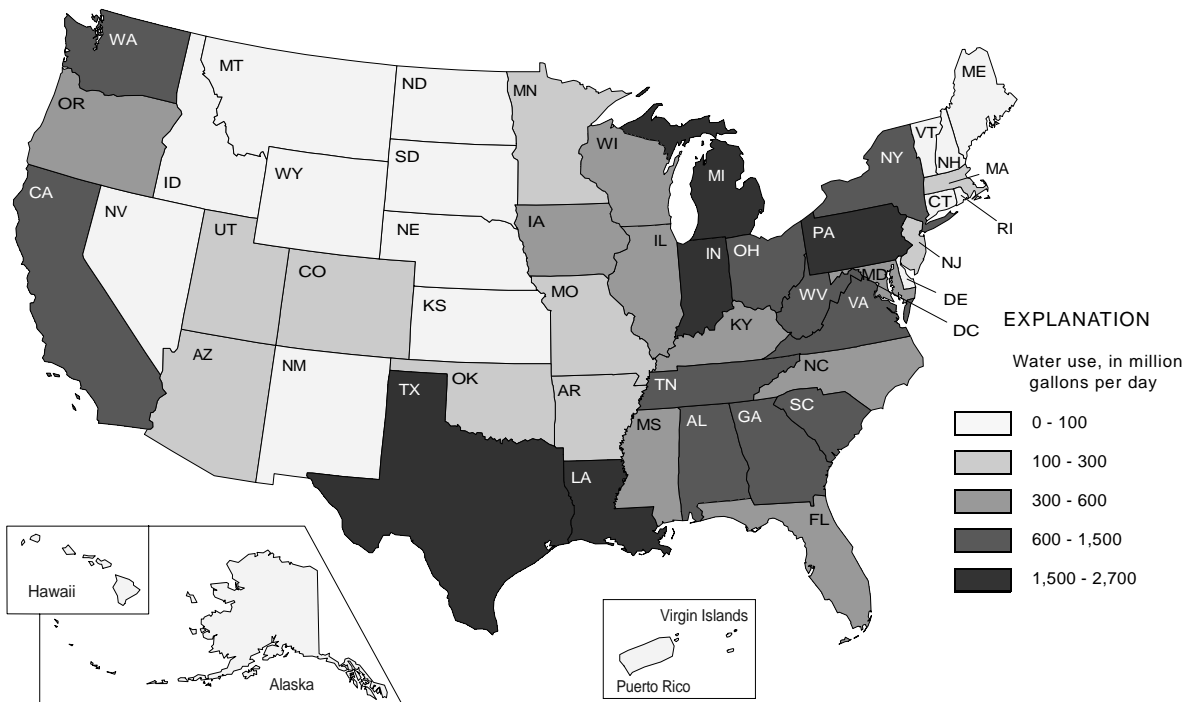
Table 19. Industrial water use by water-resources region, 1995

[Figures may not add to totals because of independent rounding. All values in million gallons per day]

REGION	SELF-SUPPLIED WITHDRAWALS								TOTAL USE			
	By source and type				Total	RECLAIMED WASTE-WATER	PUBLIC-SUPPLY DELIVERIES	Withdrawals and deliveries		Consumptive use		
	Ground water		Surface water					Fresh	Saline	Fresh	Saline	
	Fresh	Saline	Fresh	Saline	Fresh	Saline	Fresh					Saline
New England . . . . .	53	0	100	0	153	0	153	0	168	321	24	0
Mid-Atlantic . . . . .	344	0	1,090	526	1,430	526	1,960	71	516	1,950	198	49
South Atlantic-Gulf . . .	787	0	2,010	40	2,790	40	2,830	1.2	742	3,530	502	2.2
Great Lakes . . . . .	270	3.6	3,900	0	4,170	3.6	4,180	0	775	4,950	436	.4
Ohio . . . . .	379	0	3,310	0	3,690	0	3,690	.1	590	4,280	480	0
Tennessee . . . . .	35	0	1,030	0	1,070	0	1,070	0	101	1,170	115	0
Upper Mississippi . . . .	328	0	660	0	988	0	988	0	361	1,350	176	0
Lower Mississippi . . . .	611	0	2,280	0	2,890	0	2,890	0	94	2,990	294	0
Souris-Red-Rainy . . . .	1.7	0	20	0	22	0	22	0	3.9	26	4.9	0
Missouri Basin . . . . .	102	0	50	0	152	0	152	0	106	258	76	0
Arkansas-White-Red . . .	78	0	360	0	438	0	438	13	291	728	119	0
Texas-Gulf . . . . .	214	.5	846	996	1,060	996	2,060	17	171	1,230	375	599
Rio Grande . . . . .	10	0	.1	0	10	0	10	2.1	20	30	16	0
Upper Colorado . . . . .	2.4	0	4.0	0	6.4	0	6.4	0	4.2	11	3.5	0
Lower Colorado . . . . .	42	0	5.5	0	47	0	47	2.3	68	115	102	0
Great Basin . . . . .	60	.1	31	0	91	.1	91	0	17	109	46	0
Pacific Northwest . . . .	215	0	866	38	1,080	38	1,120	0	407	1,490	148	4.2
California . . . . .	522	10	19	26	541	36	577	3.6	284	824	239	9.1
Alaska . . . . .	3.8	0	51	1.8	55	1.8	57	0	12	66	9.9	.3
Hawaii . . . . .	19	.9	0	0	19	.9	20	0	5.6	25	2.5	.1
Caribbean . . . . .	10	.2	4.0	17	14	17	31	0	15	29	8.0	.3
<b>Total . . . . .</b>	<b>4,090</b>	<b>15</b>	<b>16,700</b>	<b>1,640</b>	<b>20,700</b>	<b>1,660</b>	<b>22,400</b>	<b>110</b>	<b>4,750</b>	<b>25,500</b>	<b>3,370</b>	<b>665</b>



**Figure 21.** Industrial self-supplied water withdrawals (fresh, saline) by State, 1995.



**Figure 22.** Industrial freshwater use (withdrawals, deliveries) by State, 1995.

**Table 20.** Industrial water use by State, 1995

[Figures may not add to totals because of independent rounding. All values in million gallons per day]

STATE	SELF-SUPPLIED WITHDRAWALS							TOTAL USE				
	By source and type				Total		RECLAIMED WASTE- WATER	PUBLIC- SUPPLY DELIV- ERIES	With- drawals and deliveries	Consumptive use		
	Ground water		Surface water									
	Fresh	Saline	Fresh	Saline	Fresh	Saline	Total	Fresh	Fresh	Fresh	Saline	
Alabama	34	0	699	0	733	0	733	0	213	946	116	0
Alaska	3.8	0	51	1.8	55	1.8	57	0	12	66	9.9	.3
Arizona	39	0	0	0	39	0	39	2.3	66	106	98	0
Arkansas	108	0	80	0	187	0	187	0	57	245	14	0
California	522	10	16	26	538	36	575	3.6	283	821	239	9.1
Colorado	37	0	86	0	123	0	123	0	19	143	42	0
Connecticut	3.5	0	6.2	0	9.6	0	9.6	0	42	51	1.1	0
Delaware	17	0	43	3.2	61	3.2	64	0	16	76	11	0
D.C.	.5	0	0	0	.5	0	.5	0	.7	1.2	.1	0
Florida	240	0	106	8.0	345	8.0	353	.7	103	449	46	0
Georgia	295	0	337	32	633	32	664	.6	194	827	85	2.2
Hawaii	19	.9	0	0	19	.9	20	0	5.6	25	2.5	.1
Idaho	39	0	7.9	0	47	0	47	0	6.7	54	3.1	0
Illinois	162	0	290	0	452	0	452	0	118	570	63	0
Indiana	119	0	2,160	0	2,270	0	2,270	0	125	2,400	144	0
Iowa	74	0	184	0	258	0	258	0	78	335	44	0
Kansas	50	0	3.2	0	53	0	53	.2	37	90	45	0
Kentucky	92	0	255	0	347	0	347	0	197	543	22	0
Louisiana	356	0	2,230	0	2,580	0	2,580	0	35	2,620	266	0
Maine	4.6	0	5.9	0	11	0	11	0	14	25	2.5	0
Maryland	19	0	45	261	65	261	326	70	44	109	16	26
Massachusetts	38	0	47	0	85	0	85	0	86	171	13	0
Michigan	177	3.6	1,670	0	1,850	3.6	1,850	0	270	2,120	160	.4
Minnesota	58	0	83	0	140	0	140	0	41	181	26	0
Mississippi	166	0	124	0	290	0	290	0	20	310	49	0
Missouri	21	0	18	0	39	0	39	0	140	179	27	0
Montana	31	0	29	0	60	0	60	0	1.0	61	9.3	0
Nebraska	26	0	4.4	0	30	0	30	0	26	57	16	0
Nevada	7.4	0	7.5	0	15	0	15	0	2.2	17	4.9	0
New Hampshire	5.6	0	38	0	43	0	43	0	13	56	6.6	0
New Jersey	43	0	158	195	201	195	396	0	91	292	22	15
New Mexico	6.3	0	2.0	0	8.3	0	8.3	0	15	23	12	0
New York	127	0	132	0	259	0	259	0	356	615	62	0
North Carolina	61	0	308	0	369	0	369	0	193	562	112	0
North Dakota	3.6	0	7.9	0	11	0	11	0	2.5	14	9.4	0
Ohio	158	0	399	0	557	0	557	0	355	912	190	0
Oklahoma	3.8	0	17	0	21	0	21	0	122	142	8.9	0
Oregon	13	0	365	0	378	0	378	0	71	448	18	0
Pennsylvania	147	0	1,530	0	1,680	0	1,680	1.1	193	1,870	158	0
Rhode Island	1.1	0	0	0	1.1	0	1.1	0	12	13	1.3	0
South Carolina	60	0	640	0	700	0	700	0	44	744	112	0
South Dakota	4.1	0	1.0	0	5.1	0	5.1	0	7.9	13	1.9	0
Tennessee	68	0	795	0	863	0	863	0	130	993	109	0
Texas	226	.5	1,070	996	1,300	996	2,300	32	268	1,570	430	599
Utah	55	.1	31	0	86	.1	86	0	17	103	45	0
Vermont	1.9	0	7.4	0	9.4	0	9.4	0	7.7	17	1.7	0
Virginia	107	0	410	67	516	67	583	0	88	605	72	8.0
Washington	133	0	478	38	611	38	649	0	331	942	120	4.2
West Virginia	13	0	1,300	0	1,320	0	1,320	0	14	1,330	200	0
Wisconsin	78	0	363	0	441	0	441	0	151	592	95	0
Wyoming	1.6	0	1.2	0	2.8	0	2.8	0	2.4	5.1	.8	0
Puerto Rico	10	0	1.1	0	11	0	11	0	15	26	7.6	0
Virgin Islands	.1	.2	2.9	17	3.0	17	20	0	0	3.0	.4	.3
Total	4,090	15	16,700	1,640	20,700	1,660	22,400	110	4,750	25,500	3,370	665