

ELEMENTS OF WATER SUPPLY ENGINEERING

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TABLE 1
GROWTH IN NUMBER AND CHANGES IN OWNERSHIP OF UNITED STATES
WATER WORKS SINCE 1800 *

Year	Total Water Works	Ownership		Per Cent Total	
		Public	Private	Public	Private
1800	17	1	16	5.9	94.1
1810	27	5	22	18.5	81.5
1820	31	5	26	16.1	83.9
1830	45	9	36	20.0	80.0
1840	65	23	42	35.4	64.6
1850	84	33	51	39.3	60.7
1860	137	57	80	41.7	58.3
1870	244	116	128	47.5	52.5
1880	599	293	306	48.9	51.1
1890	1 879	806	1 073	42.9	57.1
1896	3 197	1 690	1 490	52.9	46.6
1924†	9 850	6 900	2 950	70.0	30.0
1932‡	10 789	7 853	2 936	72.8	27.2

* "Water Works Practice," American Water Works Association. Williams & Wilkins, 1925.

† Estimated.

‡ "Rates, Revenues and Results of Municipal Ownership in the United States," R. E. McDonald, 1932.

1-4. Municipal Water Supply Systems.—The essential parts of a municipal water supply system are the source from which an adequate supply of suitable water may be obtained; works for the collection of water and transporting it from the point of collection to the municipality in which it is to be used; works for the purification of water if the raw water (water as collected at the source) is not suitable for use without treatment; and works for the distribution of water to the consumer.

Some of the more important structures which are parts of a municipal water works system are: dams which form impounding reservoirs; aqueducts and pipe lines; river and lake intakes; pumping plants; slow sand filters; rapid sand filters; water-softening plants; iron-removal plants; distribution systems; and distributing reservoirs. Each part of a water works must be