

B. COSTS AND USER CHARGES

1. CONSTRUCTION COSTS

Table 8 shows the incremental costs of waterworks for varying periods in the development of the water industry. It is interesting to note that the investment for the last decade almost equals the amount spent during the previous 35 years, and that the expenditure since the end of World War II is more than three times the amount spent during the entire previous history of the industry. Average per capita investment in water facilities has risen accordingly and for 1956-65 it averaged \$275. It continues to grow as the result of rising costs and the necessity for utilities to go further for new water sources. Figure 1 illustrates water utility cost indexes for two typical types of systems, the weighted components of which are shown in table 9.

TABLE 8.—*Incremental costs of water facilities*¹

Period	New invest- ments (millions)	Growth in population served (millions)	Per capita investment
Before 1896	\$450	22.7	\$20.00
1896 to 1910	510	15.3	33.30
1910 to 1920	640	12.0	53.00
1920 to 1946	3,350	40.0	83.75
1946 to 1955	7,050	30.0	235.00
1956 to 1965 ²	10,200	37.0	275.70

¹ Howson, L. R., "50 Years' Experience With Water Utility Costs and Revenues." Journal AWWA, 51:693 (June 1959).

² Figures for 1956-65 have been added to Howson's original table. Population growth is based on data of the U.S. Public Health Service and the U.S. Department of Commerce.

TABLE 9.—*Weighted components for two typical plants*¹

[In percent]

Component	Plant A	Plant B
Land	1	13
Reservoirs	5	17
Buildings	10	25
Pumps, motors, and so on	5	5
Mains	60	32
Services	10	2
Meters	7	4
Other equipment	2	2
Total	100	100

¹ Fick, H. H., "Cost Indexes for Water Utility Property." Journal AWWA, 56:1021 (August 1964).