CHAPTER 3

CAPACITY OF WATER-SUPPLY SYSTEM

3-1.- Capacity factors. Capacity factors, as a function of effective population, are shown in table 3-1, as follows:

Table 3-1. Capacity Factors

Effective Population	Capacity Factor
5,000 or less	1.50
10,000	1.25
20,000	1.15
30,000	1.10
40,000	1.05
50,000 or more	1.00

3-2. Use of capacity factor. The capacity factor will be used in planning water supplies for all projects, including general hospitals. The proper capacity factor as given in table 3-1 is multiplied by the effective population to obtain the design population. Arithmetic interpolation should be used to determine the appropriate capacity factor for intermediate project population. (For example, for an effective population of 7,200 in interpolation, obtain a capacity factor of 1.39.) Capacity factors will be applied in determining the required capacity of the supply works, supply lines, treatment works, principal feeder mains, and storage reservoirs. Capacity factors will not be used for hotels and similar structures that are acquired or rented for hospital and troop housing. Capacity factors will not be applied to fire flows, irrigation requirements, or industrial demands.

3-3. System design capacity. The design of elements of the water supply system, except as noted in paragraph 3-2, should be based on the design population.

3-4. Special design capacity. Where special demands for water exist, such as those resulting from unusual fire fighting requirements, irrigation, industrial processes, and cooling water usage, consideration must be given to these special demands in determining the design capacity of the water supply system.