

CHAPTER 4

SYSTEM PRESSURES

4-1. - Minimum pressures. Water distribution systems, including pumping facilities and storage tanks or reservoirs, should be designed so that water pressures of at least 40 psi at ground level will be maintained at all points in the system, including the highest ground elevations in the service area. Minimum pressures of 30 psi, under peak domestic flow conditions, can be tolerated in small areas as long as all peak flow requirements can be satisfied. During firefighting flows, water pressures should not fall below 20 psi at the hydrants for new construction and not below 10 psi at existing hydrants when affected by new water line construction.

4-2. Maximum pressures. Maximum water pressures in distribution mains and service lines should not normally exceed 75 psi at ground elevation. Static pressures up to 100 psi can be tolerated in distribution systems in small, low-lying areas. Higher pressures require pressure reducing valves on feeder mains or individual service lines to restrict maximum service pressures to 75 psi.

4-3. Multiple pressure levels. If an extensive area has pressures higher than 75 psi or lower than 40 psi under a single pressure level configuration, it may be appropriate to divide the system into two or more separate areas each having different pressure levels. Within each level, pressures within the distribution system should range from 40 to 75 psi at ground elevation.