

## **A P P E N D I X A**

### **RESIDENTIAL PEAK USER DEMAND**

This Appendix contains excerpts from the North Carolina Administrative Code, Title 15A, Subchapter 18C, Section .0802, Parts (a) and (b). The guidelines contained herein shall be used to determine the peak user demand for all developments covered under Section 3.3.5.3 of the Manual.

**SECTION .0800 - HYDROPNEUMATIC STORAGE TANKS**

Rules .0801 - .0805 of Title 15A Subchapter 18C of the North Carolina Administrative Code (T15A.18C .0801 - .0805); has been transferred and recodified from Rules .2001 - .2005 Title 10 Subchapter 10D of the North Carolina Administrative Code (T10.10D .2001 - .2005), effective April 4, 1990.

**.0801 CAPACITIES: DETERMINING MINIMUM EFFECTIVE VOLUME**

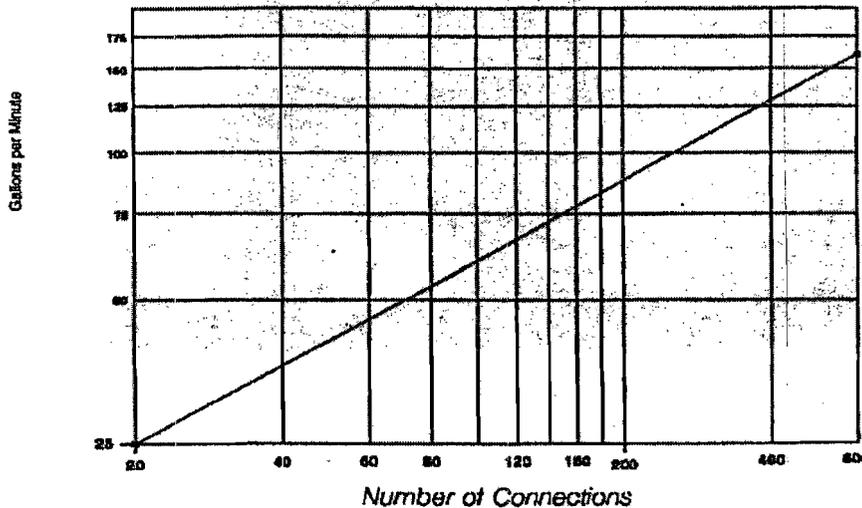
The minimum effective volume of pressure tanks, in gallons, shall equal the peak demand, in gallons per minute, minus the pumping capacity (gpm), multiplied by 20.

*History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523;  
Eff. January 1, 1977;  
Readopted Eff. December 5, 1977.*

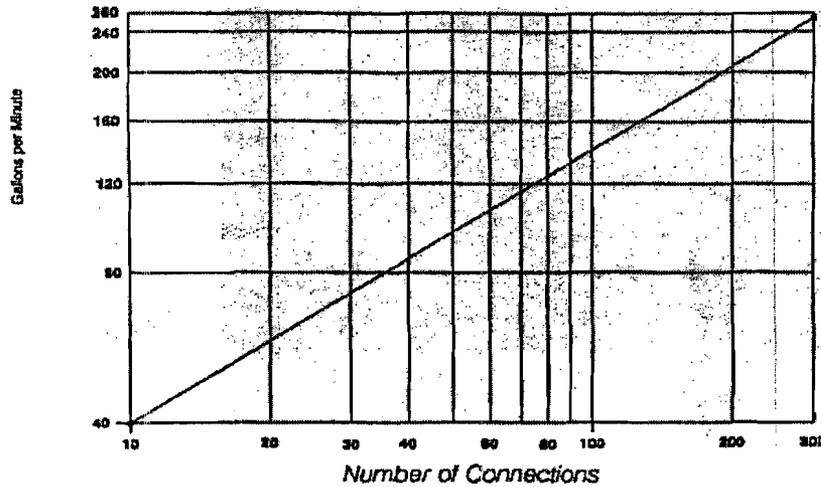
**.0802 CAPACITIES: DETERMINING PEAK DEMAND**

(a) The following charts shall be used to determine the peak demand for residential communities, and mobile home parks, and campgrounds:

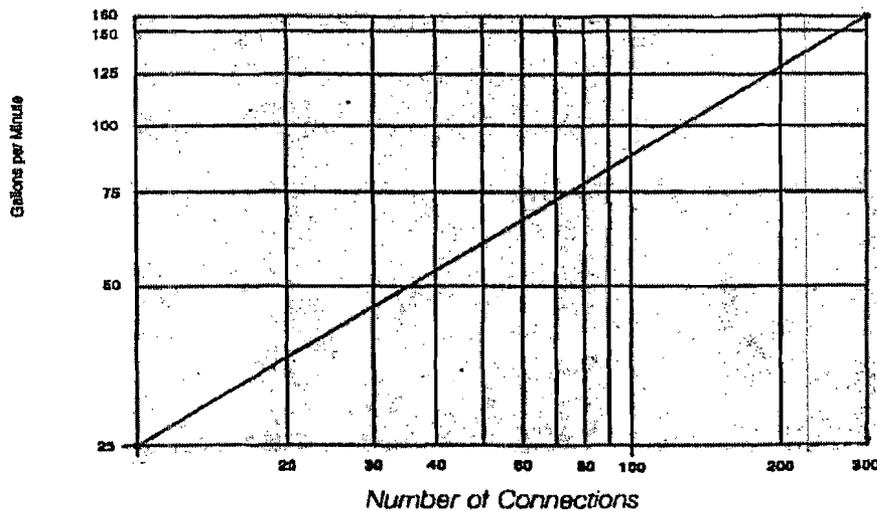
**PEAK DEMAND FOR CAMPGROUND AND TRAVEL TRAILER WATER SYSTEMS**  
(Number of Connections vs Gallons per Minute)



**PEAK DEMAND FOR RESIDENTIAL COMMUNITY WATER SYSTEMS**  
(Number of Connections vs Gallons per Minute)



**PEAK DEMAND FOR MOBILE HOME PARK WATER SYSTEMS**  
(Number of Connections vs Gallons per Minute)



(b) The peak demand for non-transient, non-community water systems shall be determined based on the total demand weight of fixtures in accordance with the procedures of the North Carolina State Building Code, Volume II, Plumbing Section which are hereby incorporated by reference including any subsequent amendments and editions. This material is available for inspection at the Department of Environment, Health, and Natural Resources, Division of Environmental Health, 1330 Saint Mary's Street, Raleigh, North Carolina. Copies may be obtained from the North Carolina Department of

Insurance, Engineering Division, 410 North Boylan Avenue, Raleigh, North Carolina at a cost of forty-five dollars (\$45.00) per copy.

*History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523;  
Eff. January 1, 1977;  
Readopted Eff. December 5, 1977;  
Amended Eff. July 1, 1994; June 30, 1980.*

#### **.0803 CAPACITIES: DETERMINING TOTAL VOLUME**

The total volume of a pressure tank shall be calculated by using the principle of Boyle's Law. The total volume (gallons) shall be not less than 25 times the number of connections or 500 gallons, whichever is greater for a mobile home park. In the case of a residential community (community water system) the total volume shall not be less than 40 times the number of connections or 500 gallons, whichever is greater. In the case of campgrounds, the total volume shall not be less than 10 times the number of connections or 500 gallons, whichever is greater.

*History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523;  
Eff. January 1, 1977;  
Readopted Eff. December 5, 1977;  
Amended Eff. July 1, 1994; March 31, 1980.*

#### **.0804 CAPACITIES: GROUND STORAGE PLUS HYDROPNEUMATIC TANKS**

When ground level storage tanks and high-service pumps are to be used, hydropneumatic tanks shall be sized in relation to peak demand and the high-service pump capacity

*History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523;  
Eff. January 1, 1977;  
Readopted Eff. December 5, 1977;  
Amended Eff. July 1, 1994.*

#### **.0805 CAPACITIES: ELEVATED STORAGE**

(a) Where feasible, elevated storage capacity shall meet the requirements of Fire Insurance Rating Bureau the Fire Suppression Rating Schedule which are hereby incorporated by reference including any subsequent amendments and editions. This material is available for inspection at the Department of Environment, Health, and Natural Resources, Division of Environmental Health, 1330 St. Mary's Street, Raleigh, North Carolina. Copies may be obtained from ISO Commercial Risk Services, Incorporated, Accounting Division, 7 World Trade Center, New York, New York 10048 at a cost of forty dollars (\$40.00) per copy.

(b) The elevated storage for a municipality shall be sufficient to minimize the effect of fluctuating demand plus provide a reserve for fire protection, but not be less than 75,000 gallons in capacity.

(c) The combined elevated and ground storage of the finished water for community and non-transient, non-community water systems shall be a minimum of one-half day's supply of the average annual daily demand.

*History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523;  
Eff. January 1, 1978;  
Amended Eff. July 1, 1994.*