

# Counting population and connections for a Public Water System

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**Population (C, Residential NP-State Regulated)** is the actual year-round residential population. Large PWS population can be looked up using US census data or PSU population data, <http://www.pdx.edu/prc/annual-population-estimates>

**Population (TNC, NTNC, Transient NP-State Regulated)** is the average daily population of potential consumers (people with access to water for consumption) averaged over the operating season. The operating season is the total number of days where the facility is open to public, regardless of individual days where the population does not meet the definition of a PWS. Ask the operator what the average daily population is and verify they are calculating correctly.

Note that the system is not a PWS unless there are 10 or more potential consumers for at least 60 individual days in the operating period.

**Example 1:** If a church only operates on Sundays (i.e. only Sundays have at least 10 potential consumers), there would only be 52 operational days per year (not a PWS). It is important to ask the operator of the church if they have other people using the system on days other than Sunday, and if so, include all in the population calculation, meetings, daycare, etc.

**Example 2:** Consider a TNC state park with visitors primarily Friday - Sunday from May - September. During these approximately 60 days (20 weeks x 3 days per week), an average of 30 potential consumers per day visit the park. During the other four days of the week (Monday - Thursday), there is an average of only 15 visitors per day. The system meets the definition of a TNC water system because there are 25 or more transient daily users for 60 or more days out of the year. However, when considering the population over the entire operating period of approximately 150 days (May - September), the average daily population is only 21 [(60 days x 30 visitors) + (90 days x 15 visitors) / 150 = 21]. In this case the population should be stated as "25" not "21" because there are at least 60 days in the operating period with a minimum of 25 users.

Note: The same principle applies to NP-State Regulated systems. If there are 60 or more days with a population of greater than 10, but the average population is less than 10, state "10" as the system population.

**Example 3:** Consider a church that keeps exact Sunday attendance records, (total number of Sunday attendees for the year was 2,600). The church also has a Wednesday fellowship with around 25 attendees. The total population becomes the total of documented Sunday attendance + 25x52 (i.e. 25 Wednesday fellowship participants for 52 weeks = 1300). Finally, the average daily population would be the total population (2600 + 1300 divided by 365 days = 10.6 or rounded up to 11. This example demonstrates that actual system population records should be used when available, but estimates are acceptable when records are not available.

**Proposed connection wording for survey manual:**

For residential systems (Community and residential NP-state regulated), each year-round residence should count as a connection, regardless of ownership. For example, a Mobile Home Park that has one owner and rents 18 spaces to 23 people would be classified as a Community System.

Most non-community water systems are located on one property and should be counted as having one connection. If there are separate properties (such as vacation homes), counting the number of properties as connections is appropriate.

Transient systems that have a mix of permanent residences and transient RV spaces but do not have enough year-round residents to qualify as a community system should be handled as follows. The year-round residences should be counted as individual connections and the transient RV spaces should be counted as one connection. For example, if a system has 10 mobile homes and 15 RV spaces, we would count the number of connections as 11. In this way the year-round residents would be better represented.