Population, Connections, and Public Water System Classification Procedure

Purpose & Scope: This document describes a general procedure for collecting the population and number of connections to accurately determine the correct Public Water System (PWS) classification of a new or existing supplier of water to the public.

Definitions: Key definitions used in this document include the following.

Public water system (PWS) means a system for the provision to the public of piped water for human consumption, if such system has more than three service connections, or supplies water to a public or commercial establishment that operates a total of at least 60 days per year, and that is used by 10 or more individuals per day. Public water system also means a system for the provision to the public of water through constructed conveyances other than pipes to at least 15 service connections or regularly serves at least 25 individuals daily at least 60 days of the year.

Community (C) water system means a public water system that has 15 or more service connections used by year-round residents, or that regularly serves 25 or more year-round residents.

Non-Transient Non-Community (NTNC) water system means a public water system that regularly serves at least 25 of the same persons over 6 months per year.

Transient Non-Community (TNC) water system means a public water system that serves a transient population of 25 or more persons.

Oregon Very Small (OVS) water system means a public water system that serves 4 to 14 service connections or that serves commercial or public premises that are used by 10 to 24 people at least 60 days per year.

Human consumption means water used for drinking, personal hygiene, bathing, showering, cooking, dishwashing, and maintaining oral hygiene.

Service connection means the piping connection through which water is conveyed from a public water system to a user's premises.

Procedure

The following information should be obtained from the PWS owner or operator.

1. **Days of operation:** The water system must operate for a minimum of 60 days out of the year and serve water for human consumption to 10 or more people per day to qualify as a PWS.
2. **Number of connections:** This is generally the number of connections serving separate properties. For the purpose of determining water system classification, service connection includes any piping connection that provides a residence or a public or commercial premises water from a water system. Verify the number of residential and commercial premises connected to the water system and the type of land use and occupancy at the residential and/or commercial premises. Spaces in an RV park should be lumped together as one connection except for spaces that are occupied by the same resident(s) year-round, which would be considered separate connections.
3. **Population:** Population is generally the average number of daily users of the water system, including residents, workers, and visitors. The system's operator or owner should be asked to provide the population information.
    a. For Community water systems,
        i. A multiplier of the number of connections can also be used, often 2–4 depending on typical residence size.
        ii. For a city, you can check the most recent population estimate from Portland State University's Population Research Center (go to Estimates).
    b. When population and/or usage of a PWS varies, the PWS population is averaged over the busiest 60 days of operation. The busiest 60 days of operation do not have to be consecutive days. Infrequent events that draw a larger than usual number of customers, such as a concert, should not be included in calculating the average transient population.
    c. Add the total of the following populations:
        i. Residential population: Year-round residents in any buildings served by the water system.
        ii. Regular population (non-residential, non-transient): People who use the water with recurring regularity but do not live there. Examples

include workers and students.

iii. Transient population: Random individuals and customers who do not regularly use the water system (campground users, store customers, tasting room visitors, hotel guests, etc.).

4. **Classifying the PWS type:** The regulator should use the above information to determine the classification type as either Community (C), Non-Transient Non-Community (NTNC), Transient Non-Community (TNC), or Oregon Very Small (OVS). See flowchart at the end of this document.

   Examples: The following examples help clarify some commonly confusing PWS classification circumstances.

   1. An RV/mobile home park has a mix of structures occupied by temporary and permanent residents. Fifteen structures are occupied by year-round (permanent) residents. An additional five structures are parked temporarily and occupied by visitors who will be served by the water system for less than one year. Each structure is occupied by one person. The population should therefore be counted as 20, and the number of connections as 16 (each permanent residential structure counts as one connection, and all transient connections count as a total of one connection, in aggregate). The system should be classified as C because there are 15 or more service connections used by year-round residents. Note that property ownership and divisions (number of tax lots and parcels) is not relevant in this case.

   2. A winery tasting room with a regular staff of two is open Fridays, Saturdays, and Sundays from June to the end of October (63 days). The public has access to the water system for human consumption only at the tasting room. There is one service connection because the water source and distribution system are on one property. An average transient population of 15 people per day visit the facility, except for three Saturdays when there are concerts that draw a maximum of 200 people. If the three concerts were to be included along with the other regular daily population, this could equal an average daily population of 26: [(60 x 17)+(3 x 200)]/63 = 26. However, there are not 25 or more users at least 60 days of the year, therefore the system is classified as an OVS system with an average

population of 17. Note that if the facility was open for less than 60 days per year, it would not be a public water system.

3. An annual county fair is taking place at the county's fairgrounds. The fairgrounds are supplied by a county-owned groundwater well. The fairgrounds have a permanent maintenance building that four regular staff operate out of Monday thru Friday. The fair operates for two weeks in August and is permitted for an occupancy of up to 5,000 people per day over the duration of the fair. The fair utilizes a groundwater source for human consumption during the two-week event. The event does not meet the definition of a PWS because the minimum operation duration (60 days per year) is not met. The event is required to test the water quality and water system capacity per OAR 333, Division 039, Health and Safety at Outdoor Mass Gatherings. These OARs are overseen by the Oregon Health Authority Food Safety Program.

4. A seasonal state park serves a campground and associated amenities (i.e., cabins, lakefront beach, public restroom buildings, one park ranger's office and residence building, etc.) and is open every day of the week. Four people reside in the park ranger's residence (residential consumers) from May 1 through October 31 during the park's open season. The park has 20 cabins with an estimated usage of 300 people per month (10 per day) and averages 250 transient visitors per day at the lake's beach between July and August. During the off season (November 1 through April 30) only the park ranger's residence is in operation with its four residents.

   The state park meets the definition of a seasonal TNC PWS. The system has a peak average daily population of 264 (4 residents + 10 transient consumers in cabins + 250 transient consumers) during the busiest 60 days of the season. The number of service connections is 2 (1 for the cabins and bathrooms + 1 residence). Even though the park water system is still in use during the off season by 4 residents, the population drops below the threshold needed to meet the definition of a PWS.

5. A water system serves a church, the minister's home, and 2 neighboring homes. Five people reside in the minister's home, and a total of 7 people reside in the neighboring homes. The church operates a year-round preschool that has 2 teachers and 15 children. An average of 100 parishioners attend church or Sunday school each Sunday. In addition, the church holds other functions such as choir practices, youth group meetings, and dinners that have an average population of 50 people per week. The daily average, over any given month, for the transient population is 21 people (150 transient consumers/week x 1 week/7 days = 21 per day).

   The establishment meets the definition of a NTNC PWS because it serves a total of 12 residential consumers and 17 regular consumers (students and teachers) who are served for 6 or more months. The system has an average population of 50 (12 residents + 17 regular consumers + 21 transient consumers). The water system has 4 connections (the church + 3 separate homes).

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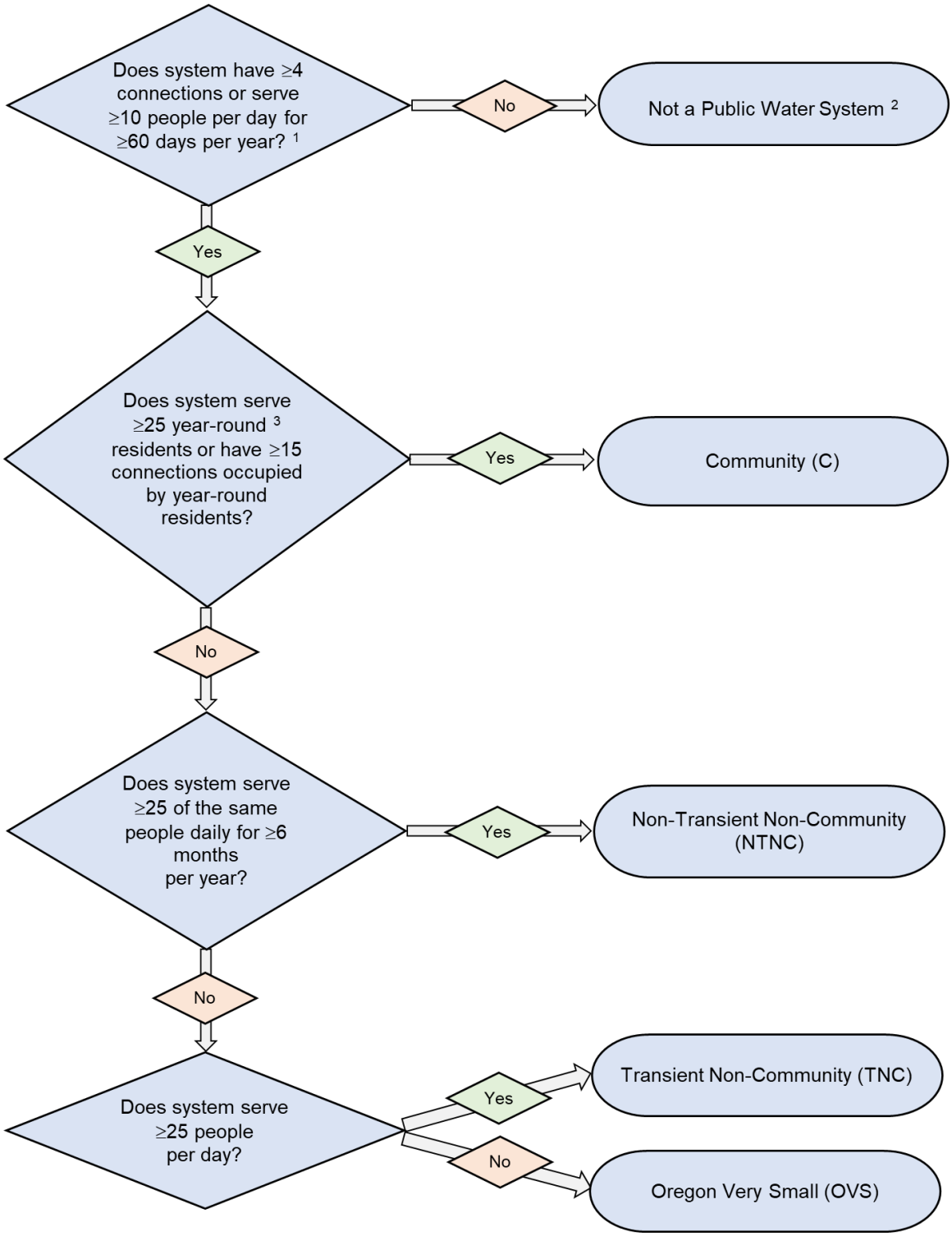

[1] For the purpose of determining classification, a connection consists of any piping that provides water to a residence or public or commercial premises.
[2] Some licensed facilities not meeting the definition of a public water system may have to comply with drinking water regulations in other rules, such as food & lodging, daycare, schools, and mass gatherings.
[3] A year-round residence is a primary residence that is not necessarily occupied every day of the year.