What is a Public Water System?

A public water system is defined as a system that provides water for human consumption[1] to 15 or more connections or regularly serves 25 or more people daily for at least 60 days out of the year.

What types of Public Water Systems are there?

Many people think of public water systems as large city or regional water suppliers, but they also include small housing communities, businesses and even schools and restaurants that provide water. A public water system is not necessarily a public entity, and most public water systems are privately owned. There are three legal distinctions between the types of public water systems: community, non-transient non-community, and transient. The type of water system is based on how often people consume the water. Drinking water regulations impose the most stringent monitoring requirements on community and non-transient non- community water systems because the people they serve obtain all or much of their water from that system each day.

	Community Water Systems are city, county, regulated utilities, regional water systems and even small water companies and districts where people live.
	Non-community non-transient water systems are places like schools and businesses that provide their own water. The same people have a regular opportunity to consume the water, but they do not reside there.
	Transient water systems include entities like rural gas stations, restaurants and State and National parks that provide their own potable water source. Most people that consume the water neither reside nor regularly spend time there.

What does it take to be a public water system?

Being a public water system means providing affordable, safe drinking water to your customers 24 hours a day, 7 days a week, 365 day a year. This includes the associated legal, fiscal, and operational responsibilities, and future planning. Public water systems typically are run more efficiently when costs can be spread out over a large group of people to obtain good economies of scale. Small public water systems without a very high level of managerial, technical and financial capacity tend to be unsustainable.

Public water systems are required to have domestic water supply permits. The first step of the process to obtain a permit for a new public water system is to complete a preliminary technical report. The report involves contacting other existing public water systems to see if the service area of the proposed system could, instead, be served by an existing system. It also evaluates the long-term costs of creating a new public water system. **The preliminary technical report must be submitted at least 6-months prior to any water related construction.** A copy of the preliminary technical report template and the subsequent permit application materials can be obtained by contacting the State Water Resources Control Board, Division of Drinking Water's District Office. A map with District Offices can be found at the following website:

http://www.waterboards.ca.gov/drinking_water/programs/documents/ddwem/DDWdistrictofficesmap.pdf

[1] Human consumption means the use of water for drinking, bathing or showering, hand washing, oral hygiene, or cooking, including but not limited to, preparing food and washing dishes per Section §116275(e) of the Health and Safety Code.

What are the requirements to create and maintain a public water system?

A new water system applicant should consider all requirements for a public water system that are listed below and on the following page. **Typically, a public water system will incur costs associated with most or all of the required elements.** Other requirements may also be applicable, depending on whether the system is a public or private entity, such as requirements imposed by other programs with the State Water Board, such as Division of Water Rights, and other regulatory agencies, such as Local Area Formation Commissions, Public Utilities Commission, city and county governments. The section from the California Code of Regulations (CCR) Title 22, discussing the specific requirements or the section of the California Health and Safety Code (CHSC) is identified in parentheses. If the requirement comes from another regulatory section, the location is noted. Note that this is a partial list of regulatory requirements.

- $ Permitting engineering and technical reports (§64552), including pump tests (§64554), at least two water supply well sources for communities (§64554c and §64561), a 50-foot radius source protection zone around all new wells (§64560), a minimum of a 50-foot annular seal on new wells (§64560), a well flow meter (§64561) and initial monitoring
- $ Construction, including elevated storage or backup electricity for pumps to maintain 40 pounds per square inch (psi) minimum pressure at all times (§64602), proper construction of distribution systems (§64570- 64580), adequate storage capacity (§64554 and 64585) and fire capacity (contact local fire official)
- $ As-built maps (§64604)
- $ Annual water-treatment chemicals (§64590) and equipment for distribution monitoring of any added chemical treatment (dependent on the type of needed treatment)
- $ Ongoing raw water chemical monitoring sampling and analysis (§64431-64445.2)
- $ Ongoing raw water bacteriological monitoring sampling and analysis (§64430)
- $ Ongoing treated water bacteriological monitoring sampling and analysis (§64421-64430)
- $ Maintenance of bacteriological plans (§64422) and emergency notification plans for water quality emergencies (§64463-64466)
- $ Ongoing lead and copper monitoring including sampling and analysis and maintenance of a lead and copper plan (§64670-64690.80)
- $ Ongoing disinfection byproducts monitoring and maintenance of an associated plan (§64530-64537.6)
- $ Maintaining a customer water quality complaint program (§64470)
- $ Main flushing (§64575), valve and meter maintenance (§64600), and maintaining system maps (§64604)
- $ Cross connection program and annual backflow device testing (from Title 17, §7583-7605)
- $ Licensed water treatment operator and distribution staff (§64413.1-64413.7)
- $ Written procedures for system maintenance, for example pipeline break procedures, etc. (§64580, 64582, & 64583)

- $ Source capacity planning studies and permit amendments for any additional growth (§64558 and §64556)
- $ Annual Consumer Confidence Report preparation and distribution (§64480-64483)
- $ Annual Electronic Report submittal to State Water Resource Control Board-Division of Drinking Water (CHSC §116530)
- $ Records of the estimated life of all pumps, treatment, storage, and distribution system and an annual capital improvement plan to fund infrastructure replacement (CHSC §116540)
- $ Metering and billing staff (CHSC §116540)
- $ Emergency reserves for drought, regulatory changes, public notice of bacteriological or chemical failures, etc. (CHSC §116540)
- $ Maintaining of business licenses, annual drinking water permit fees (CHSC §116565) and payment of any State enforcement fees for actions resulting from water system non-compliance (CHSC §116577)
- $ Appropriate working area for staff, chemicals, and records (§64470, §64423.1)
- $ Insurance and liability for staff, with duties including climbing tanks, handling hazardous chemicals, etc.
- $ Management staff that is knowledgeable about drinking water. Staff coordinate the above and maintain financial controls (per Corporation Code and Government Code requirements and CHSC §116540)
- $ If the source is surface water, there may be additional requirements:
    - A water treatment plant meeting all Surface Water Treatment Rule requirements (§64650-64666),
    - Continuous operator supervision of the water treatment plant when in service (§64660)
    - Chemical monitoring equipment, at minimum turbidity and chlorine (§64655-64656.5, §64659)
    - Operations Plan (§64661) and Alarms (§64659)
    - Monthly monitoring reports to the Division of Drinking Water (§64662-64664.2)
    - Additional raw water sampling requirements (§64654.8)
    - Watershed Sanitary Survey, every five years (§64665)

Is there any flexibility on these requirements?

All public water systems are subject to the same health based standards and laws whether they are a big city, a small community, or a rural restaurant. However, there are some minor adjustments that are made to monitoring frequencies based on population and water system type. Each public water system is expected to continuously supply high quality water meeting all the applicable requirements.

How do I find an existing public water system to serve my project area?

California Environmental Health Tracking Program:
http://cehtp.org/page/water/water_system_map_viewer This website provides a map of the boundaries of public water systems. It is currently under development and does not include all public water systems, but is searchable by address or county.

Drinking Water Watch: https://sdwis.waterboards.ca.gov/PDWW/
All active and inactive public water systems in California are provided on this website as well as a contact phone number or address for the public water system. The listing can be filtered by county, but no map is provided.

Contact the Division of Drinking Water District Office Serving Your Area and Ask: If you are unable to find a public water system nearby, contact the District Engineer for additional support. A webpage link of Division District offices and contacts is provided on the first page of this document.