

**ATTACHMENT 1**

**GENERAL ORDER 103-A**

**PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA  
EFFECTIVE SEPTEMBER 10, 2009**

**RULES GOVERNING WATER SERVICE, INCLUDING MINIMUM  
STANDARDS FOR OPERATION, MAINTENANCE,  
DESIGN AND CONSTRUCTION**

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Appendix A – Non Potable Water Systems

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Appendix D – Report Card Billing

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## **I. General**

### **1. Intent**

#### **A. Purpose**

The purpose of these rules is to establish minimum standards to be followed in the design, construction, location, maintenance and operation of the facilities of water and wastewater utilities operating under the jurisdiction of the Commission. Each of these rules is subject to active oversight and enforcement by the Commission.

#### **B. Limits of Order**

These rules do not supersede the effective tariff rules of the water and wastewater utilities or any other subsequent Commission order.

#### **C. Expiration of Economic Life**

Nothing contained in these rules shall be construed to require the replacement or abandonment of facilities in use at the time of adoption of these rules, prior to the expiration of their economic life, unless the Commission orders the abandonment or replacement of particular facilities found to be inadequate for the provision of proper public utility service.

#### **D. Absence of Civil Liability**

These rules are adopted by the Commission to establish minimum standards in the design, construction, maintenance and operation of water and wastewater utilities operating under the jurisdiction of the Commission. Such rules shall not impose upon these utilities, and these utilities shall not be subject to, any civil liability for damages, if liability would not exist had these rules not been adopted.

#### **E. Applicability**

The following rules relating to the construction, reconstruction, maintenance, and operation of water and wastewater facilities shall be observed in this state unless otherwise authorized or directed by the Commission. The sections of these rules applicable to wastewater utilities are specified in Appendices A and B.

### **2. Definitions**

- A. Bill. Any invoice for water or wastewater service including final invoices and invoices for maintenance or repair service.

- B. Commission. The Public Utilities Commission of the State of California.
- C. Complaint. A request requiring an investigation or action on the part of the utility to address an alleged problem, deficiency, or inadequacy in the utility's provision, pricing, or billing for its service. An inquiry to the utility not requiring an investigation or action is not a complaint.
- D. County Health Department. The county agency governing water quality for the county.
- E. Customer. Any person, firm, association, corporation or governmental agency supplied or entitled to be supplied with water or wastewater service for compensation by a utility.
- F. Customer Service Lateral. All pipe, tubing, valves and fittings connecting a customer sewer system to the point where the lateral enters the public right of way including all pipe, fittings and valves necessary to make the connection.
- G. Department. The Division of Drinking Water and Environmental Management of the Department of Public Health of the State of California, or its successor; or the County Health Department, that has jurisdiction over the utility.
- H. Distribution System. All physical parts of the water system, including, but not limited to pipes, valves, pumping stations, storage tanks or reservoirs, and service lines that are located between the water treatment plant or the source if there is no treatment, and the consumer's service connection.
- I. Maximum Day Demand. The actual, estimated or projected amount of water utilized by consumers during the highest day of use, midnight to midnight, excluding fire flow as defined in Waterworks Standards, CCR Title 22, Section 64551.30.
- J. Normal Business Hours. 8 a.m. to 5 p.m., Monday through Friday, excluding utility holidays, unless otherwise posted at the utility's office.
- K. Peak Hour Demand. The amount of water utilized by consumers during the highest hour of use during the maximum day, excluding fire flow as defined in Waterworks Standards, CCR Title 22, Section 64551.35.
- L. Pressure Zone. Sections of the water system that are segregated by a controlled change in the hydraulic grade line.

- M. Regional Board. The Regional Water Quality Control Board that has jurisdiction over the specific wastewater or reclamation facilities.
- N. Recycled water system. Water recycling, also known as reclamation or reuse, is an umbrella term encompassing the process of treating wastewater, and then storing, distributing, and using the recycled water. Recycled water is defined in California Water Code Section 13050(n) to mean “water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur.” A recycled water system includes all real estate, fixtures, and personal property owned, controlled, operated, or managed in connection with or to facilitate the collection, treatment, creation, development, storage, supply, distribution, sale, furnishing, carriage, apportionment, or measurement of recycled water.
- O. Service Line. All the pipe, tubing, valves and fittings connecting a water main to an individual water meter or service connection, including all pipe, fittings and valves necessary to make the connection.
- P. Source Capacity. The total amount of water supply available expressed as a flow from all active sources permitted for use by the water system, including approved surface water, groundwater, and purchased water. (Waterworks Standards, CCR Title 22, Section 64551.40.)
- Q. State Board. State Water Resources Control Board
- R. Storage Capacity. The total volume of water supply available from used and useful storage tanks or reservoirs approved by the Department as an active part of the utility’s water system.
- S. Sewer system. As defined in Public Utilities Code Section 230.5, all real estate, fixtures, and personal property owned, controlled, operated, or managed in connection with or to facilitate sewage collection, treatment, and disposition for sanitary or drainage purposes. Sewer system(s) include any and all trunk lines and connecting sewers, interceptors, outfall lines and sanitary sewage treatment or disposal plants or works, and any and all drains, conduits, and outlets for surface or storm waters, and any and all other works, property or structures necessary or convenient for the collection or disposal of sewage, industrial waste, or surface or storm waters.
- T. Tariff Rule. A Rule in the tariffs that has been approved by the Commission.

- U. Urban Water Management Plan. A plan prepared in response to California Water Code Sections 10610 through 10656.
- V. Utility. A person, a sole proprietorship, a partnership, a limited liability corporation, a company, an association, or a joint stock association that provides water or sewer service and is under Commission jurisdiction. As used in this order, a utility includes the lessees, trustees, receivers or trustees appointed by any court whatsoever, of the corporation.
- W. Utility Service Lateral. All the pipe, tubing, valves and fittings connecting a customer service lateral to the sewer main.
- X. Wastewater Meter. Any device used for the purpose of measuring the quantity of wastewater produced.
- Y. Wastewater system. Any sewer service system or recycled water system subject to the Commission's regulation. The wastewater system does not include the service lateral from the premise to the entrance into the public right-of-way for eventual connection to the utility system.
- Z. Wastewater utility. Any corporation or person owning, controlling, operating, or managing any wastewater system subject to the Commission's regulation. A sewer system utility as defined in Public Utility Code Section 230.5 is a wastewater utility.
- AA. Water Main. Any pipeline, except for user service lines, within the distribution system.
- AB. Water Meter. Any device used for the purpose of measuring the quantity of water delivered.
- AC. Water Service Connection. The point of connection from a service line or ditch owned by the utility or from the outlet connection of a utility water meter assembly or other measurement device, or the service connection point, to the customer's piping or ditch.
- AD. Water System. The interconnected reservoirs, pipes, sources of supply, real estate, and facilities used to provide water service to a particular set of customers.
- AE. Water Treatment Plant. A group or assemblage of structures, equipment, and processes that treat or condition the water supply of a public water system for the purpose of meeting drinking water standards, consistent with the definition of Water Treatment Facility in the Department's CCR Title 22, Chapter 13 (Operator Certification).



- AF. Waterworks Standards. Regulations adopted by the Department that take cognizance of the latest available “Standards of Minimum Requirements for Safe Practice in the Production and Delivery of Water for Domestic Use” adopted by the California section of the American Water Works Association (Section 116275 of the Health and Safety Code.) The Waterworks Standards may be found in California Code of Regulations, Title 22, Division 4, Chapter 16.
- AG. Water Utility. Any corporation or person owning, controlling, operating or managing any water system subject to the Commission’s regulation.

### **3. Abbreviations and Acronyms:**

- A. AWWA. American Water Works Association.
- B. WEF. Water Environment Federation.
- C. CCR. California Code of Regulations.
- D. DPH. Department of Public Health of the State of California.
- E. MDD. Maximum Day Demand.
- F. PHD. Peak Hour Demand.
- G. BOD. Biochemical Oxygen Demand.
- H. TSS. Total Suspended Solids.
- I. TDS. Total Dissolved Solids.
- J. PDC. Peak Daily Capacity.
- K. MGD. Million Gallons per Day.
- L. mg/L. milligrams per liter.
- M. psi. Pressure measurement of “pounds per square inch” as registered on a gauge.
- N. US EPA. United States Environmental Protection Agency.
- O. UWMP. Urban Water Management Plan.

#### **4. Information Available to Public**

The utility shall maintain and make available for public inspection at one or more of the utility's commercial offices, in structure and languages to properly inform the customer, information regarding the service rendered, including the following:

- A. A description in writing of the utility services provided;
- B. Copies of all active Tariffs including rates, general rules of the utility, service area maps and forms of contracts and applications applicable to the territory served from that office;
- C. Information about the utility's method of reading meters;
- D. Bill Analysis. A statement of the past readings of the meters serving a customer's own premises for a period of two years;
- E. Consumer Confidence Report. Each utility operating a potable water system must annually mail or deliver a copy of the Consumer Confidence Report to each customer;
- F. Conservation programs and opportunities;
- G. Low-income ratepayer assistance programs;
- H. Customer rights and obligations;
- I. Information on obtaining emergency assistance; and
- J. How customers can make suggestions or complaints.

This information, except for items (B), (D), and (E) above shall be made available in language(s), other than English, that are predominantly spoken in each utility's service territory. In addition, this information, except for item (D) above, shall be available in electronic form on the company's website, if a website is maintained. All Class A and B water utilities shall maintain a website with the above listed information, except for item (D).

## **5. Access to Property**

### **A. When**

The utility shall at all reasonable hours have safe access to meters, service connections, customer service laterals and any utility-owned property located on the customer's premises for the purposes of installation, maintenance, operation, or removal.

### **B. Secure Access**

The utility may request the customer to secure any animals to ensure the safety of the utility's representative or the utility may enlist the aid of appropriate agencies, if required, to ensure safe access, particularly when animals on the customer's premises prevent access in times of an emergency.

### **C. Proper Identification**

- (1) Any utility representative whose duties require entering the customer's premises shall wear a distinguishing uniform or other insignia, identifying the utility representative as an employee of the utility, or carry other identification such as a badge to verify employment by the utility, to be shown by the utility representative upon request.
- (2) The utility shall inform the customer in such a manner that the utility can prove the customer was aware of impending access to utility-owned property, except in events associated with the safety of the water supply. This requirement includes language barriers or issues covered by the Americans with Disabilities Act.

## **6. Accidents/Acts of Terror**

- A. The utility shall cooperate with the Commission to promote a reduction in hazards within the industry and to the public.
- B. The utility shall keep a record of any accident endangering the public in general, its employees, or disrupting the facilities for supplying water or wastewater service to the public which may have caused substantial property damage, personal injury or death. This information shall be available for inspection by the Commission for the period prescribed by the California Code of Civil Procedure, or as prescribed by the Federal Department of Homeland Security, or for five years, whichever is greater. The utility shall fully cooperate with the Commission in the event of an investigation by the Commission staff.

## **7. Reports and Notifications to the Commission**

- A. The utility shall furnish to the Commission staff, at such times and in such form as the staff may require results or summaries of any tests required by these rules and any information concerning the utility's facilities or operations which the Commission may request for assessing the practices of the utility.
- B. Reports and notifications to the Commission required by this General Order shall be filed with the Division of Water and Audits, or its successor, with a copy sent to the Division of Ratepayer Advocates (DRA), or its successor. Class C and D utilities are not required to provide copies of the reports required by this General Order to DRA.

## **8. Exemptions or Variances from These Rules**

- A. This General Order may be amended to ensure consistency with applicable statutes, Commission orders and industry standards. The Commission may adopt the amendments by resolution, with such modification as the Commission deems appropriate, following notice and opportunity to comment on the proposed amendments. After being amended, the text of this General Order will be published at the Commission's Internet site.
- B. A utility may request exemption from the requirements of this General Order by application. Any utility that proposes an exemption or variance from this General Order must explain to the Commission any effects the proposed exemption or variance would have on public health risks, service quality, or rates and must bear the burden of justifying any adverse effect.
- C. Where exceptions to this General Order are requested that are of minor importance or temporary in nature, the utility may file a request and showing of necessity for relief by an Advice Letter, in accordance with General Order 96-B.

## **9. Preemption of Local Authority**

Local agencies acting pursuant to local authority are preempted from regulating water production, storage, treatment, transmission, distribution, or other facilities (including the location of such facilities) constructed or installed by water or wastewater utilities subject to the Commission's jurisdiction. However, in locating such projects, the utility should consult with local agencies regarding land use matters.

## **II. Standards of Service**

### **1. General**

- A. Subject to the Commission's oversight, each utility shall operate its system so as to deliver reliable, high quality service to its customers at reasonable cost.
- B. Each water utility shall ensure that it complies with the Department's permit requirements and all applicable drinking water regulations.
- C. Each wastewater utility shall ensure that it complies with the State Board, Regional Board, and County Health Department permit requirements and all applicable regulations.

### **2. Water Quality and Supply Requirements**

#### **A. Quality of Water**

- (1) General. Any utility serving water for human consumption shall provide water that is not harmful or dangerous to health and, insofar as practicable, free from objectionable odors, taste, color and turbidity.
- (2) The utility shall comply with applicable state and federal laws pertaining to water quality, and with related regulations of the Department and US EPA and all additional requirements of the Commission.
- (3) If the Department or US EPA finds a utility to be out of compliance with the water quality regulations specified in section II.2.A(2), the utility shall promptly notify the Commission, by telephone or e-mail, with confirmation in writing. Any report submitted to the Department or US EPA in such circumstances shall be submitted concurrently to the Commission.
- (4) If a utility notifies its customers of a water quality event, it shall simultaneously provide such notice to the Commission, by telephone or e-mail, with confirmation in writing.

- (5) Each utility shall have representative samples of its water analyzed by a Department accredited laboratory, as required pursuant to California Health and Safety Code Sections 116390 and 100825-100920, at intervals specified by the Department.
- (6) It is not intended that any rule contained in this General Order shall supersede or conflict with the regulations of the Department or US EPA. Compliance by a utility with the regulations of the Department or US EPA on a particular subject matter shall constitute compliance with such of these rules as relate to the same subject matter except as otherwise ordered by the Commission.
- (7) In accordance with the Commission's Decision 07-05-062 or subsequent order, in each general rate case of a Class A water utility, the Presiding Officer shall appoint a water quality expert to assist the Commission in making specific findings and recommendations concerning the Class A water utilities' water quality compliance, unless good cause exists to forego such appointment.
- (8) Appointment of a water expert may not be necessary if the utility has met all sampling and testing requirements, and has no test results on facilities in active service that exceed the maximum contaminant levels (MCLs) established by the Department, and no party raises concerns of merit.
- (9) Recycled water shall meet the Department's recycled water requirements of Article 4, Chapter 7, Part 12 of Division 104 of the California Health and Safety Code.
- (10) Any unauthorized waste discharge (as defined in the utility's tariff rules) into a utility's wastewater system shall be grounds for disconnection at the customer service lateral from the utility's system.

## **B. Quantity of Water**

### **(1) Source**

All water supplied by the water utility shall be:

- (a) Obtained from a permitted source;
- (b) Obtained from a source or sources reasonably adequate to provide a reliable supply of water; or
- (c) Produced from a source or sources described in the utility's Urban Water Management Plan (UWMP) that has been reviewed by the Commission in its most recent general rate case or in an

amendment to such UWMP that the utility has submitted by advice letter for review by the Division of Water and Audits, or its successor.

(2) Operation of Supply System

- (a) The potable water supply system, including wells, reservoirs, pumping equipment, treatment and filtration works, mains, meters and service pipes shall be free from sanitary defects.
- (b) No physical connection between the distribution system of a public potable water supply and that of any other water supply shall be permitted except in compliance with the Regulations Relating to Cross Connections of the Department contained in the CCR, Title 17, Division 1, Chapter 5, Subchapter 1, Group 4, Articles 1 and 2, or its successor.
- (c) Production from groundwater and surface water sources shall comply with relevant Waterworks Standards and, in the case of a utility that has submitted a UWMP for Commission review, shall be conducted in accordance with a UWMP that has been reviewed by the Commission in the utility's most recent general rate case or in accordance with an amendment to such UWMP that the utility has submitted by advice letter for review by the Division of Water and Audits, or its successor.

(3) Potable Water System Capacity

- (a) A system's facilities shall have the capacity to meet the source capacity requirements as defined in the Waterworks Standards, CCR Title 22, Section 64554, or its successor. If, at any time, the system does not have this capacity, the utility shall request a service connection moratorium until such time as it can demonstrate the source capacity has been increased to meet system requirements.
- (b) If a system provides potable water for fire protection service, new portions of the system shall have supply and storage facilities that are designed to meet MDD plus the required fire flow at the time of design. *See*, Section VI of this General Order for fire flow guidelines.
- (c) The system's MDD and PHD shall be determined in accordance with Waterworks Standards, CCR Title 22, Section 64554, or its successor.

#### (4) Sewer System Capacity

Once use of a utility sewer system's facilities has reached 80 % of design average daily flow as specified in the permit as issued by the Regional Board, the utility shall request a service connection moratorium until such time as it can demonstrate the system capacity has been increased to meet system requirements.

### **3. Continuity of Service**

#### **A. Emergency Interruptions**

- (1) Each utility shall make all reasonable efforts to prevent interruptions to service and when such interruptions occur shall reestablish service with the shortest possible delay consistent with the safety of its customers, its employees, and the general public.
- (2) If an emergency interruption of service affects the service to any public fire protection device, within 120 minutes of discovery of the interruption by the utility, the utility shall notify the Fire Chief or other public official responsible for fire protection of such interruption and of subsequent restoration of normal service.

#### **B. Scheduled Interruptions**

- (1) Whenever any utility finds it necessary to schedule an interruption to its service, it shall notify all customers to be affected by the interruption, stating the approximate time and anticipated duration of the interruption. Scheduled interruptions shall be made at such hours as will provide the least inconvenience to the customers consistent with reasonable operations.
- (2) Where public fire protection is provided by the facilities affected by the interruptions, the utility shall report to the Fire Chief or other officials responsible for fire protection when the interruption is scheduled, the approximate time, and anticipated duration. In addition, the Fire Chief or other official responsible for fire protection shall be notified within 60 minutes upon restoration of service.

#### **C. Minimum Standards for Repairs**

All repairs associated with a utility's water and wastewater system shall include, as a minimum:

- (1) a determination whether temporary service can be provided;
- (2) the proper use of road hazard signs, traffic cones, and barriers;



- (3) a call to the regional underground service alert center to identify buried utilities in the area;
- (4) hydrostatic testing per applicable AWWA pipe standard, and bacteriological testing according to AWWA C651;
- (5) disinfection of mains, and the Department's or County Health's permission to return the line to service;
- (6) backfill and pipe bedding shall be per applicable AWWA pipe installation standard;
- (7) ground surface shall be repaired to at least its original condition.

#### **D. Records of Interruptions**

Each utility shall keep a complete record of all interruptions, both emergency and scheduled, when more than 10 service connections are interrupted. These records of interruptions shall include the information listed in Appendix C to this General Order and shall be kept with the utility's records in accordance with the retention schedule listed in Appendix C.

#### **E. Reports to Commission**

All emergency interruptions involving an entire system, an entire separately operated system of a multi-system utility or a major portion of an entire or separately operated system shall be reported to the Commission by the utility as soon as possible after occurrence, by telephone or e-mail stating the cause, date, time, estimated duration, location, approximate number of customers affected and remedial steps being taken to restore service.

### **4. Water Supply Measurement**

#### **A. Measuring Devices**

Measuring devices known as source flow meters are required for each water system source, except at any inactive source. In accordance with Waterworks Standards, CCR Title 22, Section 64561, the utility shall, for each water system:

- (1) Install a flow meter at a location between each water source and the entry point to the distribution system;
- (2) Meter the quantity of water flow from each source to determine total production; and

- (3) Each month, determine and record the total monthly production from each source.

## **B. Records**

The yearly water supply totals by type of source shall be recorded in the appropriate service territory or rate-making district, and transmitted annually to the Commission as provided in the utility's annual reports to the Commission.

## **III. Standards of Design and Construction**

### **1. General**

- A. The design and construction of the utility's water or wastewater system(s) shall conform to acceptable engineering standards and practices. Each system shall be designed and operated so as to provide reasonably adequate and safe service to its customers and shall conform to the requirements of the Department and this General Order.
  - (1) A professional Civil, Mechanical, or Electrical engineer registered in the State of California shall approve all design and construction documents of a utility's water or wastewater system(s) as required by the California Business and Professions Code Sections 6700 – 6799, or its successor.
  - (2) The design and construction of distribution reservoirs must conform to the requirements of the DPH's Waterworks Standards, CCR Title 22, Section 64585 with reference to sanitation and potability of water.
  - (3) All new mains, pumps, tanks, wells and other facilities for handling potable water and repaired mains and other facilities shall be thoroughly disinfected before being connected to the system. The method of disinfection shall be conducted in accordance with Waterworks Standards, CCR Title 22, Sections 64580, 64582, and 64583, or their successors.
- B. For systems applying for federal funds, under the Drinking Water State Revolving Fund or its successors, applicants must describe the design basis of all new facilities to be constructed using the criteria contained in the technical, managerial, and financial requirements of Waterworks Standards, CCR Title 22, Chapter 12, Sections 63026, 63027, and 63028, or their successors.

## **2. Materials and Specifications**

### **A. Suitability**

(1) Materials used to construct component parts of a water system including, but not limited to, conduits, pipes, couplings, caulking materials, protective linings and coatings, services, valves, hydrants, pumps, tanks, backflow devices, and reservoirs, shall be capable of withstanding the internal and external forces to which they may be subjected in service per applicable AWWA Standards.

(a) No person shall use any pipe, plumbing fitting or fixture, solder, or flux that is not "lead free" in the installation or repair of any water system, except when necessary for the repair of leaded joints of cast iron pipes.

For the purposes of this section, "lead free" means in compliance with California Health and Safety Code Section 116875, as amended by Stats. 2006 Ch. 853 or a subsequent enactment.

(b) Materials and equipment shall be selected to mitigate corrosion, electrolysis and deterioration.

(2) Materials used to construct component parts of wastewater system(s) including, but not limited to, conduits, pipes, couplings, caulking materials, protective linings and coatings, valves, pumps, tanks, backflow devices, and reservoirs, shall be capable of withstanding the internal and external forces to which they may be subjected in service per applicable standards.

### **B. Specification**

Materials and equipment shall be specified by a properly qualified person.

## **C. Newly Developed Materials and Equipment**

The Commission does not intend to prevent the use of newly developed materials and equipment that otherwise meet the requirements described above.

### **3. Distribution System**

#### **A. Mains**

- (1) Water mains shall be installed below the frost line or be otherwise protected to prevent freezing and shall have no less than 30-inches of cover over the top of the pipe in public streets or alleys except when it is necessary to avoid underground obstructions or rocky or hardpan conditions where such depth is not feasible.
- (2) All pipe and service lines that are not electrically continuous and installed using the open cut method shall be installed with continuous tracer tape or wire.

#### **B. Layout of Water Mains**

Water mains shall be laid out only in segmented grids and looped, and should be located within streets, where practical. Dead-end water mains shall be installed only if:

- (1) Looping or gridding is impractical due to topography, geology, pressure zone boundaries, unavailability of easements or locations of users; or
- (2) The main is to be extended in the near future and the planned extension will eliminate the dead-end conditions.

#### **C. Minimum Pipe Sizes**

- (1) The distribution system shall be of adequate size, and designed in conjunction with related facilities to maintain the minimum flow and pressure requirements of this General Order.
- (2) In no event shall the minimum pipe size for new mains be less than six inches in diameter when used in conjunction with a fire protection system. Otherwise, the minimum pipe size for new mains shall be no less than four inches in diameter.

#### **D. Water Main Separations**

The minimum separation distances shall be as set forth in the DPH's Waterworks Standards, CCR Title 22, Section 64572, or its successor.

#### **E. Water Main Valves**

- (1) Sufficient valves shall be provided on water mains in accordance with the DPH's Waterworks Standards, CCR Title 22, Sections 64577 and 64578, or their successors.
- (2) A flushing valve or blowoff shall be provided at the end of each newly installed dead-end water main (per Waterworks Standards, CCR Title 22, Section 64575.)

#### **4. Materials Standards for Water Mains**

All new water main materials used in the distribution system shall comply with the Department's Waterworks Standards, CCR Title 22, Section 64570, or its successor. The utility shall consider the cost effectiveness, for the intended application, of the material it selects.

#### **5. Service Connection Pipe and Fittings**

##### **A. General**

- (1) Service connection pipe and fittings shall be designed for cold water working pressures of not less than 150 psi.
- (2) Copper tubing shall be commercial designation of type K or L. Plastic tubing and fittings shall be products tested and certified as suitable for use in potable water piping systems by the National Sanitary Foundation, the Canadian Standards Association Testing Laboratory, or another testing agency acceptable to the Department.

##### **B. Conditions for Adding Service Connections**

- (1) New service connections shall not be added to a water distribution system if the additional connections will cause system pressures or water supply to be reduced below the standards set forth in this General Order.

- (2) New service connections shall not be added to a wastewater distribution system if the additional connections will cause the system to exceed the capacity requirements set forth in this General Order.

### **C. Size of Water Service Line**

The size, design, material and installation of the water service line shall conform to the reasonable requirements of the utility, provided, however, that the minimum size of the pipe shall not be less than ¾-inch nominal size. The utility may require the customer to provide such data as may be necessary for the utility to properly size a service larger than ¾-inch nominal size consistent with the requirements of fire flow.

### **D. Depth of Water Service Line**

Except in unusual conditions all service pipes shall be laid at a depth sufficient to prevent freezing, except where services are not intended for use during freezing weather and are drained prior to such weather, and at a depth of not less than 18 inches except at its termination in connecting with the meter or customer's piping.

## **6. Distribution Reservoirs**

Distribution reservoirs (as defined in Waterworks Standards, CCR Title 22, Section 64551.10) shall meet the criteria specified in the DPH's Waterworks Standards, CCR Title 22, Section 64585.

## **7. Recycled Water and Reservoirs**

No utility may use a reservoir that is directly augmented with recycled water as a source of supply, unless approved by the Department.

## **8. Reliability for Water Facilities**

- A. Surface Water Treatment Facilities shall meet the reliability standards set forth in the DPH's Waterworks Standards, CCR Title 22, Section 64659, or its successor.
- B. All other critical equipment not addressed above shall have adequate redundancy and reliability, including fixed or portable backup power, incorporated as determined by the utility and approved by the Commission to meet the requirements of this General Order.

## **9. Sewer Systems**

### **A. Mains and Submains**

- (1) Sewer mains shall be sized for the ultimate development of the area, and shall be designed for an average daily per capita flow of sewage of not less than 100 gallons per day.
- (2) The minimum size for mains and submains shall be eight inches in diameter.
- (3) Submains shall be designed to carry, when running full, not less than 400 gallons daily per capita contributions of sewage.
- (4) New sewer mains shall be installed at least 10 feet horizontally from, and at least one foot vertically below, any parallel pipeline conveying potable water.

### **B. Utility Service Laterals**

- (1) Utility service laterals shall be designed to carry, when running full, not less than 400 gallons daily per capita contributions of sewage.
- (2) The minimum size for a service lateral shall be 4 inches.
- (3) Utility service laterals shall maintain a 2% minimum and 4% maximum slope.

## **IV. Measurement of Service**

### **1. Method of Measuring Service**

#### **A. Metering**

Consistent with the requirements of Public Utilities Code Section 781, which generally requires the Commission to hold a hearing and make certain findings before customers who were unmetered on January 1, 1979 can be required to have a meter, all water provided by a utility shall be metered, except that the utility may, after authorization has been obtained from the Commission, provide flat rate or estimated service.

#### **B. Registration of Meter**

All meters used for metered sales excluding sales from irrigation systems or other irrigation sales must have registration devices indicating the volume of water in either cubic feet or United States gallons or multiples

thereof. Where a constant or multiplier is necessary to convert the meter reading to cubic feet or gallons, the constant must be indicated on the meter or on the meter-reading sheet.

### **C. Irrigation Meters**

Irrigation service may be provided with meters that measure in acre-feet or miner's inch days. This service may also be rendered on a volume basis by the use of a calibrated orifice such as the miner's inch box, by the use of weirs or otherwise measured as provided in applicable tariff schedules.

### **D. Report on Meter Readings to the Commission**

All utilities that have metered service connections shall read each customer's meter according to the utility's tariff schedules. All utilities shall make a summary of quantities used, by classification of service, in the appropriate service territory or rate-making district, and include the summary in the annual report submitted to the Commission.

## **2. Meter Test Facilities and Equipment**

### **A. Test Facilities**

Each utility furnishing metered water or wastewater service shall:

- (1) Have the necessary standard facilities, instruments and other equipment for testing its meters in compliance with these rules, or
- (2) Arrange to have its meters tested by another entity equipped to test meters in compliance with these rules.

### **B. Shop Equipment**

The meter test shop shall be provided with the necessary equipment to test up through 2-inch meters including a quick acting valve for controlling the starting and stopping of the test and a device for regulating the flow of water through the meter under test. The accuracy of the test equipment and test procedures shall be sufficient to enable shop test of the meter type used by the utility with an error not to exceed the applicable AWWA standard (M6 or its successor).

### **C. Test Measurement Standards**

Measuring devices for test of meters shall consist of calibrated tanks for volumetric measurement, tanks mounted upon scales for gravimetric measurement or standard meters.



(1) Basic Standards

- (a) When a volumetric tank is used, it shall be accompanied by a certificate of accuracy acceptable to the Commission from a County Department of Weights and Measures or other acceptable entity.
- (b) When a gravimetric standard is used, the scales shall be tested and calibrated at least once every year by such approved laboratory, or County Office of Weights and Measures and a record maintained of the results of the test.
- (c) Standard meters may be used for field tests of meter accuracy provided they are tested and calibrated to permit the test of meters within the limits of accuracy required by these rules, either by the utility with its volumetric or gravimetric standard equipment or by an approved laboratory at least once every 180 days while the standard meter is in use and a record of such tests shall be kept by the utility for a period of not less than five years.

(2) Basic Standards for Meter Testing

- (a) The minimum requirement for testing meters from 5/8 x 3/4-inch through 2-inch shall include a 10 and a 1 cubic-foot tank for meters registering in cubic feet or a 100- and a 10-gallon tank for meters registering in gallons.

**3. Accuracy Requirements of Water Meters**

**A. General**

All meters used for measuring quantities of water delivered to customers shall be in good mechanical condition, shall be adequate in size and designed for the type of service measured and shall be accurate to within generally accepted standards. The standards of accuracy for meters are set forth in paragraphs B and C, following.

**B. Test Flows**

For determination of minimum test flow and normal test flow limits, the Commission adopts as a guide the appropriate standard specifications of the applicable AWWA standard (M6 or its successor.)

When bench testing, the small meters (5/8 x 3/4-inch through 2-inch) a multi-jet meter and a positive displacement meter should not be tested in-line.

### **C. Determination of Accuracy**

- (1) Meters shall be tested at three or more test flows per the applicable AWWA standard (M6 or its successor):
- (2) A meter shall not be placed in service unless the meter test meets or exceeds the applicable AWWA standard (M6 or its successor)

### **D. Sealing of Meter**

Upon completion of adjustment and test of any water meter under the provisions of these rules, the utility shall affix a suitable seal in such a manner that adjustment or registration of the meter cannot be altered without breaking the seal, where applicable.

### **E. Record of Test**

- (1) A complete record of all meter tests, including data sufficient to allow verification of test calculations, shall be recorded by the meter tester.
- (2) Such record shall include: the identifying number of the meter; the type and size of the meter; the constant of the meter; the date and kind of test made; the reading of the meter before making any test and after the test; the test volume; and the error as found at each test.
- (3) The complete record of test of each meter shall be retained for at least five years.

## **4. Initial Tests of Meters**

Every water meter shall be tested as required by these rules prior to its installation either by the manufacturer, the utility or a reliable organization equipped for meter testing.

## **5. Repaired or Tested Meters**

All water meters removed from service for repair or test in accordance with these rules shall be restored to the prescribed limits of accuracy as required by these rules before being placed back in service.

## 6. Periodic Tests of Water Meters

### A. Maximum Time Periods for Meters in Service

- (1) No meter shall be allowed to remain in service without retesting for any more than the number of years indicated in the following tabulation:

Size of Meter	Maximum Period
Smaller than 1 – inch	20 years
1 – inch	15 years
Larger than 1 – inch	10 years

- (2) Requests to extend the maximum period may be made by advice letter based on relevant economic factors and meter accuracy.

### B. Frequency of Periodic Tests

Nothing in these rules shall be construed to mean that such periodic tests may not be made more frequently than the maximum period specified.

### C. Report of Periodic Tests of Meters

Each utility shall make a summary of all periodic tests of meters made each calendar year as required by these rules and shall submit such summary concurrently with, or as part of, the utility's Annual Report to the Commission for that year.

## 7. Meter Records

### A. Contents and Retention of Meter Records

- (1) Each utility shall keep records for each meter owned and used by it for any purpose including the identification number, name of manufacturer, serial number, type, size and the dates of installation and removal. These records shall also give condensed information, including dates, concerning all tests.
- (2) When changing out a meter, the utility shall retain the written record of the date of the change, meter readings on the day of the change-out and the serial numbers of the old and the new meter. This information will be available to the customer upon request.

(3) Meter records shall be maintained for the useful life of the meter.

## **V. Rates and Billing**

### **1. Filing of Tariffs**

The utility shall file with the Commission its tariff schedules containing all tariff sheets in accordance with the procedure prescribed by the Commission.

### **2. Information on Bills**

The utility shall render a bill to each customer for each billing period. All bills must show the time period, price per unit delivered, date bill is due, date when any late fee can be applied and the Commission's policy on late fees. Bills for metered service must include all the information shown in Appendix D.

### **3. Sewer Service**

- A. For billing purposes, except as determined by the utility, the customer is always the property owner.
- B. Each sewer bill must show the time period, date bill is due, date when any late fee can be applied and the Commission's policy on late fees.

## **VI. Fire Protection Standards**

### **1. Design Requirements**

The flow standards for public fire protection purposes set forth below are those the Commission considers appropriate on an average statewide basis.

#### **A. Standards of Local Fire Protection Agencies Govern**

The Commission recognizes that there are widely varying conditions bearing on fire protection throughout the urban, suburban, and rural areas of California. Therefore, the standards prescribed by the local fire protection agency or other prevailing local governmental agency shall govern.

#### **B. Application of the Utility's Main Extension Rule**

Such local flow standards shall be followed whether greater or lesser than those set forth in this chapter. Mains designed for and capable of

providing flows in excess of the fire flow requirements referenced in this General Order, shall be considered mains providing excess flow for the purpose of the application of the utility's main extension rule.

## **2. Initial Construction, Extension, or Modification**

In the initial construction, extension, or modification of a water system required to serve a new applicant or a change in use, the facilities constructed, extended, or modified shall be designed to be capable of providing, for a minimum of two hours, at a minimum of 20 psi, the flows specified in the 2007 California Fire Code, Appendix B, or its successor.

## **3. Replacement of Mains**

### **A. Changes to Fire Code**

The utility shall not be responsible for modifying or replacing at its expense any existing facilities, which are otherwise adequate, in order to provide increased fire flow or duration due to changes in the standards after the initial construction.

### **B. Replacement for Other Reasons**

When a main requires replacement for other reasons, the new main, if used or useful for fire protection purposes, shall be sized to accommodate the governing fire flow standard.

## **4. Fire Hydrants**

Fire hydrants shall be attached to the distribution system at the locations and spacing designated by the agency responsible for their use for fire fighting purposes.

## **5. Fire Hydrant Service Agreement**

- A. Charges for furnishing water to entities providing fire protection services to others shall be pursuant to written agreement in accordance with Public Utilities Code Section 2713, or its successor.
- B. Each water utility shall make all reasonable efforts to form or renew agreements with entities providing fire protection services that are beneficial to the utility and its customers.

- C. When such written agreement is entered into between the utility and the fire protection agency which requires the utility to be responsible for all or any portion of the capital expenditures or maintenance costs associated with providing fire hydrant service, such expenditures and costs may be included by the utility in its general plant accounts and operating expenses for ratemaking purposes.
- D. The utility may bill the fire protection agency for fire hydrant service charges only under written agreement with the agency that it will pay such charges. Fire hydrant charges made under written agreement will also be included in revenues for ratemaking purposes.
- E. In the absence of any written agreement between the utility and the fire protection agency, the utility will be responsible for maintaining fire hydrant service to the extent of its means. All cost associated with providing this service may be included for ratemaking purposes.
- F. Fire hydrant service agreements between the fire protection agency and the utility shall be submitted by advice letter in accordance with General Order 96-B.

## **VII. Operation and Maintenance**

### **1. Operation and Maintenance (O&M) Plans**

#### **A. Water Quality Procedures for Water Utilities**

Each water utility shall have a set of O&M plans that includes sampling protocols used in water quality testing and describes the normal operating procedures of the Utility and its facilities.

#### **B. Contents of O&M Plan for Water Utilities**

The O&M Plan shall include, as applicable:

- (1) The operations and maintenance schedule for each unit process for each treatment plant;
- (2) The operations and maintenance schedule for each groundwater source and unit process;
- (3) The operations and maintenance schedule for each purchased water connection;

- (4) The schedule and procedure for flushing dead end mains and the distribution system, and the procedures for disposal of the flushed water, including dechlorination;
- (5) The schedule for routine inspection of reservoirs, and the procedures for cleaning reservoirs;
- (6) The schedule and procedures for inspecting, repairing, and replacing water mains;
- (7) The plan for responding to emergencies as described in Section VII.3 of this General Order;
- (8) The training protocols for use by employees for interacting with customers;
- (9) The schedule and procedures for either testing backflow prevention assemblies or notifying customers of their obligation to test backflow prevention assemblies;
- (10) The schedule and procedures for routine maintenance of water main valves, combination air vacuum release valves, fire hydrants, and valves;
- (11) The schedule and program for maintenance and calibration of source flow meters;
- (12) The qualifications and training of operating personnel including water treatment and cross connection certification; and
- (13) The program for bio-film control in water mains.

**C. Submission of Summary of O&M Plan for Water Utilities to the Commission**

- (1) Each water utility shall have on file a summary of its current O&M plan(s), electronically or in hard copy form, with the Division of Water and Audits, or its successor. The submission of these O&M plans shall be subject to the protections against unauthorized disclosure as provided by Public Utilities Code Section 583 and the corresponding exclusion from public inspection provided by General Order 66-C, Section 2.2.
- (2) When these O&M plans change substantially and at least every five years, the water utility shall file updated summaries.

**D. Submission of Department O&M Plans for Water Utilities to the Commission**

Any water utility that has prepared an O&M Plan for the Department shall submit a copy of such O&M Plan to the Commission. The submission of an O&M Plan shall be subject to the protections against unauthorized disclosure as provided by Public Utilities Code Section 583 and the corresponding exclusion from public inspection provided by General Order 66-C, Section 2.2.

**E. Submission of O&M Plans for Wastewater System Utilities to the Commission**

Each wastewater utility shall submit to the Commission a copy of the O&M Plan required by the State Board General Order 0003-2006 (May 1, 2006, or its successor.) The submission of the O&M Plan shall be subject to the protections against unauthorized disclosure as provided by Public Utilities Code Section 583 and the corresponding exclusion from public inspection provided by General Order 66-C, Section 2.2.

**F. Availability of O&M Plan for Commission Review**

*The latest O&M plans shall be available for Commission review. In its Annual Reports, each water utility shall identify the location(s) of or the method for accessing (e.g., the website) its O&M plan.*

**2. Asset Management Requirements**

- A. Due to the water and wastewater industries' long lived infrastructure and high fixed costs, the effective management of the planning, construction, maintenance and operation of assets is a critical component in delivering good customer service and ensuring the ongoing viability of services.
- B. Effective asset management helps achieve or maintain service and other business performance requirements, manage risks, and improve efficiency. To support the asset management system requirements all utilities shall conduct regular reviews of their asset management system, employing either internal or external resources, as appropriate. Utilities shall report to the Commission on any major plans to retrofit existing facilities, use of cathodic protection programs, and other efforts to minimize deterioration and extend service life. The Commission may determine whether additional third-party review of a utility's asset management plan, as a recoverable cost, is warranted.



- C. Wastewater systems shall maintain their sanitary sewer management plan according to the State Board General Order GO-0003, 2006, or its successor.

### **3. Emergency/Disaster Response Plan**

- A. Each water utility shall have an Emergency Response Plan pursuant to the Department's requirements, as set by the US EPA, Government Code Section 8607.2, or its successor.
- B. Each wastewater system shall have an Emergency Response Plan pursuant to the State Board GO-0003, 2006, or its successor.

### **4. Records and Reports**

See Appendix C for retention schedules.

#### **A. System Plans, Maps, Drawings and Other Records**

All water and wastewater system utilities shall have on file at their principal or local office plans, maps, drawings or other records of all system facilities. The plans, maps, drawings or other records shall be clear and legible. At a minimum these records will include:

- (1) Location of all pumping stations, diversion works, water or sewer treatment plants, sources of supply, storage facilities, size, type of material and location of all mains (including recycled water mains) and ditches, including valves and sluice gates, gauges, interconnections with other systems and fire hydrants;
- (2) Location, size and material of each service line;
- (3) A schematic drawing or map of all pumping stations, water or wastewater treatment plants to show the size and location of all major equipment, pipelines, connections, valves and other equipment; and
- (4) The date of construction of all plant.

#### **B. Updates and Review**

- (1) The water and wastewater system(s) plans, maps, drawings and other records shall be updated as significant changes occur, and maintained until replaced or superseded by updated plans or drawings.
- (2) The most current plans, drawings, maps, and other records shall be available for Commission review.

### **C. Underground Damage Prevention**

The utility shall comply with all California regulations on underground damage prevention.

## **5. Water Treatment and Water Distribution Operators**

### **A. General**

The utility shall ensure that all water treatment and water distribution facilities are operated by personnel appropriately certified by the Department. Water treatment and water distribution certification are governed by Articles 1 through 5 of Title 22, Division 4, Chapter 13, and Article 2 of Title 22, Division 4, Chapter 15, or its successor.

### **B. Treatment Facility Operator Certification**

All treatment facility operators shall be certified by the Department for the functions they perform.

### **C. Distribution System Operator Certification**

All distribution system operators shall be certified by the Department for the functions they perform.

### **D. Cross-Connection Operator Certification**

All cross-connection operators shall be certified by the California/Nevada AWWA, or equivalent organization.

### **E. Wastewater Treatment and Wastewater Distribution Operators**

All wastewater treatment and wastewater distribution operators shall be certified by the State Water Resources Control Board, Office of Operator Certification.

## **6. Pressures**

### **A. Variations in Pressure**

Each potable water distribution system shall be operated in a manner to assure that the minimum operating pressure at each service connection throughout the distribution system is not less than 40 psi nor more than 125 psi, except that during periods near PHD the pressure may not be less than 30 psi and that during periods of hourly minimum demand the

pressure may be not more than 150 psi. Subject to the minimum pressure requirements of 40 psi, variations in pressures under normal operation shall not exceed 50% of the average operating pressure.

The average operating pressure shall be determined by computing the arithmetical average of at least 24 consecutive hourly pressure readings.

## **B. New Systems**

Each new distribution system shall be designed to provide a minimum operating pressure at each service connection of not less than 40 psi during PHD. If a utility cannot meet this requirement as a result of cost and/or system limitation, the utility must request an exemption in accordance with Section I.8.A of this General Order.

## **C. Changes to Existing Distribution Systems**

Changes shall be designed to maintain an operating pressure at each service connection of not less than 40 psi during PHD. If a utility cannot meet this requirement as a result of cost and/or system limitation, the utility must request an exemption in accordance with Section I.8.A of this General Order.

## **D. Pressure Requirement Exceptions**

A water utility may furnish service to a customer at less than the pressure requirement specified in this General Order, if the customer is fully advised of the conditions under which service will be provided, and a customer agreement is secured in writing. The limited nature of the service shall also be recorded as a deed restriction on the property. The properties receiving service at other than specified operating pressures specified in this General Order shall be identified on the utility's service area map.

## **E. Pressure Recorders**

Each utility shall maintain one or more pressure recorders for each separately operated system for the purpose of making pressure surveys as required by these rules. These recorders shall be able to record the pressure experienced on such a system and shall be able to record a continuous 24-hour test. Each utility serving 1000 or more customers in a separately operated system or 1000 or more customers in any separately operated system of a multi-system utility shall maintain one

or more of these pressure recorders in service at some representative points, as determined by the utility.

#### **F. Pressure Surveys**

- (1) At regular intervals, but not less than once each year, each utility shall make a survey of pressures in its distribution system of sufficient magnitude to indicate the pressures maintained at representative points on its system. Such surveys should be made at or near the period of PHD and MDD. The pressure records for these surveys shall show the date and time of beginning and end of the test and the location at which the test was made.
- (2) Records of these pressure surveys shall be maintained by the utility for a period of at least three years or after the next general rate case filing, whichever is longer, and shall be made available to representatives, agents or employees of the Commission upon request.

### **VIII. Customer Service and Reporting Standards for Water and Wastewater Utilities**

#### **1. General**

Consumers expect and should receive service that is consistently adequate, reliable, and in compliance with applicable water quality standards. Standardized reporting requirements and regular reporting are necessary for regulators to be able to monitor service quality and changes in performance. Reporting requirements should be carefully designed to yield accurate data that is uniform and consistent.

#### **2. Reporting**

When a utility is required to report the following information it shall do so in accordance with Appendix E of this General Order or the utility's tariffs.

- (A) Performance results including meter reading and work completion standards shall be aggregated quarterly, and shall be reported annually to the Commission in the utility's annual report.
- (B) Reports on company-wide performance shall be made in conjunction with each utility's annual report to the Commission's Division of Water and Audits (or its successor), with copies provided to the DRA (or its successor).

- (C) Reports shall include both annual and quarterly averages. Annual averages shall be derived from raw data, not by averaging quarterly averages.
- (D) Where quarterly performance is substantially out of compliance with an applicable standard (defined in the context of each performance measure), the utility shall within 30 days of the end of the quarter in which this provision is triggered, submit a plan to Division of Water and Audits, or its successor, indicating how it will remedy the deficiency.
- (E) Performance shall be evaluated and reported as a percentage to one decimal place for all performance areas unless otherwise specified. Actual performance shall be rounded up when the relevant decimal place is 5 or more. The utility shall retain all of its reports that support the results for each of the performance areas for a period of not less than 36 months after the results are reported. The utility shall provide these reports upon request to the Commission.
- (F) The utility shall explain in its annual report any change to the utility's measurement protocol or to the internal reporting methods that are used to obtain the data measured.
- (G) The utility's annual report shall identify any missing data or events that could reasonably affect the quality of the data reported.
- (H) The utility may seek a variance from any applicable performance standard in accordance with Section I.8.A of this General Order. A variance may be granted for demonstrated good cause, such as where the circumstances causing the failure were beyond the utility's control, and the utility can demonstrate that its level of preparedness and response was reasonable in light of the cause of the failure.

### **3. Telephone Performance Standards**

Each utility shall provide emergency telephone access, including after-hours access, for its customers. If a telephone complaint pertains to an urgent service issue presenting health or safety concerns, the utility shall respond within 24 hours. Class A and B water utilities shall comply with telephone performance standards set forth in Appendix E of this General Order.

### **4. Billing Performance Standards**

- (A) Class A and B water utilities shall establish billing performance standards as set forth in Appendix E of this General Order.
- (B) Performance results shall be reported in accordance with Section VIII.B.

## **5. Meter Reading Performance Standards**

- (A) Class A and B water utilities shall establish meter reading performance standards in accordance with Appendix E of this General Order.
- (B) Each utility shall report their performance results in accordance with Section VIII.B.

## **6. Work Completion Performance Standards**

- (A) When scheduling appointments, the utility will provide the customer with a four-hour period during which the utility representative will be at the customer's premises. The utility must attempt to notify the customer as soon as it is aware that the meeting time must be changed. Class A and B water utilities shall determine the performance of the scheduled appointment in accordance with Appendix E of this General Order.
- (B) Class A and B water utilities shall determine the percentage of customer-requested work not completed on or before the scheduled date in accordance with Appendix E of this General Order.
- (C) The utility must correct all problems that result from the flooding of sewers for which it is responsible within 48 hours of being informed of the flooding event. Extreme precipitation events, such as 100 or 500 year floods, shall be addressed on a best efforts basis by the utility.

## **7. Response to Customer and Regulatory Complaint Performance Standards**

- (A) Upon complaint to the utility by a customer communicated to the utility's office, by letter, by telephone, or by email or to the utility's internet web page if it supplies a site for customer service, the utility shall make every reasonable effort to contact the customer within three business days to acknowledge receipt of the complaint.
- (B) The utility shall provide, within 10 business days of receipt, a substantive response to customer complaints expressed directly to the utility by any method of contact.
- (C) The utility shall provide a substantive response to informal customer complaints to the Commission within 20 business days after the complaint has been forwarded to the utility by the Commission.
- (D) If the utility needs additional time to respond fully to a complaint received directly from a customer or indirectly by way of the Commission, the utility shall within the initial response period request a specific additional

time for response and shall provide a final response within the requested additional time.

- (E) The utility shall keep a record of each complaint, categorized by the nature of the complaint, that shows the name and address of the complainant, the date and nature of the complaint, and the nature and date of adjustment or disposition, for a period lasting from the time the complaint is filed with the utility until issuance of the principal decision in its next general rate case.
- (F) After issuance of the general rate case final decision subsequent to the filing of the complaint, the utility shall retain, at its option, either the original complaints or a summary of such complaints. Inquiries with reference to rates or charges, which require no further action by the utility, need not be recorded. Complaints that are determined to be out of the direct control of the utility (including but not limited to complaints relating to natural disasters) may be recorded in a summary list only.
- (G) Class A and B water utilities shall establish a customer and regulatory complaint performance measure as set forth in Appendix E.

**APPENDIX A  
NON POTABLE WATER SYSTEMS**

**Sections of Rules Governing Water Service Including Minimum Standards for Design and Construction which shall be applicable to utility water systems supplying water not intended or claimed to be potable from ditches, canals or other conduits.**

Section I – General

All paragraphs of this section, except Paragraph 4, (1) and (5)

Section II – Standards of Service

Paragraphs 2 B. (1) and (8), 3 and 4 of this section, except that paragraph 3C. shall not apply to scheduled interruptions as provided in applicable tariffs.

Section III – Standards of Design and Construction

None.

Section IV – Measurement of Service

All paragraphs of the section, except when sales are measured by other than displacement meters as provided in applicable tariff schedules only paragraphs 1C, 3A and 3E, 5, 6A, and 7 shall apply.

Section V – Rates and Billing

All paragraphs of the section.



**APPENDIX A**  
**NON-POTABLE WATER SYSTEMS**

Section VI – Fire Protection Standards

None

Section VII – Operations and Maintenance, Records and Reports

Paragraphs 1, 2, 3 A (1) and 3 C.

Section VIII - Customer Service and Reporting Standards

Paragraphs 1, 2, 3, 4, 5, 6 A through C and 7 A through G.

**(END OF APPENDIX A)**

**APPENDIX B  
SEWER SYSTEMS**

**Sections of Rules Governing Water Service Including Minimum Standards for Design and Construction which shall NOT be applicable to sewer system utilities.**

Section I – General

Paragraph 3, (1), (2), (6), (7) and (8)

Section II – Standards of Service

Paragraphs 2 A. (1) through (7)

Paragraphs 2 B. (1) through (5)

Section III – Standards of Design and Construction

Paragraphs 1 A. (3) and B

Paragraphs 2 A. (1)

Paragraphs 3 through 7

Section IV – Measurement of Service

Paragraphs 1 A and C

Paragraphs 2 B and C

Paragraphs 3, 5, and 6

Section V – Rates and Billing

Paragraph 2

Section VI – Fire Protection Standards

(ALL)

**APPENDIX B  
SEWER SYSTEMS**

Section VII – Operations and Maintenance, Records and Reports

Paragraphs 1 A and B

Paragraphs 2 A and B

Paragraphs 3 A

Paragraphs 4 A (2)

Paragraphs 5 A through D

Paragraphs 7 and 8 (all)

Section VIII - Customer Service and Reporting Standards

Paragraph 7 G

**(END OF APPENDIX B)**

**APPENDIX C**  
**RECORDS RETENTION SCHEDULES**  
**(Resolution No. A-4691, July 12, 1977)**

**PUBLIC UTILITIES COMMISSION**  
**REGULATIONS TO GOVERN THE PRESERVATION OF RECORDS**  
**OF WATER UTILITIES, CLASSES A, B & C**

**GENERAL INSTRUCTIONS**

**SCOPE OF THIS PART**

The regulations in this part apply to all records prepared by or on behalf of water utilities, Classes A, B and C.

The regulations in this part shall not be construed as excusing compliance with any other lawful requirement for the preservation of records for periods longer than those prescribed herein.

**DESIGNATION OF SUPERVISORY OFFICIAL**

Each water utility subject to the regulations herein shall designate one or more persons and positions with official responsibility to supervise the utility's program for preservation and the authorized destruction of its records.

**PROTECTION AND STORAGE OF RECORDS**

The water utility shall provide reasonable protection for records subject to the regulations herein. Records shall be arranged in such a manner as to be easily identifiable and accessible to representatives of this Commission.

**MICROFILM AND TAPE CERTIFICATION**

All microfilm and tape records shall contain labels including the title, date prepared, name of official responsible for validating the data, date of completion,

## **APPENDIX C RECORDS RETENTION SCHEDULES**

and certification that the records are true and accurate reproductions of the original records.

All film stock shall be approved operationally-permanent record microcopying type, which meets the current specifications of the National Bureau of Standards.

### **RETENTION PERIODS**

The retention periods specified in these regulations are minimum periods. The utility may retain records for longer periods when appropriate.

### **PREMATURE DESTRUCTION OR LOSS OF RECORDS**

When records are destroyed or lost before the expiration of the prescribed period of retention, a certified statement listing the records destroyed and prescribing the circumstances of accidental or other premature destruction or loss shall be filed with the Commission within sixty (60) days from the date of discovery of such destruction.

### **RECORDS OF SERVICES PERFORMED BY AFFILIATE**

The water utilities to which the regulations herein apply shall assure the availability of records of services performed by associated and affiliated companies for the periods indicated herein, as are necessary, to support the cost of services rendered to it by an associated or affiliated company.

### **RECORDS OF INTERRUPTIONS**

Records of interruption shall be maintained by the utility for a period of 4 years or after the next general rate case filing, whichever period is longer.

**APPENDIX C**  
**RECORDS RETENTION SCHEDULES**

**Water Quality Records Retention**

Results of water quality testing, including tests conducted in connection with disinfection of new or repaired mains and disinfection of reservoirs or wells, records of flushing of mains, and records of reservoir inspections and cleaning, shall be maintained for at least three years.

**APPENDIX C  
RECORDS RETENTION SCHEDULES**

**SCHEDULE OF RECORDS AND PERIODS OF RETENTION**

Description	Retention Period
<b>CORPORATE AND GENERAL</b>	
1. Capital stock records:	6 years after cancellation or other closing of accounts.
2. Proxies and voting lists:	3 years.
3. Annual reports or formal communications or statements to stockholders:	Life of corporation.
4. Debt security records:	6 years after redemption, payment or cancellation.
5. Filings with and authorizations by the Commission:	25 years or until all securities covered are retired, whichever is shorter.
6. Corporate organizational documents:	Life of corporation, with the exception of permits, deeds and title documents which shall be retained for 6 years after termination or disposition of property.
7. Contracts and agreements (except contracts provided for elsewhere):	6 years with the following exceptions:
(a) Contracts or agreements for the acquisition or disposition of investments (excluding temporary cash investments):	25 years after disposition.
(b) Memoranda essential to clarifying or explaining provisions of contracts listed above:	For the same periods as contracts to which they relate.

**APPENDIX C  
RECORDS RETENTION SCHEDULES**

**SCHEDULE OF RECORDS AND PERIODS OF RETENTION**

Description	Retention Period
CORPORATE AND GENERAL, continued	
(c) Card or book records of contract, leases, and agreements made, showing dates of expirations and of renewals, memoranda of receipts and payments under such contacts, etc.:	For the same periods as contracts to which they relate
8. Accountants' and auditors' reports, internal and external:	7 years after date of report or Commission audit, whichever comes last
9. Automatic data processing records:	Retain original source data for the periods prescribed elsewhere in the schedule; retain all other data as long as part of active program
10. General and subsidiary ledgers and journals; journal vouchers, journal entries (including supporting detail), vouchers and voucher registers:	50 years
11. Trial balance sheets of general and subsidiary ledgers:	3 years
12. Cash books, general and subsidiary or auxiliary books:	10 years after close of fiscal year



**APPENDIX C**  
**RECORDS RETENTION SCHEDULES**

**SCHEDULE OF RECORDS AND PERIODS OF RETENTION**

Description	Retention Period
CORPORATE AND GENERAL, continued	
13. Accounts receivable and supporting records:	3 years
14. Records of securities owned, in treasury, or with custodians (excluding temporary investment of cash):	6 years after disposition of investment
15. Payroll records and insurance records:	6 years, except where information transferred to other records
16. Assignments, attachments, and garnishments:	None
17. Records of injuries and damages:	2 years after settlement or other disposition

**APPENDIX C  
RECORDS RETENTION SCHEDULES**

**SCHEDULE OF RECORDS AND PERIODS OF RETENTION**

Description	Retention Period
<b>OPERATIONS AND MAINTENANCE</b>	
18. Production records of sources of supply, pumping, transmission, and distribution:	15 years, except as follows:
(a) Water reports showing purchases and exchanges:	25 years
(b) Water treatment records:	10 years
(c) Daily dispatch logs:	1 year
(d) Customer service records:	5 years
(e) Maintenance work and job orders:	6 years
(f) Equipment repair records:	Life of equipment
19. Personnel records including employees' benefit and pension records, and operating and procedural instructions issued by the company to employees:	3 years after termination of employment, plan or instructions
20. Plant and depreciation records, including plant inventory, drilling, appraisals, engineering records, construction records and contracts relating to above.	50 years

**APPENDIX C**  
**RECORDS RETENTION SCHEDULES**

**SCHEDULE OF RECORDS AND PERIODS OF RETENTION**

Description	Retention Period
<b>MISCELLANEOUS</b>	
21. All purchase and supply records:	6 years
22. All revenue, accounting and collecting records:	10 years, except as follows:
(a) Where refunds required:	6 years after refund
(b) Documents relating to donations and contributions:	50 years
(c) Published rates and service schedule:	50 years
23. Tax records:	7 years after settlement
24. Treasury records (funds, deposits, receipts and disbursements):	Completion of annual audit by independent accountants
25. All annual reports to the Commission and special reports relating to plant and utility property:	Life of corporation
26. All other reports and documents:	Fulfillment of regulatory requirements

27. Life or mortality study data for  
depreciation purposes:

Life of corporation

**(END OF APPENDIX C)**

## APPENDIX D REPORT CARD BILLING

This Appendix explains the minimum amount of information that must be included with the bill to the customer.

Meter Readings: Previous and Present; Service Charge; Commodity Charge; Past due after date; Quantity per billing unit (Hundred Cubic Feet, thousand Gallons etc.); Billing period; Usage Comparison; Amount Due.

ATTACHMENT 1

POINTS OF INTEREST

*Meter Readings, Previous and Present.* The availability of these two readings will allow you to calculate your own bills. The difference between the previous meter reading and the present one equals the amount consumed during the billing period, measured in hundred cubic feet. (One hundred cubic feet equals 748 gallons.)

*Water Charges.* This is the amount of your current bill, including the service charge and the quantity charge, which are calculated in example to the right.

*Past Due After.* This is the date after which the bill will be considered "past due" and delinquent.

*Service Charge.* This is a monthly or bi-monthly (depending on your billing cycle) charge made to each customer connected to our system. It is based on the size of your meter.

*Quantity Rates Per 100 Cubic Feet.* This section shows the rate at which your water usage was billed. Your water is billed at two step rates, a basic "lifeline" rate is charged for the first ("1st") designated quantity. Then a higher rate is charged for usage over the basic ("1st") quantity.

*Billing Period Usage Comparison.* In this area you will see how much water you have used during this billing period, compared with your usage last year during a similar billing period. The "Last Year" section will remain blank during the first year while we accumulate your monthly usage figures.

*Amount Due.* This is the amount you owe. It represents the total amount due for current charges, including the service charge and the quantity charge, for the cubic feet of water used during the billing period. The amount due may also include billing adjustments and an unpaid balance, if shown.  
To figure your water charges, multiply the quantity of water consumption shown by the quantity rates and then add the service charge. See above example:

36	TOTAL CONSUMED
- 6	1st
30	
\$ .327	1st RATE
x 6	
\$ 1.962	
\$ .575	OVER RATE
x 30	
\$ 17.25	
\$ 1.96	1st
17.25	OVER
15.40	SERVICE CHARGE
\$34.61	AMOUNT DUE

Compute Your Own Bill

(END OF APPENDIX D)

**APPENDIX E**  
**CUSTOMER SERVICE AND REPORTING STANDARDS**  
**FOR CLASS A AND B WATER UTILITIES THAT EMPLOY**  
**AUTOMATED CALL DISTRIBUTION SYSTEMS**

**1. Telephone Performance Standards**

To ensure that customer inquiries have timely responses during normal business hours, all water utilities which employ automated call distribution systems (ACD) shall comply with telephone performance standards and reporting criteria as follows:

(A) Call answer performance measures

Call Answering Service Level: Percentage of customers reaching a utility representative during normal business hours within 30 seconds after requesting to speak with a customer service representative (CSR)

Performance shall be calculated as follows:

Number of calls reaching a utility representative within 30 seconds divided by number of attempts to reach a utility representative.

Performance measure: greater than or equal to 80%

For this performance measure, substantially out of compliance is deemed to be less than 60%

Source of data: data obtained from the utility's ACD system. The data will include all calls reaching the ACD during the normal business hours.

(B) Abandoned call rate performance measure

Abandoned call rate during normal business hours: Percentage of calls abandoned before reaching a utility representative (requested by the customer) during normal business.

Performance shall be calculated as follows:

Number of calls abandoned/Number of attempts to reach a utility representative

**APPENDIX E**  
**CUSTOMER SERVICE AND REPORTING STANDARDS**  
**FOR CLASS A AND B UTILITIES**

Abandoned call rate performance measure: less than or equal to 5%.

Source of data: The standard shall be measured by using data obtained from the utility's ACD system during normal business hours

**2. Billing Performance Standards**

(A) Bill rendering performance measure

Percentage of bills rendered (mailed) within seven calendar days of the scheduled billing date. Performance shall be calculated as follows:

Number of bills not rendered within seven calendar days of the scheduled billing date/Total number of bills scheduled to be rendered.

Exclusions: The measurement will exclude accounts that were activated within 10 calendar days prior to the normal billing cycle; accounts that are scheduled to receive a final bill within 10 calendar days after the normal billing cycle; off-system sales; utility use accounts; periods during which rates are changed.

Bill rendering performance measure: greater than or equal to 99%

Source of data: This standard shall be measured by using data obtained from the utility's Customer Information System, or equivalent records. Results shall be reported to one decimal place.

**APPENDIX E**  
**CUSTOMER SERVICE AND REPORTING STANDARDS**  
**FOR CLASS A AND B UTILITIES**

(B) Bill accuracy performance measure

Bills found inaccurate: Percentage of bills found inaccurate after being sent to customers, brought to a utility's attention either as result of customer complaints and/or by the utility's own efforts. Performance shall be calculated as follows:

Number of bills rendered inaccurately for the cycle/Total number of bills rendered for the billing cycle

Exclusions: This standard does not include bills found to be inaccurate strictly as result of estimation, bills where the inaccuracy does not affect the calculation of the bill, or where the fault does not lie with the utility.

Percentage of inaccurate bills performance measure: less than or equal to 3.0%

Source of data: This standard shall be measured by using data obtained from the utility's Customer Information System or equivalent records. Results shall be reported to the second decimal place.

(C) Payment posting error performance measure

Payment posting errors: Percentage of customer payments posted incorrectly due to the utility's error. Performance shall be calculated as follows:

Number of payment posting errors/Total number of payments posted

Payment posting error performance measure: less than or equal to 1.0 %

Source of data: This Standard shall be measured by using data obtained from the utility's Customer Information System or equivalent manual records.

(D) Final Read and Final Bill

The utility is required to read the customer's meter on the day the customer specifies so long as five (5) calendar days notice is given by the customer. The utility will provide a final bill within 14 calendar days of the meter read.



**APPENDIX E**  
**CUSTOMER SERVICE AND REPORTING STANDARDS**  
**FOR CLASS A AND B UTILITIES**

**3. Meter Reading Performance Standard**

- (A) Percentage of actual meter readings per billing cycle: Percentage of meters not read each cycle in relation to the numbers that were scheduled to be read, exclusive of meters covered by AMR. Performance shall be calculated as follows:

Number of scheduled meters not read/Number of meter readings scheduled

Meter reading performance measure: less than or equal to 3.0%

Source of data: Data shall be obtained from the utility's Customer Information System.

**4. Work Completion Performance Standards**

- (A) Scheduled appointments performance measure

Keeping Scheduled Appointments: When scheduling appointments, the utility will provide the customer with a four-hour period during which the utility representative will be at the customer's premises. The utility must attempt to notify the customer as soon as it is aware that the meeting time must be changed. Performance shall be calculated as follows:

Number of scheduled appointments missed/Number of scheduled appointments

Scheduled appointments performance measure: less than or equal to 5.0%

- (B) Customer requested work completion performance measure

Percentage of customer-requested work not completed on or before the scheduled date: The percentage of jobs resulting from customer requests for meter turn-ons, meter read-over, disconnects and reconnects (collectively "customer orders") that are not completed on or before the scheduled date. Performance shall be calculated as follows:

Number of customer orders not completed on or before the scheduled date/Total number of customer orders scheduled and completed in the reporting month.

**APPENDIX E**  
**CUSTOMER SERVICE AND REPORTING STANDARDS**  
**FOR CLASS A AND B UTILITIES**

Exclusions: When an event outside of the utility's control occurs resulting in the work not being completed as promised, utility will renegotiate the scheduled date with the customer.

Customer requested work performance measure: less than or equal to 5%

Source of data: For all customer orders, data shall be obtained from the utility's Customer Information System or equivalent record.

When a customer calls for included work, a service request is created for the date promised to the customer. Reports are generated monthly of all meter orders closed during the prior month and are reviewed for the following exclusions: (1) delayed at the customer's request or because the customer was not ready for the work to be performed, (2) meter order request not the result of a customer request but rather an internal request for meter order work, (3) non-regulated business activities.

**5. Response to Customer and Regulatory Complaints Performance Standard**

- (A) Rate of complaints to the Commission's Consumer Affairs Branch (CAB): Percentage of customers who file complaints with the Commission's CAB. Performance shall be calculated as follows:

Number of complaints reported annually to the utility by the CAB/Total number of customers

Performance measure: less than or equal to 0.1%

Source of data: Data shall be obtained from the quarterly reports provided by the Commission to the utility from the Commission's Consumer Affairs Tracking System. Results shall be reported to the second decimal place.

**APPENDIX E**  
**CUSTOMER SERVICE AND REPORTING STANDARDS**  
**FOR CLASS A AND B UTILITIES**

**6. Service Interruption**

Each Utility shall keep a complete record of all interruptions, both emergency and scheduled, when more than 10 service connections are interrupted. These records of interruptions are to be kept with the utility's permanent records and shall include:

1. Date and time of service interruption
2. Date and time service is restored
3. Number of service connections affected
4. Equipment that operated or failed
5. Cause of interruption
6. Actions required to restore service
7. Identification of person reporting
8. Steps taken to prevent recurrence

**(END OF APPENDIX E)**