ATTACHMENT A

General Order No. 166

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Standards for Operation, Reliability, and Safety During Emergencies and Disasters

Adopted July 23, 1998. Effective July 23, 1998.
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Revised December 14, 2017 by D.17-12-024 in R.15-05-006

Applicability: This General Order applies to all electric utilities subject to the jurisdiction of the CPUC with regard to matters relating to electric service reliability and/or safety.

Purpose: The purpose of these standards is to ensure that jurisdictional electric utilities are prepared for emergencies and disasters in order to minimize damage and inconvenience to the public which may occur as a result of electric system failures, major outages, or hazards posed by damage to electric ~~distribution~~ facilities. The standards will facilitate the Commission's investigations into the reasonableness of the utility's response to emergencies and major outages. Such investigations will be conducted following every major outage, pursuant to and consistent with Public Utilities Code Section 364(c) and Commission policy.

Summary: The following rules require each jurisdictional electric utility to:

- Prepare an emergency and disaster preparedness plan and update the plan annually. Standard 1.

- Enter into mutual assistance agreements with other utilities. Standard 2.

- Conduct annual emergency training and exercises using the utility's emergency and disaster preparedness plan. Standard 3.

- Develop a strategy for informing the public and relevant agencies of a major outage. Standard 4.

- Coordinate internal activities during a major outage in a timely manner. Standard 5.

- Notify relevant individuals and agencies of an emergency or major outage in a timely manner. Standard 6.

- Evaluate the need for mutual assistance during a major outage. Standard 7.

- Inform the public and relevant public safety agencies of the estimated time for restoring power during a major outage. Standard 8.

- Train additional personnel to assist with emergency activities. Standard 9.

- Coordinate emergency and disaster preparedness plans with state and local public safety agencies. Standard 10
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- File an annual report describing compliance with these standards. Standard 11.

- Be subject to a restoration performance benchmark for major outages. Standard 12.

- Be subject to a call center performance benchmark for major outages. Standard 13.

- Conduct public plan development meetings with state, city, and county governments. Standard 14.

Definitions

All definitions shall be consistent with those adopted in Public Safety Power Shutoff Proceeding (R.18-12-005). In the event of any conflict, definitions adopted in that proceeding or any successor proceeding shall apply.

Accessible: A condition which permits safe and legal access.

Access and Functional Needs Populations: Refers to those populations with access and functional needs as set forth in Government Code § 8593.3. Access and functional needs population consists of individuals, including but not limited to, individuals who have developmental or intellectual disabilities, physical disabilities, chronic conditions, injuries, limited English proficiency or who are non-English speaking, older adults, children, people living in institutionalized settings, or those who are low income, homeless, or transportation disadvantaged, including, but not limited to, those who are dependent on public transit or those who are pregnant.

Appropriate Regulatory Authority: The agency or governmental body responsible for regulation or governance of the utility.

Critical Customers: Customers requiring electric service for life sustaining equipment.

Emergency or Disaster: An event which is the proximate cause of a major outage, including but not limited to storms, lightning strikes, fires, floods, hurricanes, volcanic activity, landslides, earthquakes, windstorms, tidal waves, terrorist attacks, riots, civil disobedience, wars, chemical spills, explosions, and airplane or train wrecks.

Essential Customers: Customers representing critical infrastructure and Public Safety Partners.

Major Outage: Consistent with Public Utilities Code Section 364, a major outage occurs when 10 percent of the electric utility's serviceable customers experience a simultaneous, non-momentary interruption of service. For utilities with less than 150,000 customers within California, a major outage occurs when 50 percent of the electric utility's serviceable customers experience a simultaneous, non-momentary interruption of service.

Measured Event: A Measured Event is a Major Outage (as defined herein), resulting from non-earthquake, weather-related causes, affecting between 10% (simultaneous) and 40% (cumulative) of a utility's electric customer base. A Measured Event is deemed to begin at 12:00 a.m. on the day when more than one percent (simultaneous) of the utility's electric customers experience sustained interruptions. A Measured Event is deemed to end

when fewer than one percent (simultaneous) of the utility's customers experience sustained interruptions in two consecutive 24-hour periods (12:00 a.m. to 11:59 p.m.); and the end of the Measured Event in 11:59 p.m. of that 48-hour period.

Safety Standby: Interim activities undertaken to mitigate immediate public safety hazards

Serviceable Customer: A customer prepared and properly equipped to receive service where both the customer's electrical service facilities and those facilities of the utility necessary to serve the customer can be legally and physically accessed in a safe manner.

Transmission Facilities: Transmission facilities are those facilities subject to control by the Independent System Operator pursuant to Federal Energy Regulatory Commission orders.

Public Safety Partners: First/emergency responders at the local, state and federal level, water, wastewater and communication service providers , community choice aggregators (CCAs), affected publicly-owned utilities (POUs)/ electrical cooperatives, tribal governments, the Commission, CalOES and CAL FIRE.

Standard 1. Emergency and Disaster Preparedness Plan

The utility shall prepare an emergency and disaster preparedness plan ("plan") setting forth anticipated responses to emergencies and major outages. The plan will help assure the utility is best able to protect life and property during an emergency, disaster, or major outage and communicate the scope and expected duration of an outage. At a minimum, the plan shall include the following elements:

A. Internal Coordination

The plan shall describe the utility's internal coordination function, including how the utility will gather, process, and disseminate information within the service area, set priorities, allocate resources and coordinate activities to restore service. The utility will coordinate internal activities in an emergency operations center or use some other arrangement suitable for the purposes of internal coordination.

B. ISO/TO Coordination

The plan shall provide for utility coordination with the ISO, including gathering, processing and disseminating information from the ISO, and providing information regarding how the utility will establish priorities and estimates of service restoration. A utility that does not deal directly with the ISO shall describe how it will coordinate its efforts with the TO.

C. Media Coordination

The plan shall address the utility's provision of timely and complete information available to the media before, during and immediately after a major outage. Such information shall include estimated restoration times and a description of potential safety hazards if they exist.

D. External and Government Coordination

The plan shall address the utility's efforts to coordinate emergency activities with Essential Customers, and appropriate state and local government agencies. The utility shall maintain lists of contacts at each entity and

agency which shall be included in the plan and readily accessible to employees responsible for coordinating emergency communications. The utility shall submit proof of compliance with PUC 768.6(b)(3) as part of the annual report required by Standard 11.

To effectively accomplish this coordination and communication, the utilities shall adopt and participate in California's Standardized Emergency Management System (SEMS).

However, multi-jurisdictional utilities serving customers outside of California may use an approach consistent with the Federal Emergency Management Agency's National Incident Management System (NIMS) which includes the Incident Command System (ICS) in their emergency disaster and preparedness plans as long as they demonstrate in their GO 166 Annual Reports that they have discussed how they will coordinate planning and response with Essential Customers, and appropriate governmental entities.

E. Wildfire Mitigation Plan ~~Fire Prevention Plan~~

Each utility shall include in its annual report required by Standard 11
its most recent Wildfire Mitigation Plan and updates, if applicable, that have been approved pursuant to Public Utilities Code Section 8386.3.

~~have a Fire Prevention Plan that:~~

~~A. Lists and describes the measures the electric utility intends to implement, both in the short run and in the long run, to mitigate the threat of power-line fires generally and in the specific situation where all three of the following conditions occur simultaneously: (i) The force of 3-second wind gusts exceeds the structural or mechanical design standards for the affected overhead power-line facilities, (ii) these 3-second gusts occur during a period of high fire danger, and (iii) the affected facilities are located in a high fire-threat area. A utility's fire-prevention plan may address other situations than required by this General Order, but not in lieu of this~~

~~General Order.~~

~~B. Identifies the specific parts of the electric utility's service territory where all three of the fire-weather conditions listed in Item A, above, may occur simultaneously. In making this determination, the utility shall use a minimum probability of 3% over a 50-year period that 3-second wind gusts which exceed the design standards for the affected facilities will occur during a Red Flag Warning in a high fire-threat area.~~

~~C. Lists the other fire-threat indicators that the electric utility elects to use, in addition to those required by Item A, above, to timely identify and/or forecast elevated fire-weather conditions that increase the risk of fire associated with overhead power-line facilities.~~

~~D. For the purpose of this Standard, the following definitions apply: (i) Structural and mechanical design standards are the maximum working stresses set forth in General Order 95, Section IV, for installed overhead electric facilities; (ii) period of high fire danger is the period covered by a Red Flag Warning issued by the United States National Weather Service; and (iii) high fire threat areas are areas designated as the High Fire-Threat District as defined in GO 95, Rule 21.2-D.~~

The requirement to submit a Wildfire Mitigation Plan ~~prepare a fire-prevention plan~~ applies to investor-owned electric utilities with overhead electric facilities located in the High Fire-Threat District as defined in GO 95, Rule 21.2-D.

F. Safety Considerations

The plan shall describe how the utility will assure the safety of the public and utility employees and the utility's procedures for safety standby. The plan shall include contingency measures regarding the resources required to respond to an increased number of reports concerning unsafe conditions.

G. Damage Assessment

The plan shall describe the process for assessing damage and, where appropriate, the use of contingency resources required to expedite a response to the emergency or

disaster. The plan will generally describe how the utility will set priorities, facilitate communication, and restore service.

H. Restoration Priority Guidelines

The Plan shall include guidelines for prioritizing service restoration. In general, the utility shall set priorities so that Critical Customers, Access and Functional Needs Populations, and Essential Customers are least impacted and service is restored for the majority of customers in the shortest amount of time.

I. Mutual Assistance

The plan shall describe how the utility intends to employ resources available pursuant to mutual assistance agreements for emergency response. Mutual assistance shall be requested when local resources are inadequate to assure timely restoration of service or public safety. Mutual assistance need not be requested if it would not

substantially improve restoration times or mitigate safety hazards. The plan shall recognize the need to communicate mutual assistance activities with the State Office of Emergency Services, through the UOC/OES Utility Branch, during an emergency.

J. Plan Update

The plan shall be updated annually to incorporate changes in procedures, conditions, law or Commission policy. The utility shall submit plan updates as part of the annual report required by Standard 11.

The utility's plan shall consider and address recent emergencies and disasters associated with the utility or similar utilities and shall address remedial actions for possible emergencies or disasters that may involve that

utility's delivery of service. The utility shall include these considerations in any required plan reviews and make changes and updates to the plan accordingly.

The utility shall review its plan, in particular following any emergency or disaster, to ensure that all emergency plan activation and escalation standards are clear and appropriate.

In addition, under Standard 14, every two years, the utility shall invite local government representatives to provide further consultation as it updates the plan.

The utility shall submit plan updates as part of the annual report required by Standard 11.

Standard 2. Mutual Assistance Agreement(s)

The utility shall enter into mutual assistance agreement(s), such as those facilitated by the California Utilities Emergency Association, to the extent that such agreements are practical and would improve emergency response. The utility shall submit the agreements annually to CPUC designated staff as part of the report required by Standard 11. The agreements shall include the following elements:

A. Resources that are available to be shared.

B. Procedures for requesting and providing assistance.

C. Provisions for payment, cost recovery, liability and other financial arrangements.

D. Activation and deactivation criteria.

Standard 3. Emergency Training and Exercises

A. The utility shall conduct an exercise annually using the procedures set forth in the utility's emergency and disaster preparedness plan. If the utility uses the plan during the twelve-month period in responding to an event or major outage, the utility is not required to conduct an exercise for that period.

B. The utility shall annually evaluate its response to an exercise

or major outage. The evaluation shall be provided to the CPUC as part of the report required by Standard 11.

C. The utility shall annually train designated personnel in preparation for emergencies and major outages. The training shall be designed to overcome problems identified in the evaluations of responses to a major outage or exercise and shall reflect relevant changes to the plan.

D. The utility shall provide no less than ten days notice of its annual exercise to appropriate state and local authorities, including the CPUC, state and regional offices of the OES or its successor, the California Energy Commission, and emergency offices of the counties in which the exercise is to be performed. The utility shall participate in other emergency exercises designed to address problems on electric distribution facilities or services, including those emergency exercises of the state and regional offices of the OES or its successor, and county emergency offices.

Standard 4. Communications Strategy

The utility shall develop and maintain a written strategy for how it will communicate with the public before, during and immediately following major outages and emergencies as follows:

A. Customer Communications - Media & Call Center

The communications strategy shall describe how the utility will provide information to customers by way of its call center and other communications media before, during and immediately following a major outage. The strategy shall anticipate the use of radio, television, newspapers, mail and electronic communications media.

The plan shall consider and address alternative communication strategies in the event the above methods are unavailable during an emergency, which may include in-person contact with customers.

Communication may not rely exclusively on online strategies, because this would exclude all people who regularly have limited or no internet access, as well as those who generally have some access but whose access is disrupted by the emergency.

The utility's general communication obligations apply during an emergency.

The plan shall include methods for identifying and contacting Critical Customers and Access and Functional Needs Populations before and during an emergency or disaster.

The utility should endeavor to partner with local governments and agencies to encourage identification of access and functional needs populations through those agencies, allowing the utility and local jurisdictions to provide up front education and outreach and

communication during an emergency or disaster, in formats appropriate to individual access and functional needs populations. However, utilities are not required to develop a comprehensive contact list of access and functional needs customers or to share individual customer information with local jurisdictions.

The plan should be compatible with Public Safety Power Shut-off Guidelines.

B. External and **Government Communications**

The communications strategy shall include pre-event coordination with appropriate Essential Customers, and state and local government agencies, including the appropriate methods for information exchange, to enhance communications activities during and immediately following a Major Outage. The utility shall also involve local governments in plan development as required by Standard 14.

The plan shall ensure a smooth transition in the event of any change in utility personnel designated as points of contact for local governments. This includes having requirements for timely notifications to local governments in the event of such change.

C. Independent System Operator/Transmission Owner

The communications strategy will describe how the utility will coordinate its communications with the ISO and/or the TO. The utility shall cooperate with the ISO/TO to coordinate the information provided to customers, media, and governmental agencies when the operation of the transmission system affects customer service.

Standard 5. Activation Standard

Within one hour of the identification of a major outage, the utility shall begin coordinating its internal resources as set forth in its emergency and disaster preparedness plan.

Standard 6. Initial Notification Standard

Within one hour of the identification of a major outage or other newsworthy event, the utility shall notify the Commission,

affected Essential Customers, and the Warning Center at the Office of Emergency Services of the location, possible cause and expected duration of the outage. Notification to the Commission shall be through the Commission's website, consistent with Resolution E-4184, ESRB-8, and/or subsequent Commission guidance. The Warning Center at the OES is expected to notify other state and local agencies and affected Public Safety Partners of the outage. Subsequent contacts between state and local agencies and the utility shall be conducted between personnel identified in advance, as set forth in Standard 4.B. From time to time the Commission staff may issue instructions or guidelines regarding reporting.

Standard 7. Mutual Assistance Evaluation Standard

No later than 4 hours after the onset of a major outage, the utility shall begin the process of evaluating and documenting the need for mutual assistance. The utility is not required to seek assistance if it would not substantially expedite restoration of electric service or promote public safety. The utility should reevaluate the need for assistance throughout the period of the outage.

Standard 8. Major Outage and Restoration Estimate Communication Standard

A. Within 4 hours of the identification of a major outage, the utility shall make information available to customers through its call center and notify affected Essential Customers, state and local public agencies, and the media of the major outage, its location, expected duration and cause. The utility shall provide estimates of restoration times as soon as possible following an initial assessment of damage and the establishment of priorities for service restoration.

B. Within 4 hours of the initial damage assessment and the establishment of priorities for restoring service, the utility shall make available through its call center and notify affected Essential Customers, state and local public agencies, and the media of the estimated service restoration times by geographic area. If the utility is unable to estimate a restoration time for a certain area, the utility shall so state.

C. The utility shall provide periodic restoration time estimate

updates at predetermined or otherwise designated intervals for the duration of any emergency or disaster.

D. The plan shall delineate methods for restoration estimate methodology, and for evaluating the accuracy of those forecasts following any emergency or disaster.

E. The plan should be compatible with Public Safety Power-Shutoff Guidelines.

Standard 9. Personnel Redeployment Planning Standard

The utility shall maintain a training and redeployment plan for performing safety standby activities and assessing damage during a major outage. The utility should plan to have personnel available to augment the number of employees whose duties include safety standby and damage assessment activities. The utility shall identify and train additional employees to perform safety standby activities and assess damage during emergencies requiring such activities and major outages, and in lieu of their normal duties.

Where possible, utilities should use contractors and others with demonstrated damage assessment and disaster response/recovery experience in emergencies and disasters affecting electric utilities.

Standard 10. Annual Pre-Event Coordination Standard

The utility shall annually coordinate emergency preparations with appropriate state, county and local agencies, Essential Customers, and the ISO/TO. As part of such activities, the utility shall establish and confirm contacts and communication channels, plan the exchange of emergency planning and response information, and participate in emergency exercises or training.

Standard 11. Annual Report

The utility shall annually report to the CPUC and other appropriate governmental agencies by April 30 regarding its compliance with this general order for the previous twelve

months ending December 31. The annual report shall identify and describe any modifications to the utility's emergency and disaster preparedness plan.

Further, the utility shall report on the number of repair and maintenance personnel in each personnel classification in each county (and total throughout the company), as of December 31 of the current and previous year.

Standard 12. Restoration Performance Benchmark For A Measured Event

The Commission shall perform a review of utility performance following every Major Outage. This standard sets a benchmark for the Commission to use in reviewing utility restoration performance only during Measured Events.

A. Benchmark

A utility's restoration performance during a Measure Event shall be presumed reasonable if the CAIDI is 570 or below, and presumed unreasonable if the CAIDI is above 570. These presumptions are rebuttable.

B. CAIDI Calculation

CAIDI stands for Customer Average Interruption Duration Index and is computed using the following equation:

$$\frac{\text{total customer minutes of interruption}}{\text{total number of customer interruptions}}$$

If a single customer experiences more than one sustained interruption during a Measured Event, each interruption shall count as a separate customer interruption. CAIDI shall be measured from the beginning of the Measured Event and shall continue until all customers experiencing interruptions during the Measured Event have been restored.

C. Transmission Outages

Customer minutes of interruption caused by outages of Transmission Facilities owned by the utility during a Measured Event are included in the calculation of CAIDI for purposes of this standard.

Customer minutes of interruption attributable to utility compliance with ISO directives, including its protocols, tariffs, transmission agreements or other written or verbal instructions specific to the event, which prevent the utility from restoring service it is otherwise able to provide shall be excluded in the calculation of CAIDI for purposes of this standard.

D. Exemption

Utilities with fewer than 150,000 electric customers are exempted from application of this standard.

Standard 13. Call Center Benchmark For A Measured Event

The Commission shall perform a review of utility performance following every Major Outage. This standard sets a benchmark for the Commission to use in reviewing utility call center performance only during Measured Events.

A. Benchmark

A utility's call center performance during a Measured Event shall be presumed reasonable if the percent busies calculation is lower than Level-1, and presumed unreasonable if the percent busies calculation is greater than Level-2. These presumptions are rebuttable. Performance equal to or between Level-1 and Level-2 is subject to no presumption.

Level-1 is defined as 30% busies over the day of the outage (12:00 a.m. to 11:59 p.m.).

Level-2 is defined as 50% busies over the day of the outage (12:00 a.m. to 11:59 p.m.) plus at least 50% busies in each of six one-hour increments (these increments need not be consecutive).

B. Percent Busies Calculation

Percent busies calculation measures the levels of busy signals encountered by customers at the utility's switch and that of its contractors. Mutual aid partners are not considered "contractors" for purposes of this standard, and busies encountered as a result of mutual aid assistance are not included in measurements to which this standard applies.

Percent busies indicator is measured on a 24-hour basis for outage-related calls (on energy outage and general call lines) from the time the Measured Event begins (12:00 a.m. to 11:59 p.m.), and separately for each 24-hour period until the Measured Event ends.

Either of the following methods for calculating percent busies is acceptable:

- Percent of call attempts reaching the utility which receive a busy signal
- Percent of time that trunk line capacity is exhausted.

C. Other Call Center Metrics

The utility shall develop and track metrics that measure customer access to information on customer service calls and web host availability during an emergency or disaster.

D**. Exemption**

Utilities with fewer than 150,000 electric customers are exempted from application of this standard.

Standard 14. Plan Development Coordination and Public Meeting

In developing the plan, the utility shall invite representatives of every city, county, or city and county in its service area to meet with and provide consultation on the plan. In addition, every city and county within the utility service area may designate a point of contact for the electrical corporation to consult with regarding emergency and disaster response planning. The electrical corporation shall provide each city's designated point of contact with an opportunity to comment on the draft plans.

The utility shall, where possible, meet with Essential Customers not included above, regarding the development of its plan.

The utility shall invite the representatives listed above to a meeting at least every two years to provide further consultation to update the plan.

The utility shall provide notice and conduct public meetings pursuant to this Standard and any other public participation requirements. The utility shall provide participating counties and cities the opportunity to provide written and verbal input regarding the plan. The utility may convene closed door meetings with city and county representatives to discuss sensitive security-related information.

The utility shall notify the Commission of the date, time and location of the meeting. The utility shall memorialize these meetings and submit records of the meeting to the Commission.

The utility may also fulfill the meeting requirement by presenting its plan at a regularly scheduled public meeting of each disaster council created pursuant to Article 10 of Chapter 7 of Division 1 of Title 2 of the Government Code within the utility service area, or at a regularly scheduled public meeting of the governing body of each city, county or city and county within the utility's service area.

ATTACHMENT B

ATTACHMENT 1

PROPOSED REDLINES

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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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 used 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 ¾-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 ¾-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 Response Plan

A. Each water utility shall have an Emergency Response Plan pursuant to the Board's requirements, as set by the US EPA, Government Code Section 8607.2, or its successor, and Public Utilities Code Section 768.6.

B. Class A and B water utility Emergency Response Plans shall address the Department's guidance for public water systems with over 1,000 service connections.

C. Class C and D water utility Emergency Response Plans shall address the Department's guidance for public water systems with less than 1,000 service connections.

D. Pursuant to Public Utilities Code Section 768.6(a), Class A and B water utility Emergency Response Plans shall address measures the utility intends to implement in order to mitigate the threat of severe weather; including, but not limited to, high fire danger, windstorms, and voluntary de-energization by electric utilities (Public Safety Power Shutoffs or PSPS) that may result from severe weather events. This may include the prepositioning of personnel and equipment to assure timely restoration of service or public safety in the event of anticipated severe weather.

E. Class C and D water utility Emergency Response Plans shall address equipment and/or equipment suppliers that may be made available in the event of severe weather. This may include leasing of portable generators or other equipment necessary to maintain water system operations, or to minimize damage to the water utility's infrastructure.

F. Water utility Emergency Response Plans shall address contingencies for temporary emergency water supplies, such as water trucks and bottled water, including for persons with access and functional needs who may require special assistance during a disaster. Access and functional needs population consists of individuals who have developmental or intellectual disabilities, physical disabilities, chronic conditions, injuries, limited English proficiency or who are non-English speaking, older adults, children, people living in institutionalized settings, or those who are low income, homeless, or transportation disadvantaged, and those who are dependent on public transit or those who are pregnant.

G. Emergency Response Plans shall address public notice, pursuant to the Department's requirements, in language(s), other than English, that are predominantly spoken in each utility's service territory.

H. Class A and B water utilities shall adopt and participate in California's Standardized Emergency Management System (SEMS).

I. Pursuant to Public Utilities Code Section 768.6(f)(2), Class A water utilities shall hold meetings when developing, adopting, or updating an Emergency Response Plan with representatives pursuant to the American's Water Infrastructure Act of 2018 or every five years, whichever comes first, and, where possible, first responders from each city, county or city and county in the water company's service area regarding the Emergency Response Plans. The utilities shall include information on the meetings in their annual reports to the Commission, including: list of all counties and cities within territory that meetings were held with during that year and the dates of such meetings. A water utility may fulfill a meeting requirement imposed by this section by making a presentation regarding its Emergency Response Plan at a regularly scheduled public meeting of each disaster council within the utility's service area, or at a regularly scheduled public meeting of the governing body of each city, county, or city and county within its service area.

J. Class B, C and D water utilities shall confer when developing, adopting, or updating an Emergency Response Plan or every five years, whichever comes first, with representatives from each city, county or city and county in the water company's service area regarding the Emergency Response Plans. Each utility shall include in its annual report to the Commission, a list of all counties and cities within its territory that it has conferred with regarding planning and discussions on the implementation of its Emergency Response Plan. A water utility may fulfill the requirement to confer imposed by this section by making a presentation regarding its emergency response plan at a regularly scheduled public meeting of each disaster council within the utility's service area, or at a regularly scheduled public meeting of the governing body of each city, county, or city and county within the service area.

K.~~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,

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
CORPORATE AND GENERAL	
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
OPERATIONS AND MAINTENANCE	
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
MISCELLANEOUS	
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

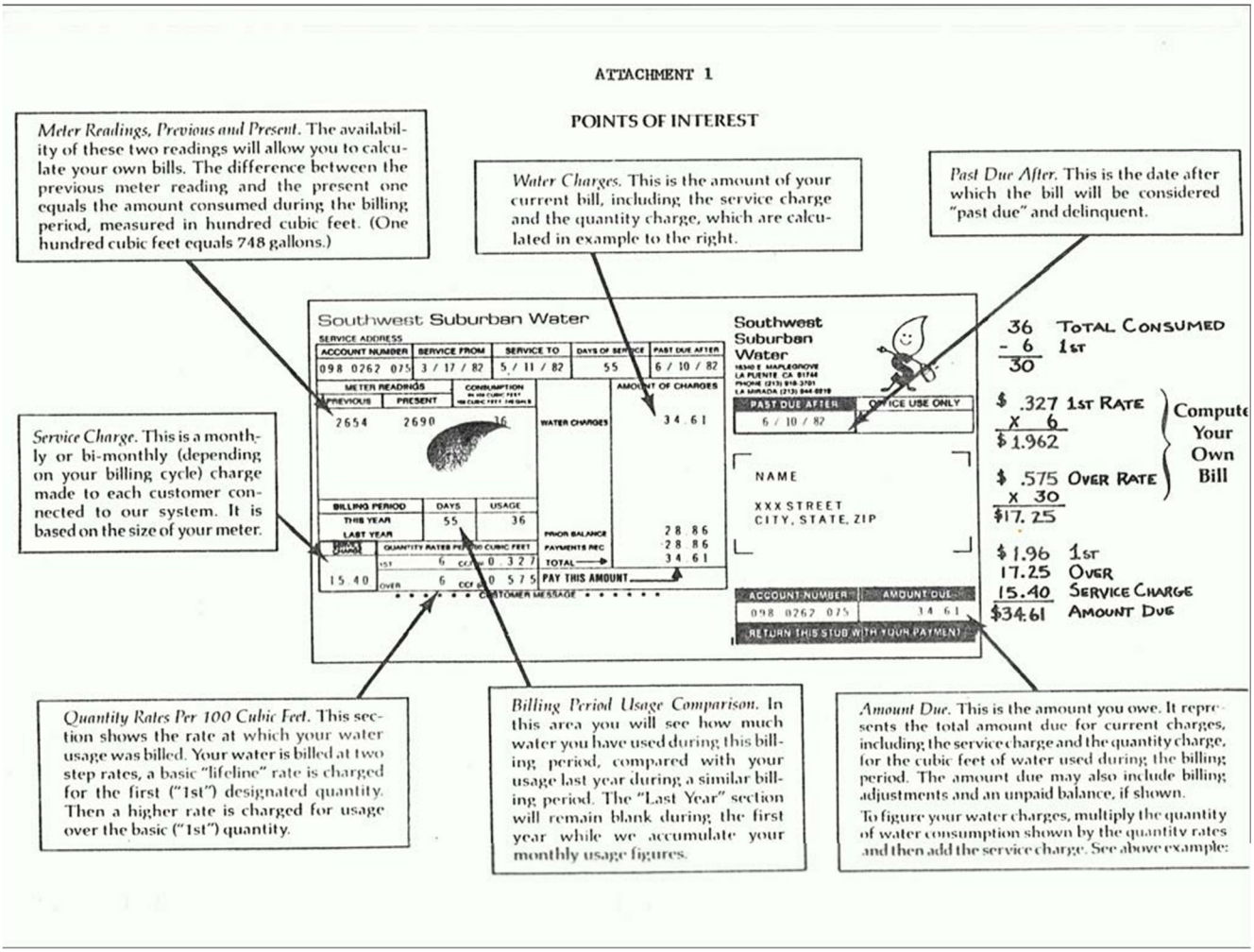
27.	Life or mortality study data for depreciation purposes:	Life of corporation

(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.



(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

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.

(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.

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)