RULE NO. 16 Page 1

SERVICE CONNECTIONS, METERS, AND CUSTOMER'S FACILITIES

A. General

1. Utility's Responsibility

a. (1) In urban areas with dedicated front streets, rear service roads, or public utility easements the utility will furnish and install the service pipe, curb stop, meter and meter box at its own expense for the purpose of connecting its distribution system to the customer's piping, except for temporary services and as otherwise provided in Rule No. 15, Main Extensions. The service connection, curb stop, meter and meter box will be installed at a convenient place between the property line and the curb, or inside the customer's property line where necessary.

(2) In areas which do not have dedicated front streets, rear service roads, or public utility easements, the utility will furnish and install the service pipe, curb stop, meter and meter box as above provided but at a convenient point on or near the customer's property except for service beyond the service area.

b. The service connection will determine the point of delivery of water service to the customer.

2. Customer's Responsibility

a. Condition Precedent to Receiving Service

The customer as a condition precedent to receiving service shall:

(1) Furnish and lay the necessary piping to make the connection from the service connection to the place of consumption and shall keep such piping in good repair in accordance with such reasonable requirements of the utility as may be incorporated in its rules herein.

(2) Provide a main valve on the piping between the service connection and the point of customer use.

(3) Where service is rendered at or near the service area boundary for use beyond the service area, install, operate, and maintain the facilities necessary to provide service.

b. The customer's piping shall extend to that point on the curb line or property line of easiest access to the utility from its existing distribution system or requiring the least extension of the existing distribution main. The utility shall be consulted before installation thereof and its approval of location secured. **(L)**

3. Ownership and Absence of Rental Obligation Where Facilities Are on Premises of Customer

a. The service pipe, curb stop, meter, and meter box furnished by or on behalf of the utility and located wholly or partially upon a customer's premises are the property of the utility.

b. No rent or other charge will be paid by the utility where the utility-owned service facilities are located on a customer's premises. **(L)**

(Continued)

RULE NO. 16 Page 2

SERVICE CONNECTIONS, METERS, AND CUSTOMER'S FACILITIES

A. 4. Access to Premises of Customer

a. The utility shall at all reasonable hours have access to meters, service connections and other property owned by it which may be located on customer's premises for purposes of installation, maintenance, operation or removal of the property at the time service is to be terminated. The customer's system should be open for inspection at all reasonable times to authorized representatives of the utility.

b. Any inspection work or recommendations made by the utility or its agents in connection with plumbing or appliances or any use of water on the customer's premises, either as a result of a complaint or otherwise, will be made without charge.

5. Responsibility for Loss or Damage

a. The utility will not be responsible for any loss or damage caused by any negligence or wrongful act of a customer or of a customer's authorized representatives in installing, maintaining, operating or using any or all appliances, facilities or equipment for which service is supplied.

b. The customer will be held responsible for damage to utility's meters and other property resulting from the use or operation of appliances and facilities on customer's premises, including, but not limited to damage caused by steam, hot water, or chemicals. (L)

B. Services

1. Charge for Service Connections

Except as provided in subparagraphs a., b., or c. below, the utility shall make no charge to a customer for making a service connection except in case of connections for private fire protection service, connections for temporary service, changes made at the request and for the convenience of the customer, where additional connections are requested because of divisions of land ownership when the land before division was receiving service, and as otherwise provided in the utility's main extension rules.

a. Individual Customer Connection Fee

A Class C or Class D utility, or a Class A or Class B utility district or subsidiary serving 2,000 or fewer connections, may accept from individual customers amounts in contribution as a connection fee calculated pursuant to the Commission's Connection Fee Data Form contained in the utility's tariffs.

b. In lieu of paying the connection fee, an applicant for a service connection may retain a licensed contractor, qualified in the judgment of the utility, to install the service connection. Cost to the utility of inspection and supervision of the installation, including gross-up for tax required by a contribution, shall be paid by the applicant. The applicant shall provide the utility with a statement of actual construction costs in reasonable detail. The amount shall be treated as contribution by the utility. The installation shall be in accordance with plans and specifications of the utility. (L)

(Continued)

SERVICE CONNECTIONS, METERS, AND CUSTOMER'S FACILITIES

B. 1. c. Individual Customer Facilities Fee

A Class C or Class D utility, or a Class A or Class B utility district or subsidiary serving 2,000 or fewer connections, may accept from individual customers amounts in contribution as a facilities fee calculated pursuant to tariff approved by the Commission.

2. Size of Service Pipe (L)

a. The minimum size of service pipe installed by the utility will not be less than 1-inch nominal size. (T)

b. The utility may require the customer to provide such data as may be necessary for the utility to properly size a service larger than 1-inch nominal size consistent with pressure requirements. (T)

3. Installation

Only duly authorized employees or agents of the utility (or licensed contractors, upon approval of the utility) will be permitted to install a service pipe from the utility's main to the location of the service connection. The connection from the meter to the customer's piping will be made by the utility; provided, however, that if the customer's piping requires repair or replacement, the connection may, at the option of the utility, be made by the customer or his agent. (T)

C. Cross-Connections

1. Protective Regulation

No physical connection between the potable water supply system of the public utility and that of any other water supply or source of actual or potential contamination will be permitted except in compliance with the regulations of the State Department of Public Health contained in Title 17, Sections 7583-7605 of the California Code of Regulations under "Regulations Relating to Cross-Connections."

It is unlawful for any person, firm, or corporation at any time to make or maintain or cause to be made, temporarily or permanently, for any period of time whatsoever, any cross-connection between plumbing pipes or water fixtures being served with water by the Utility and any other source of water supply or to maintain any sanitary fixture or other appurtenances or fixtures which, by reason of their construction, may cause or allow backflow of water or other substances into the water supply system of the Utility and/or the service of water pipes or fixtures of any consumer of the Utility. (N) (N)

2. Backflow Prevention Assemblies Required (T)

Pursuant to general rate case decisions, and in accordance with the Commission's general supervisory policies, the utility will evaluate the degree of potential health hazard to the public water supply which may be created as a result of conditions existing on a user's premises. As a minimum, the evaluation will consider: the existence of cross-connections, auxiliary intakes, bypasses or interconnections, the nature of materials handled on the property, the probability of a backflow occurring, the degree of piping system complexity, and the potential for piping system modification. It is not the responsibility of Liberty Utilities to identify all hazards within a facility rather than the hazards sufficient for identifying appropriate service protection. (T) (T) (T) (T)(L)

SERVICE CONNECTIONS, METERS, AND CUSTOMER'S FACILITIES

C. 2. Backflow Prevention Assemblies Required (continued) **(T)**

Notwithstanding the above, because certain activities present inherent risks to the water supply, the utility may forego a complete evaluation and may require backflow protection based on the type of facility or nature of water use, if certain conditions are present. The installation of a backflow prevention assembly at the potable water meter protects the public water system from potential cross-connections, but it does not prevent backflow within the customer's internal piping system. Liberty Utilities is not responsible for cross-connections within the customer's internal piping system. The conditions under which Liberty Utilities will require the installation of approved backflow prevention assembly(ies) of required type include, but are not limited to, those listed below. **(N)** **(N)** **(T)**

a. Where a fresh water supply which has not been approved by the utility is already available from a well, spring, reservoir or other source. (If the customer agrees to destroy this other supply and agrees to remove all pumps and piping necessary for the utilization of an auxiliary supply, the installation of backflow prevention assembly(ies) will not be required.) **(T)(L)** **(T)** **(T)**

b. Where salt water, or water otherwise contaminated, is available for industrial or fire protection purposes at the same premises.

c. Where the premises are or may be engaged in industrial processes using or producing process waters or liquid industrial wastes, or where the premises are or may be engaged in handling sewage or any other dangerous substances.

d. Where fresh water hydrants or other outlets are or may be installed on piers or docks.

e. Where the circumstances are such that there is special danger of backflow of sewage or other contaminated liquids through plumbing fixtures or water-using or treating equipment, or storage tanks and reservoirs. **(T)**

f. Where premises have internal cross-connections that are not abated to the satisfaction of the utility or the health agency. **(T)**

g. Intricate plumbing and piping arrangements or premises where cross-connections are likely to occur and entry is restricted so that cross-connection inspections cannot be made with sufficient frequency or at sufficiently short notice to assure that cross-connections do not exist. **(T)**

h. Premises having a repeated history of cross-connections being established or re-established. **(L)**

i. Premises that have more than one service connection present a loop-through hazard such that backflow protection on all service connections must be installed. Each backflow prevention assembly must be commensurate with the highest degree of hazard present, but must provide no less protection than a Double Check Valve Assembly. **(N)**

j. Premises that have multiple users or units sharing one meter must install an RP due to the risk of occupancy change without notification to the utility. **(N)**

SERVICE CONNECTIONS, METERS, AND CUSTOMER'S FACILITIES

C. 2. Backflow Prevention Assemblies Required (continued) **(T)**

k. Premises that store or handle materials or substances that, if introduced into the water supply, have the potential to pose a health-related or aesthetic risk to drinking water quality. **(N)**

l. New or modified fire sprinkler systems: A backflow prevention assembly must be installed when new or modified non-residential fire sprinkler systems are installed. If potable water pipes are used to construct the sprinkler system, no chemicals are added, and there is no auxiliary supply, a Double Check Detector Assembly may be installed. If non-potable water pipes are used, or chemicals are added, or there is an auxiliary water supply, then a Reduced Pressure Principle Detector Assembly must be installed.

Residential fire sprinkler systems do not need a backflow prevention assembly if they are designed and installed using potable water piping and materials, and have connections to points of regular water use to prevent degradation of water quality. Systems that do not meet these requirements must be equipped, at a minimum, with a Double Check Valve Assembly (DC) located at the service connection. If chemical additives, on-site storage, or booster pumps are used, backflow protection must be a Reduced Pressure Principle Assembly (RP).

Where a premises is required to have an RP backflow prevention assembly installed on a metered service, a Reduced Pressure Principle Detector Assembly must also be installed on all new or modified fire service connections.

All new or modified fire systems that are being fitted with a backflow prevention assembly shall be designed by a licensed engineer at the customer's expense.

m. Temporary hydrants must be equipped with a RP device.

The water service may be discontinued in the case of non-compliance with Liberty Utilities Regulations. Non-compliance includes, but is not limited to, the following:

a. Refusal to allow the Cross-connections Control Specialist access to the property to survey for cross-connection(s).

b. Removal of a backflow prevention assembly or method that is required by the Utility.

c. Bypassing of a backflow prevention assembly or method that is required by the Utility.

d. Providing inadequate backflow prevention when potential or actual cross-connections exist.

e. Failure to install a backflow prevention assembly or method that is required by the Utility.

f. Failure to test and/or properly repair a backflow prevention assembly or method as required by the Utility. **(N)**

SERVICE CONNECTIONS, METERS, AND CUSTOMER'S FACILITIES

C. 3. Type and Expense of Backflow Prevention Assemblies **(T)**

a. Any backflow prevention assembly utilized shall be of the type and design specified and approved for the circumstances in Section 7604, Title 17 of the California Code of Regulations (or its successor, and the California Plumbing Code), except that a customer may utilize an approved backflow prevention assembly providing greater protection than required by Section 7604. Such backflow prevention assembly shall be installed by and at the expense of the customer, in a manner approved by the utility and the public health agency having jurisdiction. **(T)**

b. Backflow prevention assemblies shall be tested, repaired or replaced at the expense of the customer. **(T)**

c. Backflow prevention assemblies shall be installed no more than 5 feet (unless approved by the utility) to the customer's connection to the utility, prior to any tee or branch line, and in a location which that is readily available for periodic inspection. **(N)**

d. Existing backflow prevention assemblies that are determined to provide an inadequate level of protection must be replaced by the appropriate level of protection instead of repaired. Inadequate backflow prevention assemblies must be replaced immediately, even if the existing assembly still passes the annual test, if there is an imminent health risk as determined by the utility.

e. A non-residential connection that has a backflow prevention assembly installed to abate an internal backflow hazard, whether at the recommendation of utility or as directed by a regulatory agency, must also install a backflow prevention assembly at the meter commensurate with the degree of hazard. The utility does not have any responsibility or authority to abate internal hazards or monitor testing of backflow prevention assemblies that are installed internal to a customer's premise.

f. Residential Irrigation Systems: At the discretion of the utility, properly installed Reduced Pressure Principle Assemblies (RPs), pressure vacuum breakers (PVBs), or spill resistant pressure vacuum breakers (SVBs) may be accepted as protection on residential irrigation systems in lieu of protection at the meter, when no other hazards are present, provided they are tested and maintained in accordance with Section 4.

g. For dedicated road median irrigation systems, PVBs and SVBs are acceptable as service protection only if they are properly installed.

h. No backflow prevention assemblies or methods shall be installed in a place where they would create a safety hazard such as, but not limited to, over an electrical panel or above ceiling level.

i. The removal, bypassing, or altering of a protective assembly or the installation, thereof so as to render an assembly ineffective, shall constitute grounds for discontinuance of water service. Water service to such premises shall not be restored until the Customer has corrected or eliminated such conditions or defects. **(N)**

(Continued)

SERVICE CONNECTIONS, METERS, AND CUSTOMER'S FACILITIES

C. 4. Periodic Testing of Backflow Prevention Assemblies (L)(T)

Whenever a backflow prevention assembly is installed, relocated, or repaired, the customer shall have it tested by persons who are certified to test backflow prevention assemblies by either the California Nevada Section of the American Water Works Association, County of Los Angeles Public Health or the American Backflow Prevention Association. (T)

Backflow prevention assemblies shall be tested at least annually or more frequently if determined to be necessary by the health agency or utility. (L)(T)

The utility shall notify the customer on record when testing of backflow prevention assemblies is needed. The notice shall give the date by which the test must be completed. The notice shall also inform the customer that, following the compliance date, the costs of all testing, repair, or replacement will be borne by the customer. In tenant-landlord situations, the utility shall not be responsible for determining the responsible party beyond notification of the customer of record. (N)

Reports of testing and maintenance shall be maintained by the utility for a minimum of three years.

The Utility shall have the right to inspect and require testing of the assemblies whenever deemed necessary.

Should a protective assembly be found defective or have a status of Failed, the Utility will require the assembly to be repaired promptly with manufacturer's specified parts, in accordance to manufacturer's suggested procedure, and placed in proper operating condition within 15-days of the finding or the specified time limit established by the Utility. Following repairs, the assembly is to be tested again to verify that it is meeting performance standards and have a status of Passed. The owner will be held responsible for maintaining protective measures in a good state of repairs.

If the assembly cannot or will not be repaired within 3 days (72 hours) of discovery of the failure, the backflow prevention assembly tester must notify the utility of the failure in cases where the failed assembly presents an immediate risk to public health, the service will be discontinued until the repairs or replacement is completed. (N)

5. Refusal to Serve or Discontinuance of Service (L)

The utility may refuse or discontinue service:

a. Until there has been installed on the customer's piping an approved backflow prevention assembly of the required type, if one is required. (T)

b. Where the utility has been denied access to the customer's premises to make an evaluation.

c. Where the customer refuses or fails to install, test a backflow prevention assembly, or to repair or replace a faulty backflow prevention assembly. (T) (T)

SERVICE CONNECTIONS, METERS, AND CUSTOMER'S FACILITIES

C. 5. d. Providing inadequate backflow prevention when potential or actual cross-connections exist. **(N)**

(N)

e. Where there is a direct or indirect connection between the public water system and a sewer line. **(T)(L)**

f. Where there is an unprotected direct or indirect connection between the public water system and a system or equipment containing contaminants.

g. Where there is an unprotected direct or indirect connection between the public water system and auxiliary water system.

h. When there is a situation which presents an immediate health hazard to the public water system. **(T)(L)**

(N)

i. Bypassing of a backflow prevention assembly or method that is required by the Utility.

j. Removal of a backflow prevention assembly or method that is required by the Utility.

6. Thermal Expansion

Prior to the installation of a backflow prevention assembly, it is the customer's responsibility to have a qualified plumber mitigate the effects of thermal expansion. Failure to do so may create a dangerous condition resulting in damage and/or injury. **(N)**

7. Pumps and Boosters **(T)(L)**

When a customer receiving service at the utility's main or service connection must, by means of a pump of any kind, increase the pressure of the water received, the pump shall not be attached to any pipe directly connected to the utility's main or service pipe. Such pumping or boosting of pressure shall be done at the option of the utility, either:

a. From a sump, cistern or storage tank which must be served through an air gap connection, or

b. From a combination of an approved backflow prevention assembly plus a device approved by the water utility to prevent the booster pump from drawing the utility's system pressure below 20 psig. **(T)**

This requirement of a pressure limiting device shall not apply to fire protection systems equipped with booster pumps. **(T)**

(T)

(D)

C. 8. Automatic Valves **(N)**

Quick closing or opening valves shall not be installed on customer's pipes which are directly attached to the utility's mains or service pipes. A customer whose operation requires the use of a quick opening or closing valve must operate such device from a tank, cistern, sump or other facility which may be served by but not directly connected with the utility's distribution mains or service pipes. This restriction does not apply to quick closing or opening valves used in connection with normal household appliances such as automatic dishwashers or washing machines.

D. Reclaimed Water Service

1. Construction

a. Material

(1) All on-site reclaimed water facilities must be readily distinguishable from all on-site potable water facilities.

(2) Reclaimed water pipes may be of PVC dyed purple (Pantone 512) with continuous lettering **"CAUTION RECLAIMED WATER"** applied at the factory. No other identification is required.

(3) All reclaimed water pipes except as specified in item 2 above, must be identified along their entire length with warning tape. The warning tape must be yellow in color, a minimum of 2 inches wide with the words **"RECLAIMED WATER"** printed in 1" high black letters. The lettering should be repeated continuously the full length of the tape.

(4) All piping from the reclaimed water system shall be installed to maintain ten (10') feet minimum horizontal separation from all potable water piping. Where reclaimed and potable water piping cross, the reclaimed water piping shall be installed below the potable water piping in a PVC class 200 pipe sleeve which extends a minimum of five (5') feet on either side of the potable water piping. Additionally, a minimum vertical clearance of six (6") inches shall be provided.

(5) All above ground reclaimed water facilities (risers, valves, controllers, etc.) must have identifying labels for reclaimed water.

b. Valve Marking

Hose bibs are not permitted on the reclaimed water system.

c. Drawings Required

Applicants for reclaimed water service shall submit system plans for review and approval by the utility.

d. Location

(1) Reclaimed water facilities shall not be installed inside any structures, indoor atriums or planters.

(2) Drinking fountains and picnic tables shall be located to minimize exposure to direct and windblown reclaimed water spray. **(N)**

SERVICE CONNECTIONS, METERS, AND CUSTOMER'S FACILITIES

D.1.d. Location (continued) **(N)**

(3) Reclaimed water shall not be sprayed outside the design area shown in the plans submitted in Section D.1.c. above.

(4) Reclaimed water shall not be used to irrigate any enclosed private rear yard or patio.

2. Cross Connection Control Requirements

a. Cross connection between the potable water system and the reclaimed water system is prohibited.

b. Where reclaimed water and potable water service exist on the same site the potable water system shall be protected with an approved backflow prevention assembly (reduced pressure principle assembly RP). Applicant shall pay all costs for the purchase, installation, and maintenance of backflow preventative devices. Final determination of the type of protection will be the responsibility of the water utility.

c. Backflow prevention devices shall not be installed on reclaimed water systems and must be removed from potable irrigation systems which are converted to reclaimed water.

d. Backflow prevention devices shall be tested annually or more frequently if determined to be necessary by the utility and repaired or replaced as necessary at the expense of the customer.

3. Operational Requirements

a. The customer must appoint a Site Supervisor and provide name, title and 24-hour phone number(s) of designated Site Supervisor to the water utility. Alternate site supervisors may be appointed.

b. The Site Supervisor shall:

(1) Ensure proper installation, operation, and maintenance of the recycled water system and all backflow prevention devices on the potable water system.

(2) Practice diligent surveillance of the system to ensure compliance with water utility rules, the State Board's Division of Drinking Water regulations, and any local governmental requirements. Disregard for requirements could result in termination of service until the specified corrections are made.

(3) Educate occupants, residents, and on-site personnel on a continuous basis to ensure that reclaimed water is used in compliance with the State Board's Division of Drinking Water and any local governmental requirements.

(4) Post warnings that reclaimed water shall not be used for human consumption or in the preparation of food.

(5) Maintain the reclaimed water system to ensure its integrity and minimize failures. Broken valves, pipes, and sprinklers shall be repaired in a timely manner.

(6) Receive appropriate training to assure proper operation of recycling facilities, operations personnel protection, and that the reuse site meets all applicable requirements. **(N)**

SERVICE CONNECTIONS, METERS, AND CUSTOMER'S FACILITIES

4. Usage Guidelines **(N)**

    a. Avoid direct spray and minimize overspray on drinking fountains in areas irrigated with reclaimed water.

    b. Adjust sprinklers to minimize reclaimed water spray on picnic tables, benches, decks, patios, sidewalks and roads.

    c. Irrigate in a manner which will minimize ponding, and runoff. If necessary, use the "repeat" function of the irrigation controller to apply the required amount of water in several short duration cycles.

5. Irrigation Time Restrictions

    a. Irrigation in areas of human contact, parks, playgrounds, and school yards shall be during the late night/early morning hours (10:00 p.m. – 6:00 a.m.). Slopes adjacent to pedestrian walkways are considered areas where there is human contact.

    b. No time restrictions apply to irrigation areas where there is minimal human contact.

6. Reporting and Inspections

    a. The water utility shall be notified 48 hours prior to the start of construction or pipeline installation in order to schedule inspection.

    b. The water utility shall be notified immediately of a change in Site Supervisor.

    c. All significant changes for the reclaimed water system shall be submitted to the water utility for pre-approval.

    d. As-built plans for the reclaimed water system including subsequent modifications shall be submitted to the water utility for approval. **(N)**