San Francisco
Water Power Sewer
Services of the San Francisco Public Utilities Commission

Rules and Regulations Governing Water Service to Customers









Established by Resolution No. 19.786
Passed December 15, 1959
by the Public Utilities Commission

Effective January 1, 1960
Amended June 8, 2026

San Francisco Public Utilities Commission
Water Enterprise

Rules and Regulations Governing Water Service to Customers

Established by
Resolution No. 19.786

Passed December 15, 1959
by the Public Utilities Commission

Effective January 1, 1960
Amended June 8, 2026

525 Golden Gate Avenue
San Francisco, California 94102

Table of Contents

Section A – Installation of Services

Rule 1 - Application for Service 1
Rule 2 - Installation of Service 2
Rule 3 - Standard Service 3
Rule 4 - Non-Standard Service 3
Rule 5 - Fire Service 4
Rule 5A - Combination Fire Service 4
Rule 6 - Service Outside San Francisco 5
Rule 7 - Basement Under Sidewalk 6
Rule 8 - Change of Location or Size of Service or Meter 6
Rule 9 - Protection of Public Water Supply 7
Rule 10 - Control Valves, Ground Wires, Etc. 8
Rule 11 - Mains and/or Services in Impaired Sub-Surface Areas 8

Section B – Extension of Mains

Rule 1 - Installation 10
Rule 2 - Ownership Transfer 10
Rule 3 - Financial Responsibilities 11
Rule 4 - Cost Sharing by New Applicants 12

Section C – Application for Water Supply and Responsibility of Applicants

Rule 1 - Application for Supply 15
Rule 2 - Establishing and Maintaining Credit 15
Rule 3 - Return of Deposit 16
Rule 4 - Charge for Turning On/Shutting Off Water Supply 16
Rule 5 - Water Used Without Regulation Application 16

Section D – Meter Reading, Billing and Collection

Rule 1 - Billing Periods 17
Rule 2 - Billing for Two or More Meters 17
Rule 3 - Size of Meter for Billing 17
Rule 4 - Presentation and Payment of Bills 17
Rule 5 - Proper Charges – Time Limit 18
Rule 6 - Allowances 18
Rule 7 - Meter Tests 19
Rule 8 - Non-Registering Meters 19
Rule 9 - Exemptions from Liens and Discontinuations of Service 20

Section E – General

Rule 1 - Compliance with Emergencies 21
Rule 2 - Application of San Francisco Rates 21
Rule 3 - Improvement of Service 21
Rule 4 - Pressure and Supply 21
Rule 5 - Tampering with Department Property 22
Rule 6 - Admission of Department's Employees 22
Rule 7 - Abatement of Noises 22
Rule 8 - Removal and Relocation of Facilities 22
Rule 9 - Determination of Cost 23
Rule 10 - Damage Claims 24

Rule 11 - Applicability of Charges for Water Use Due to Noncompliance with Conservation Measures ..24
Rule 12 - Water Use Restrictions ..24
Rule 13 - Interpretation of Rules and Regulations ..26

Section F - Water Efficient Irrigation

Purpose ..27
Rule 1 - Applicability..27
Rule 2 - Definitions..29
Rule 3 - Tier 1 - Landscape Rehabilitation Projects ..37
Rule 4 - Tier 2 - New construction projects ..38
Rule 5 - Compliance Plans for Large Irrigated Landscapes ..39
Rule 6 - Water Efficient Landscape Design and Operation Elements..40
Rule 7 - Maximum Applied Water Allowance (MAWA) ..44
Rule 8 - Landscape Documentation Package..45
Rule 9 - Soil Management Report ..45
Rule 10 - Landscape Design Plan ..46
Rule 11 - Irrigation Design Plan..47
Rule 12 - Grading Design Plan..48
Rule 13 - Certificate of Landscape Completion..48
Rule 14 - Irrigation Audits for Landscape Areas..49
Rule 15 - Non-Potable Water ..49
Rule 16 - Water Waste Prevention ..50
Rule 17 - Potable Water and Nonfunctional Turf ..51

Section G – Cross-Connection Control

Rule 1 - Applicability..53
Rule 2 - Definitions..55
Rule 3 - Type and Level of Backflow Prevention Required..59
Rule 4 - Installation, Replacement, and Relocation Requirements for Backflow Preventers ..64
Rule 5 - Testing, Inspection, and Repair Requirements for Backflow Preventers ..66
Rule 6 - Backflow Prevention Assembly Test Tags ..67
Rule 7 - Water Quality Division Inspections of New Water Services ..67
Rule 8 - Permits to Operate..68
Rule 9 - Companies Employing Authorized Backflow Prevention Assembly Testers and Authorized Cross-Connection Control Specialists ..71
Rule 10 - Inspection and Testing Requirements for Dual-Plumbed Systems ..72
Rule 11 - Emergency Cross-Connection Response Plan for Standard-Plumbed and Dual-Plumbed Systems..73
Rule 12 - User Supervisor ..74
Rule 13 - General Manager Notices and Inspections..75
Rule 14 - Enforcement, Citations, and Fines ..76
Rule 15 - Administrative Review and Appeal ..77
Rule 16 - Variances..78

APPENDIX

Sample Calculations of Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use (ETWU)..79

Section A – Installation of Services

Rule 1 - Application for Service

The owner or authorized agent of the property to be served shall make written application to the Water Enterprise (hereinafter referred to as “Water Department” or “the Department”) for service before extending the house pipe to the curb. Applications shall include the desired location and size of service pipe and meter, fixtures to be supplied or quantity of water required in gallons per minute, the use or class of occupancy of the premises, the area to be supplied, and any other information which shall aid the Department in providing adequate service. Applications for fire service shall include any special requirements of the Fire Department or the Underwriters having jurisdiction. No application for service from an existing main will be considered where the meter(s) for the property to be supplied will be located at an elevation of less than 100 feet below the outlet level of the reservoir supplying the main, unless the applicant agrees to accept such existing water supply and service to the said property as constituting full performance by the Department of its obligation. The Department shall not be responsible for inadequate or improper installations resulting from lack of information in the application.

(Paragraph as amended August 16, 1966. Resolution No. 66-0662)

All standard and non-standard services two inches (2”) and larger shall be for use in the area or premises as defined in the application which shall include a term agreement with the terms and conditions fully set forth in the application for such service.

All services of the Department are supplied with the understanding that the applicant agrees to abide by the Rules and Regulations and the Rate Schedules of the Department as they now exist or as they hereafter may be amended.

Rule 2 - Installation of Service

Service connections will be installed, at the expense of the applicant, from the Department's mains to the meter at the opposite curb line of public streets in which the mains are located and clear of driveways or other obstructions. The meter or meters will be installed on the service inside the curb line or as near thereto as possible. Where the main is in a right of way or easement owned or controlled by the Department, the service will not be extended beyond such right of way or easement.

Where the Department has no main installed, the applicant must arrange for main extension or extend his house piping to the curb of a street occupied by the Department's mains.

No service will be installed on any private road, lane, street, alley, court or place, or extended beyond the curb of the street in which the Department's mains are installed. Applicants desiring such service must extend their housepiping.

The Department reserves the right to determine the location and size of service and meter, to limit the number of houses or buildings and the area of land to be supplied by one service connection, and to refuse service if it considers such service to be detrimental to existing services or to the interests and operations of the Department or to the interests of the City and County of San Francisco. The Department shall determine the class of service, taking into consideration the type of structure, the use of the service, volume of water usage and other pertinent factors.

When more than one consumer is supplied through one service connection and meter, the Department will hold the accepted applicant responsible for the bills for all water supplied. If separate billing is desired, additional services or meters will be installed and bills rendered accordingly, provided the house piping is segregated and brought to the curb line of the property.

For the purposes of determining charges for installation of water services (Schedule W-41) under the established rate schedules, a service installation shall be understood to mean the connection to the main, the pipe from the main to the meter, appurtenant valves and fittings, and the meter box and appurtenances; and the size of the pipe from the main to the meter shall determine the amount of the installation charge. However, for service pipes normally 2 inches or smaller in size, the Department may, at its discretion, install a larger or smaller size pipe from the main to the meter than is normally required in which case the normally required size of pipe shall determine the amount of the installation charge. For service pipe installations over 2 inches in size or when in the opinion of the Department any unusual conditions may result in costs more than 15 percent higher than the charges in the rate schedule, the applicant shall pay the actual costs of installation. Service charges (Schedules W-1, W-21, and W-25) shall be predicated on the size of meters installed on the service connection.

All pipe, valves, fittings, equipment, materials, meters, etc., up to and including the outlet equipment from the meter or meters shall remain the property of the Department.

Rule 3 - Standard Service

Service for immediate and permanent use for standard residential, commercial or industrial purposes and complying in all respects with the provisions of the Department as to size, location and usage will be classed as standard service. The necessary meter or meters will be furnished and installed by the Department without charge.

Rule 4 - Non-Standard Service

Service for temporary or intermittent use or for purposes not deemed by the Department to comply with its requirements for standard service will be classed as non-standard service. The installation charge shall include the costs of the metering equipment and its installation.

The cost of the metering equipment, less removal costs, may be returned to the original applicant if, within two years of installation, service is terminated and the metering equipment recovered by the Department without damage. Non-standard service extending beyond two years that in fact becomes standard service as defined in Rule 3, Section A, may be declared by the Department to be standard service, and the costs of the metering equipment and its installation refunded to the original applicant, if such applicant so requests within ten years of installation and the total revenue from the service within the two years immediately prior to the request is equal to or greater than ten times the cost of the complete installation.

Rule 5 - Fire Service

Service for automatic fire sprinkler systems or for fire protection of any kind will be classed as fire service provided such service is required by or conforms to the regulations of the Fire Department or the Underwriters having jurisdiction and provided that if water is used for any purpose other than extinguishing accidental fires or for testing the system, the general use schedule of rates for service charge, water delivered and minimum billing shall apply and the Department shall have the right to place a standard meter or meters on the service, if not already installed, at the expense of the customer or to disconnect the entire water supply for the premises.

The installation charge shall include the costs of the metering equipment and its installation.

Rule 5A - Combination Fire Service

Service for automatic fire sprinkler systems or for fire protection of any kind, when combined with a standard service, will be classed as a combination fire service subject to be the following provisions:

(1) Such service is required by or conforms to the regulations of the Fire Department or the Underwriters having jurisdiction.

(2) The fire service size shall be determined by the San Francisco Fire Department or other proper authority having fire jurisdiction.

(3) The domestic service shall be sized in accordance with Department Rules based on demand and/or fixture unit count for the building or premises involved.

(4) The combined fire and domestic service shall not be sized greater than two (meter) sizes larger than that required to satisfy domestic requirements.

(5) Maximum size of a combined service shall be 2 inch.

(Rule as adopted, February 10, 1970, Resolution No. 70-0081).

Rule 6 - Service Outside San Francisco

It is the policy of the Department to give preference in the sale of water outside the limits of the City and County of San Francisco to municipalities, water districts and communities for distribution under their own operation and control. The Department will, however, consider applications for service from individuals or others located outside of the areas served by such local distributing systems and may within its discretion provide such service until such time as the premises supplied are included within the area served by an independent system, supplied by the Water Department, which independent system desires and is able to provide such service or until such time as it is no longer feasible for the Department to continue to provide such service.

Connections to the Department's transmission mains will be made only at points to be chosen by it. Non-standard service will not be provided from transmission mains except to meet an urgent requirement concerning the public welfare.

Fire service connections may be allowed provided that domestic service is also supplied by the Department to the same premises. Applications for water service for industrial and other purposes will be considered and may be accepted if not deemed detrimental to existing services or inimical to the interests and operations of the Department and such water service may be furnished under agreement fixing terms and conditions for such service.

In the event it becomes necessary for the Department to abandon a transmission main, the Department reserves the right to discontinue the existing services from such transmission main; and will thereafter supply service, if requested, from the most convenient then existing transmission main.

Wholesale service shall be by application and shall be restricted to the supply of water for distribution by the applicant for domestic and other municipal purposes of the applicant in the service area defined in the application. The application shall be a term agreement in which shall be set forth the area to be supplied, the size of the service, whether the service is for immediate and permanent use or for intermittent use.

Water service conducted pursuant to these Rules and Regulations shall be in accordance with that certain federal statute designated as the "Raker Act".

No new service or services for wholesale water will be installed, nor will any present service or services be increased in capacity; nor will the Department supply water for wholesale to any present service or services to supply any additional area than the area supplied by such present services as of January 1, 1960, unless written application as provided in this section has been properly signed, received and approved by the Department.

Unless written application as provided in this section has been signed, received and approved by the Department from the present wholesale customers the Department will notify each such customer for wholesale water that, effective January 1, 1960, the Department will not guarantee to supply water in excess of the safe plant capacity existing as of January 1, 1960.

All supply and distribution lines leading from the Department's meters shall be installed and maintained by the applicant at his expense and the applicant will be held responsible for payment for all water delivered whether beneficially used or lost through leakage.

Rule 7 - Basement Under Sidewalk

Where the basement of the property to be served extends under the sidewalk area, the owner or applicant shall provide, at a point approved by the Department, the necessary opening in the retaining wall to extend the service pipe, and the meter shall be installed on the service just inside such wall in a position convenient for reading or for making any repairs or changes necessary. Neither the Department nor its officers, employees or agents shall incur any liability of any kind whatever by reason of the installation or presence of Department's meter, service pipe or any other facility or facilities of Department in or near the said property to be served.

The owner, tenant or customer shall provide and maintain easy access to the meter for reading or any other purpose the Department may deem necessary. Failure to remove any obstruction within ten (10) days after notification by the Department, will be sufficient cause for removal of the meter, at the expense of the applicant, to a more accessible location or for discontinuance of service.

Rule 8 - Change of Location or Size of Service or Meter

Applicants desiring a change in the location, arrangement or size of the service or meter must bear all cost of such change.

(Rule as adopted, April 13, 1971. Resolution No. 71-0130).

Rule 9 - Protection of Public Water Supply
Services, meters and house piping shall conform to the rules of the Water Department, to the Building, Plumbing and Fire Ordinances and to any legal requirements of the State Department of Public Health or other authority having jurisdiction.

Where an auxiliary water supply exists in any building or premises connected to the system of the Department, approved backflow protection must be provided unless the auxiliary water supply is acceptable as an additional source of water by the Department. This requirement shall include the handling of process waters and waters originating from the Department which have been or may be subject to deterioration in sanitary quality. Backflow prevention devices shall be installed where internal cross connections exist unless such cross connections are abated to the satisfaction of the Department.

The Department will not supply water to any building or premises having an auxiliary water supply or where cross connections exist unless approval for such service is first obtained from the Department. Approval may be granted under the following conditions:

a) Premises With Auxiliary Water Supply
Where approved backflow prevention devices are installed and maintained by the customer to the satisfaction of the Department.

b) Premises With Cross Connection
Where approved backflow prevention devices are installed and maintained by the customer to the satisfaction of the Department or where approved air-gap separation has been provided

c) Sewage Treatment Plants or Sewage Pumping Stations
Where the Department's service line is protected by approved air-gap separation before the first fixture and where the piping between the service cock and the receiving tank is entirely visible.

The Department may require an affidavit at any time to the effect that no cross connection or auxiliary water supply exists or stating the size and location if any do exist.

Failure to comply with any requirements relative to the protection of public water supplies will be sufficient reason for immediate discontinuance of any service until such time as it is determined that the requirements of the Department have been met.

Rule 10 - Control Valves, Ground Wires, Etc.
The owner or accepted applicant of the property to be or being supplied shall, if not already provided, install a gate type control valve on the house pipe between the Department's meter and the first fixture outlet.

Neither the Department nor its officers, employees or agents shall incur any liability of any kind whatever by reason of water running from open or faulty fixtures or from broken or damaged house pipes, i.e. for pipes beyond the Department's meter.

No one may attach any ground wire or wires to any plumbing which is or may be connected to any service pipe or main belonging to the Department unless such plumbing is adequately connected to an effective driven ground installation on the premises. Neither the Department nor its officers, employees or agents shall incur any liability of any kind whatever by reason of the use of any facility for grounding purposes which is or may be connected to the system of the Department.

The owner or accepted applicant will be held liable for any damage to the property of the Department which may be willfully caused by him or result from carelessness or negligence on his part or on the part of any person or entity acting for or on behalf of such owner or accepted applicant and in particular, without limiting the foregoing, for damage occasioned by operating the Department's stop cock in lieu of a control valve, for damage due to ground wire attachments and for damage to the meter caused by not water or steam from the premises. In the event payment for such damage is not promptly made, the Department reserves the right to disconnect service to the premises until all claims are satisfied.

Rule 11 - Mains and/or Services in Impaired Sub-Surface Areas
Where mains and/or services are installed in streets where new installations or maintenance work will be impaired because of Redevelopment, Subways or similar public projects, the Department's policy is to remove such mains and/or services wherever feasible and to make no new installations in such streets.

Properties presently being served from such streets and abutting another street in which the Department has distribution mains will, if any changes in present service or any new service are required, be served only from such other street and the owner, agent, lessee or applicant shall extend his existing pipe to such other street to meet the new service location.

Section A

Where property presently abuts a side street, and is later subdivided so that any parcel will no longer have access to the side street, the owner, agent or lessee shall make the necessary arrangements to insure that such parcel or parcels shall be served from the appropriate side street.

If an owner, agent or lessee of property is unwilling to so extend a connection to such side street, the Department may refuse service to such property upon a determination that such service would be detrimental to existing services or detrimental to the interests of the Department or of the general public.

(Rule as adopted August 16, 1966. Resolution No. 66-0664).

Section B – Extension of Mains

(Section Revised January 16, 2001, effective February 13, 2001, Resolution No. 01-0035).

In the context of this Section B, the term “extension” shall mean the installation of a new water main to an area that has no existing main referred to as “new extension”, or to the upgrade to an existing main referred to as “extension upgrade” to meet new demand of the applicant. Extension upgrade includes the changeover of service lines from the existing main to the new main. Rules established for “extension” without any specific “new” or “upgrade” shall apply for both cases.

The term “facility” shall mean any new installation besides the main extensions. Typical facilities include pump stations, hydro-pneumatic stations, reservoirs, water tanks, and pressure regulator stations.

Rule 1 - Installation

The Department will determine if a main or mains extension or modifications to existing Department facilities or new facilities are required based on the applicant’s water demands.

The Department will specify characteristics of the extension such as size, location of the mains and any facilities that are required or approve extension or facility characteristics proposed by the applicant.

The Department will be responsible for the design of the extension or facility or approve the applicant’s design.

The Department will do the installation, hire a contractor or approve a contractor hired by the applicant to do it.

No extension or facilities shall be installed until such time as roadways are completed to sub-grade and construction of curbs and gutters are completed.

Installation by a contractor shall be inspected either by SFPUC inspectors or by inspectors selected or approved by the Department.

Rule 2 - Ownership Transfer

a) Installations in streets already accepted by the City Board of Supervisors (BOS)

- Installation done by the Department

The ownership of the installation is with the Department

- Installation done by others

The ownership of the installation is transferred to the Department on the day the installation is put into service or the day the applicant provides to the Department a 5-year warranty as to workmanship, whichever is later. The 5-year workmanship warranty shall be in the form of a warranty bond or other financial instrument acceptable to the Department.

b) Installation in streets not accepted by BOS or in private properties. Ownership of the installation remains with the applicant. The Department will install appurtenances (valves, meters) in the system that delineate the ownership boundary change. The Department may assume the ownership of the installation if certain conditions are met.

Conditions include but are not limited to:

- Pipeline right-of-way, facility access roads, and facility sites, as determined by the Department, have been provided to the Department.
- Design plans and specifications have been approved by the Department prior to construction.
- The installation met the Department standards. The Department may make a field investigation to insure the conformance to Department standards and require modifications as necessary before considering the ownership transfer.
- The inspection has been performed by SFPUC inspector or inspector approved by the Department.
- As-built drawings, acceptable to the Department, have been provided to the Department.
- A 5-year warranty as to workmanship, from the construction completion date of the installation or repairs/modification work has been provided to the Department.

If the Department satisfies all its requirements and accepts the ownership of the installation, the Department will issue a Certificate of Ownership Change. The effective date of the ownership transfer will be the date on the certificate.

Rule 3 - Financial Responsibilities

Unless otherwise indicated, the applicant is responsible for all costs of the installations required to meet new demands and costs related to the ownership transfer. Costs of the installations include, but are not limited to, costs for project management planning, design, materials, equipment, installation, inspection, system disinfection, and land acquisition (as applicable).

For the service or work to be performed by the Department, the applicant shall make a deposit equal to the estimated cost, as determined by the Department. At the completion of the installation, the Department will determine the actual costs. Refund or additional charges shall be made to or requested from the applicant should the estimated costs differ from the actual costs.

If any of the costs have been paid to a party besides the Department, at the completion of the installation, the applicant shall submit to the Department these costs incurred by him/her for each extension and each facility. The applicant shall provide all supporting documents to the Department for these costs. The Department will review the expenditures and determine the reasonable costs that will be applied for future refunds, if any. If the applicant fails to submit the costs to the Department within 60 calendar days after the day when the installation is put into service, the Department will unilaterally determine the reasonable costs.

Where the Department, in the anticipation of future development, specifies an extension system that is beyond and above the need of the applicant, the applicant is only responsible for the system that satisfies existing customers' and the applicant's demands.

The Department will, at its own expense and without deposit, install the first 150 feet and street crossings of a new extension required to provide exclusively standard service. If the new extension for standard service is longer than 150 feet, the applicant is only responsible for the portion of the extension in excess of the first 150 feet and street crossings. For a new extension required for fire or other services (besides standard service), or an extension upgrade for any service, the applicant is responsible for the entire cost of the extension.

Rule 4 - Cost Sharing by New Applicants

a) Cost Sharing Requirements

New applicants, who need the service from an extension or a facility, shall be required at the time of application for service to pay through the Department their shares of the installation cost paid by the previous applicant(s), if the dates of the new applications are within 10 years of the date when the extension or the facility is put into service. The Department will determine the costs as determined hereinafter. The Department will make the request to the new applicants, collect monies from them and pay to previous applicant(s).

The Department will make refund payments to the previous applicant(s) who actually paid for the installation or part of it. The right of collecting refunds is not transferable. Previous applicant(s) who are entitled to refunds shall notify the Department of any address change. If the Department cannot contact an applicant to send a refund, the Department will retain the fund.

No service hook-up for new applicants shall be made before the sharing costs are deposited to the Department. No cost sharing is required for applications submitting after the 10-year period.

The Department will retain 5% of the refund monies to administer the refund program.

b) Cost Sharing for Main Extensions

The cost of a main extension will be shared on a proportional basis among all customers connecting to the main extension. The share of cost assigned to each new connection will be calculated using information available from Customer Service Bureau records and the following formula:

$$S = \frac{M \times L}{T} \times C$$

Where:
S = Cost share of the connection.
M = Meter size in inches
L = Distance in feet from the beginning of the extension to the point of the new connection.
C = Total cost of the extension paid by the original (first) applicant.
T = The sum of M x L terms of all connections to the extension. Changeover, connections for extension upgrade are excluded.

Every time there is an application for a new connection to the extension, term "T" will increase and the cost share of all previous connections will be reduced. Applicants of previous connections will receive a refund, which is the difference of their previous cost share and the new cost share.

In case of an extension upgrade, all existing services that need to be connected to the new main (changeover) shall not be considered as new connections and consequently will not be included in the cost sharing calculation.

The applicant shall not receive any refund if he/she asks for disconnection of a service that was part of the cost sharing calculation.

An applicant, who needs an extension from an existing extension, shall share the cost for the entire length of the existing extension (the total length of the extension will be used to calculate his/her share). Besides, he/she will be responsible for the entire cost of the new extension.

c) Cost Sharing for Facility

- Facility can accommodate additional demand of the new applicant

If the Department determines that the facility can accommodate the new applicant's demand, the cost sharing is proportional to the ratio of the new demand over the total capacity of the facility. The ratio shall be determined by the Department.

The cost share S of the new applicant will be:
S = Cost share of facility
d = New applicant demand in gallons per minute (gpm) d

$$S = \frac{d}{D} \times C$$

D = Total capacity of facility in gallons per minute (gpm)
C = Total cost of the facility excluding main extension paid by the original applicant

- Facility cannot accommodate additional demand of the new applicant

If the Department determines that the facility cannot accommodate the new applicant's demand and it needs to be upgraded to satisfy new demand; the cost sharing shall be through an agreement between the original and new applicants with the approval of the Department. If no agreement can be reached within 90 calendar days from the date of the new application, the Department shall unilaterally determine the cost sharing based on modifications to the facility that best suit the Department's operation. Besides the cost share for the existing facility, the new applicant shall be responsible for all modifications as determined by the Department.

d) Cost Sharing Paid to the Department

The Department may also decide to install an additional extension or oversize an extension or a facility needed by an applicant to satisfy anticipated future demands. The Department will be responsible for what is above and beyond the applicant demand. However, any new applicant who needs the service of the additional or upgraded extension or facility will be requested to share the cost paid by the Department in the same way as outlined in b) and c) above.

Under no circumstances shall customers be requested to pay any cost share for connecting to a new main that has been installed as part of the Department's systematic Ductile Iron Main Replacement Program.

Section C – Application for Water Supply and Responsibility of Applicants

Rule 1 - Application for Supply

An applicant for water supply shall furnish such information as the Department requires to establish the account and shall establish credit as provided in Rule 2 of this Section. When a guarantee deposit is required the application shall be in writing. The responsible applicant, person or firm being supplied will be held liable for payment for all water delivered from the time service begins until the Department is notified in writing and discontinues service pursuant to such notification.

Where changes have been made in the house piping which affect the supply area as shown on the records of the Department, and the Department has not been afforded an opportunity to inspect such changes, the accepted applicant will also be held liable for payment of the bills as issued.

Any person or company that desires access to temporary water supply through the City and County of San Francisco's low-pressured fire hydrants shall file with the Department an application for a permit for such access in accordance with the SFPUC's Rules and Regulations Governing Hydrant Use for Temporary Water Supply, and comply with all requirements of those Rules and Regulations, a copy of which shall be available on the SFPUC's website.

All services of the Department are supplied with the understanding and condition that the applicant agrees to abide by all Rules and Regulations and the Rate Schedules of the Department as they now exist or as they hereafter may be amended.

(Rule as amended December 9, 2025. Resolution No. 25-0171)

Rule 2 - Establishing and Maintaining Credit

Customers are required to establish and maintain credit to the satisfaction of the Department. A regulation guarantee deposit may be required before granting, continuing, or re-establishing service.

When a guarantee deposit is required for a metered water supply, such deposit shall be approximately twice the estimated monthly water and sewer service charge bill but in no case shall it be less than $50.00. The deposit for temporary unmetered usage or for special shipping service may be equal to the estimated maximum bills for service to be rendered.

(Paragraph as amended May 25, 1999. Resolution No. 99-0138)

When service has been given with the understanding that a guarantee deposit is

to be made and such deposit is not made within ten (10) days, the Department may discontinue service.

At time of application for service, the Department will require a form of verifiable identification from the customer. Failure to provide such identification will result in not providing water service to the applicant.

(Paragraph as adopted May 25, 1999. Resolution No. 99-0138)

If an applicant has failed to pay the amount billed for all services rendered, the Department may discontinue or refuse to furnish service until the outstanding bills are paid and may apply any deposit to liquidate the bills. The Department may then require that the deposit be restored or, if none, may require that a regulation guarantee deposit be made before service will be granted, continued or re-established.

A guarantee deposit will be required in the amount of the estimated replacement cost of the metering equipment for portable meters issued for the drawing of Department water from fire hydrants.

(Rule as adopted, April 13, 1971. Resolution No. 71-0130).

Rule 3 - Return of Deposit

A guarantee deposit shall be returned to the depositor at the expiration of twelve months provided credit has been maintained to the satisfaction of the Department. The Department may extend the twelve-month period for holding a guarantee deposit to twenty-four months if the customer's payment record so warrants. Refund of a deposit held beyond the twelve-month period will be made on application therefore provided that credit has been maintained to the satisfaction of the Department. Upon closing an account the balance of any deposit remaining after settlement of the closing bill will be returned promptly to the depositor. Interest will be paid on guarantee deposits based on recommendations from time to time from the Public Utilities Commission's Bureau of Finance.

(Rule as amended May 25, 1999. Resolution No. 99-0138)

Rule 4 - Charge for Turning On/Shutting Off Water Supply

Service charges will be assessed for a service turn-on or shut-off during normal business hours (eight a.m. to four-thirty p.m. daily except Saturday, Sunday and holidays) and at times other than normal business hours. For applicable fees, refer to current Rates Schedules and Fees for Water, Power and Sewer Service (Schedule W-44).

Rule 5 - Water Used Without Regulation Application

A person or firm taking possession of premises and using water without having

made application to the Department for service, shall be liable for the charges from the date of the last recorded meter reading. If such use has not been metered the Department will install a meter and may render a bill based on the use of water as estimated by the Department and for as long as the consumer has been occupying or in possession of the premises without paying bills.

If proper application is not made upon notification by the Department to do so and if accumulated bills for service are not paid on presentation, service will be discontinued without further notice.

Section D – Meter Reading, Billing and Collection

Rule 1 - Billing Periods
Under ordinary conditions meters will be read either monthly or bi-monthly as determined by the Department on approximately the same day of the month and bills will be issued showing the period covered by the meter readings, the quantity of water delivered and the total charge for the service rendered. Bills will also be rendered upon termination of service. Service periods up to 40 days will be considered as one month and those up to 70 days will be considered as two months when computing charges.

Rule 2 - Billing for Two or More Meters
For the purpose of making charges, all meters will be billed separately and the readings will not be combined except that where the Department shall, for operating necessity, install two or more meters in place of one meter, then the readings of such meters will be combined for billing purposes.

Where the Department, for operating necessity, decides to supply a customer taking water for wholesale through more than one connection at different points on the same transmission main instead of at one point, the readings of the meters at the several connections may be combined for billing purposes. Such combinations will not be made unless the water is for use within the limits of a single municipality or well-defined community and the Department's system is the sole source of supply, and will be limited to three in number each not less than four inches in size.

Rule 3 - Size of Meter for Billing
The scheduled rate for service charge based on the size of the meter shall apply to disc or other displacement type meters, and to compound meters. Where current, velocity or magnetic meters are installed, the service charge shall be based on the size of compound meter or meters of equivalent delivery capacity.

Rule 4 - Presentation and Payment of Bills
Unless the applicant specifies otherwise, bills will be mailed to the premises.

Bills are due and payable on presentation, i.e., when mailed or upon delivery in any manner and become delinquent fifteen days thereafter. Service may be discontinued for non-payment of a delinquent bill or for any other infraction of the rules. Discontinuation of residential water service for nonpayment shall be conducted in accordance with the SFPUC's "Policy on Discontinuation of Residential Water Service for Nonpayment," a copy of which shall be available on the SFPUC's website.

(Rule as amended December 10, 2019. Resolution No. 19-0237).

Rule 5 - Proper Charges – Time Limit
Any bill for water supplied or service rendered will be considered a proper charge unless protest is made to the Department within fifteen (15) days after presentation.

In the event that a customer receives a notice of discontinuation of residential water service for nonpayment, the customer may contest or appeal a bill in accordance with the procedures set forth in the SFPUC's "Policy on Discontinuation of Residential Water Service for Nonpayment," a copy of which shall be available on the SFPUC's website.

In case of dispute as to payment of a bill, the customer will be required to present the receipted bill, cancelled check or other evidence of payment.

The Department will, upon request of the customer or for other reason, make an inspection of the premises on account of apparently excessive bills. After the Department has made a complete inspection, no further inspection will be made for a period of six (6) months provided, however, the Department may order an inspection at any time if conditions warrant.

(Rule as amended on December 10, 2019. Resolution No. 19-0237)

Rule 6 - Allowances
The customer has sole control of the water delivered beyond the Department's meter and the Department is not responsible for maintenance and repairs of the pipes and fixtures beyond the meter. In order to encourage prompt repairs of leaking pipes or fixtures the Department may, under certain conditions, grant allowances for apparently excessive bills resulting from leakage beyond the meter. All risk of loss beyond the point of delivery shall be borne by the customer, except as otherwise provided herein.

a) Allowance may be granted only when claim has been received as provided in Rule 5 of this Section and evidence clearly shows that the apparently excessive bill is due to leaking pipes or fixtures and not wasteful use and then only when repairs have been promptly made and reported to the Department. The allowance, if granted, will be for not more than two billing periods including that in which the claim was made.

b) Allowance ordinarily may be granted on the basis of one-half of the excess delivery due to leakage but in the case of concealed leaks in underground or unexposed pipes, full excess may be allowed.

c) Outside San Francisco no allowance will be made on account of leakage except when in the judgment of the Department exceptional conditions justify allowance and then only for concealed leaks in underground or unexposed pipes. In that event allowance may be granted based on from fifty to one hundred percent of the excess delivery. No allowance shall apply to customers taking water for wholesale.

The Department shall be the sole judge in determining the excess delivery due to leakage.

(Rule 6 as amended April 8, 1997. Resolution No. 97-0090)

Rule 7 - Meter Tests

If the customer questions the accuracy of a meter the Department will, upon written request, test the meter. The customer should be present to witness such meter test.

If the customer requests a meter test they will be charged for the first test and for any subsequent test within a 24-month period. For applicable fees, refer to current Rates Schedules and Fees for Water, Power and Sewer Service (Schedule W-44).

If the meter is found to register more than two percent fast the testing fee, if deposited, will be returned together with any overcharge based on correct meter readings. Such overcharge may be allowed for the twelve months next preceding the test or as much of the twelve months as the customer had been paying bills on the fast meter.

If the meter registers within the limit of error specified above, the testing fee, if deposited, will be applied by the Department to partially offset the costs of making the test.

Rule 8 - Non-Registering Meters

If a meter fails to register or to properly indicate the flow of water, a bill will be rendered on the basis of the average consumption of three preceding billing periods during which the meter was presumed to be functioning properly.

Bills rendered under the provisions of this rule will be subject to adjustment to give consideration to volume of business, seasonal demand, subsequent reading of a new meter, or other factors which may aid in making a proper charge.

Rule 9 - Exemptions from Liens and Discontinuations of Service

d) A customer shall be exempt from discontinuation of service or lien proceedings so long as the outstanding balance on the customer's water account remains less than or equal to $100.

e) Any account that is actively enrolled in the SFPUC's Customer Assistance Program shall be exempt from discontinuation of service and lien proceedings. A customer's water account that has remained delinquent for more than one year shall no longer qualify for this exemption unless the customer enters into and remains current on an SFPUC-approved payment plan.

f) A customer with income between 51% and 80% of current Area Median Income may qualify for a temporary exemption of up to six months from discontinuation of service or lien proceedings. A customer who seeks such an exemption shall submit to the SFPUC in writing a description of any Extenuating Circumstances that the customer believes would qualify them for a temporary exemption. For purposes of this Rule 9, Extenuating Circumstances means death of a spouse, partner or family member; divorce; loss of income or unemployment; disability or injury; medical treatment expenses; or any other circumstances that materially impact the customer's ability to pay the customer's water bill in full. Upon the expiration of a temporary exemption authorized under this subdivision (c), a customer may apply to SFPUC for a one-time extension of no more than six months by submitting proof of continuing Extenuating Circumstances.

g) Any customer that obtains an exemption under this Rule 9 shall remain responsible to pay SFPUC any unpaid or outstanding account balance, including any unpaid or outstanding account balance that may accrue while the exemption is in effect.

h) The exemptions in this Rule 9 are in addition to, and not exclusive of, all other SFPUC policies, rules, and regulations regarding collections and discontinuations of service, including, but not limited to SFPUC's Policy on Discontinuation of Residential Water Service for Nonpayment. This Rule 9 shall govern in the event there is a conflict between this Rule 9 and any other SFPUC policy, rule, or regulation.

(Rule as adopted, Nov. 12, 2024. Resolution No. 24-0236).

Section E – General

Rule 1 - Compliance with Emergencies
In order to comply with any laws of the United States, the State of California or the City and County of San Francisco with respect to any National, State or Local Emergency and any executive and administrative proclamations and orders made thereunder, each rule or regulation of the Department affected by such emergency shall be suspended or modified to the extent necessary to permit the Department to comply with any such laws, proclamations and orders during the period they are in effect.

Rule 2 - Application of San Francisco Rates
Where the Rate Schedules provide different rates for water service "within" and "outside" the limits of the City and County of San Francisco, rates applicable within the limits of San Francisco shall apply to all water service to premises served through a connection to the Department's mains which, together with the meter or meters, is located within the boundaries of the City and County of San Francisco. All other services shall be considered outside services.

Rule 3 - Improvement of Service
The Department may, as a part of its routine operations, enlarge, extend or replace its mains, services or other facilities and perform necessary work incidental thereto to whenever the Department head shall determine that such work is necessary.

Rule 4 - Pressure and Supply
The Department does not guarantee pressure or continuous supply nor will it accept responsibility at any time for the maintenance of pressure on its lines nor for increases or decreases in pressure. It reserves the right at any and all times, without notice, to shut off water for the purpose of making repairs, extensions, alterations or improvements and to increase or reduce pressure as a part of its operations. Neither the Department nor its officers, employees or agents shall incur any liability of any kind whatever by reason of the cessation in whole or in part of water pressure or water supply. Customers depending upon a continuous and uninterrupted supply shall provide emergency storage, oversize piping, pumps, tanks, pressure regulators, check valves or other means for a continuous or adequate supply or to safeguard their facilities.

Rule 5 - Tampering with Department Property
No one except an employee or representative of the Department shall at any time in any manner operate the main cocks, gates or valves of the Department's system, nor connect or disconnect the service pipe, nor interfere with meters or their connections, street mains or other property of the Department. Where the stop cock is operated in lieu of a control valve on the house pipe the Department will not be responsible for any damage resulting from the malfunction or breaking of the service pipe, stop cock, meter, house pipe or any connections.

The Department reserves the right to recover for damage to any of its facilities caused by the acts of others and will not be responsible for water damage occasioned by such acts of others.

Rule 6 - Admission of Department's Employees
Employees or representatives of the Department shall be admitted during reasonable hours to customers' premises to perform the various functions required in the performance of their regular duties. Those engaged in such work will be furnished with badges or other means of identification.

Rule 7 - Abatement of Noises
Where it has been determined that noises or other disturbances are originating from a customer's premises caused by apparatus attached to the water pipes or fixtures and are resulting in annoyance to other water users or may damage the Department's facilities, the Department may issue a notice to such customer or to the owner or agent of the property requesting removal or correction of the cause of complaint. Failure to properly abate the nuisance will be sufficient reason for discontinuing water service.

Rule 8 - Removal and Relocation of Facilities
Property owners or others desiring the removal or relocation of fire hydrants, water mains, services, meters or other facilities of the Department must bear all costs of such removal or relocation. In the case of any work involving a fire hydrant, the applicant will be required to present a written permit authorizing such work from the Fire Department having jurisdiction.

Rule 9 - Determination of Cost

In determining the actual cost of any work to be done by the Department at the expense of others, such cost shall include labor, material, engineering, inspection, contractual service, administrative service, and any other proper element of cost. Ten percent shall be added to all other costs for administrative services, except where work is performed for this Department by others, under contract, in which case five percent shall be added for administrative services.

(Paragraph as amended August 16, 1966. Resolution No. 66-0666)

The applicant shall make written request of the Department for the estimated cost of the proposed work following which such estimated cost, or the charge if listed in these rules or in the rate schedules, must be deposited before the Department can proceed. If the work has been done on an estimated cost basis, any difference between the amount deposited and the actual cost shall be adjusted by the Department or the depositor as required.

The requirement for a deposit shall not apply to work to be performed for a governmental agency or a public utility where satisfactory written authorization has been received covering agreement to pay for such work.

Any fees, deposits or payments imposed by and paid to the Department for installation charges, estimated costs, deposits or penalties may be refunded after adjustment for service and deduction for expenses of the Department, if any, as determined by the Department as hereinafter set forth: Provided, that such payment was made by reason of:

1. Duplicate payment.
2. Payment made in excess of actual amount due.
3. Payment erroneously imposed or collected by reason of error.
4. Payment for installation where no installation has been made.
5. In the case of deposits for service connection charges and where no work or partial work has been performed, and where the applicant notifies the Department of the abandonment of its application for service connection in whole or in part, or where such application has been canceled or denied by the Department.

The provisions of this rule relating to the right of refund of money shall apply to all claims for refunds of any kind heretofore presented, approved and transmitted to the Controller, on or subsequent to November 1, 1963; and the payment of all such claims made prior to November 1, 1963 is hereby ratified and approved.

(Paragraphs as adopted August 16, 1966. Resolution No. 66-0667)

Rule 10 - Damage Claims

Claims for damage which may be caused by, or result from, the Department's operations should be made pursuant to Section 87 of the Charter of the City and County of San Francisco, if said section is applicable, or pursuant to applicable provisions of the statutes of the State of California. In addition, prompt notice of any damage caused by or resulting from the Department's operations should be given by telephoning the City Attorney's Office, Claims Division at (415) 554-3900 to obtain a claim form and instructions. Evidence of damage involved in such claims shall not be destroyed before the Department has been given opportunity to inspect such damage.

Rule 11 - Applicability of Charges for Water Use Due to Noncompliance with Conservation Measures

All retail paying and nonpaying customers within and outside of the City and County of San Francisco, including but not limited to Federal, state and local governments, shall be subject to any charges for water resulting from noncompliance with various conservation measures imposed under the rate-setting authority of the Public Utilities Commission. These conservation measures include, but are not limited to the following:

6. Retrofitting of showerheads;
7. Installation of water-conserving plumbing fixtures such as aerators with restrictors on all faucets and permanent devices to reduce the amount of water used per flush by toilets using more than 3.5 gallons per flush;
8. Excess use charges in the event of mandatory rationing; and
9. Such other water conservation measures as may in the future be adopted by the Public Utilities Commission.

(Paragraph as adopted July 9, 1996. Resolution No. 96-0137)

Rule 12 - Water Use Restrictions

(Per Resolution 22-0045 approved February 22, 2022 and Resolution 23—0042 approved February 14, 2023 that updated Resolution 16-0127 approved June 28, 2016 that updated previous SFPUC Resolution 19.786

1. The customer will be in violation of the SFPUC's Water Waste Restrictions if the customer is found to be using water in the following ways:

   a) Application of potable water to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots or structures

   b) Use of hoses for any purpose without a positive shut-off valve

   c) Use of potable water to wash sidewalks, driveways, plazas and other outdoor hardscapes for reasons other than health, safety, or to meet City of San Francisco standards for sidewalk cleanliness and in a manner that causes runoff to storm drains and sewer catch basins

d) Use of single pass cooling systems, fountains and decorative water features, and commercial car washes

e) Application of potable water to outdoor landscapes during and within 48 hours after measurable rainfall

f) Irrigation with potable water of ornamental turf on public street medians

g) Use of potable water for backfill consolidation around non-potable piping, soil compaction, or dust control for construction or demolition projects within the boundaries of the City and County of San Francisco, if recycled water, well water, or groundwater are available. Recycled water must be used in accordance with State Water Resources Control Board, San Francisco Bay Regional Water Quality Control Board, San Francisco Department of Health, and SFPUC standards, regulations and requirements. The SFPUC will review the customer's fire hydrant meter application and allow temporary water supply from fire hydrants, if SFPUC determines that recycled water, well water, or groundwater are not available for the construction or demolition project

h) Serving drinking water other than upon request at eating or drinking establishments, including restaurants, hotels, cafes, cafeterias, bars or other public places where food or drink are served

i) To promote conservation, hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily and display notice of this option in guestrooms

2. Any homeowner's association or community service organization or similar entity is prohibited from:

a) Taking or threatening to take any action to enforce any provision of the governing documents or architectural or landscaping guidelines or policies of a common interest development where that provision is void or unenforceable under section 4735, subdivisions (a) and (b) of the Civil Code

b) Imposing or threatening to impose a fine, assessment, or other monetary penalty against any owner of a separate interest for reducing or eliminating the watering of vegetation or lawns during a declared drought emergency, as described in section 4735, subdivision (c) of the Civil Code

c) Requiring an owner of a separate interest upon which water-efficient landscaping measures have been installed in response to a declared drought emergency, as described in section 4735, subdivisions (c) and (d) of the Civil Code, to reverse or remove the water-efficient landscaping measures upon the conclusion of the state of emergency

3. As used in this Rule:

   a) "Architectural or landscaping guidelines or policies" includes any formal or informal rules other than the governing documents of a common interest development

   b) "Homeowner's association" means an "association" as defined in section 4080 of the Civil Code

   c) "Common interest development" has the same meaning as in section 4100 of the Civil Code

   d) "Community service organization or similar entity" has the same meaning as in section 4110 of the Civil Code

   e) "Governing documents" has the same meaning as in section 4150 of the Civil Code

   f) "Separate interest" has the same meaning as in section 4185 of the Civil Code

4. The SFPUC directs members of the public to report potential instances of water waste or other violations of this Rule through the City's 311 system. SFPUC staff regularly review and respond to reports submitted. The SFPUC will notify customers and other entities subject to this Rule that it observes or are publicly reported to be violating a water waste restriction and advise them of corrective action. Notification methods may include letter, phone call, and dispatch of an inspector. Customers and other entities subject to this Rule may be subject to enforcement that could include fines on their water bill, installation of flow restriction devices, injunctions, or other actions as deemed appropriate.

Rule 13 - Interpretation of Rules and Regulations

In the event of any question as to interpretation or application of any of these Rules and Regulations, the Department shall make such interpretation or application. In event of appeal, the ruling of the Public Utilities Commission shall be final.

Section F - Water Efficient Irrigation

(As amended per Resolution 22-0170 that was approved on September 27, 2022 and Resolution 15-0221 that was approved on October 27, 2015 and Resolution 26-0054 on April 14, 2026.)

Purpose

Section F - Water Efficient Irrigation Rules will:

a) Promote the values and benefits of landscapes while recognizing the need to invest water and other resources as efficiently as possible;

b) Establish a structure for planning, designing, installing, maintaining, and managing water efficient landscapes in new construction and rehabilitated projects;

c) Establish provisions for water management practices and water waste prevention for existing landscapes;

d) Promote using water efficiently without waste by setting a Maximum Applied Water Allowance, using state mandated formulas and accounting for local climatic conditions, that will serve as an upper limit for water use by irrigated landscapes;

e) Comply with the requirements of Article 10.8 of the California Government Code, enacted by the State as the Water Conservation in Landscaping Act;

f) Comply with the requirements of the California Green Building Standards Code (California Code of Regulations, Title 24, Part 11) and the State Model Water Efficient Landscape Ordinance (California Code of Regulations, Title 23, Chapter 2.7); and

g) Delineate the conditions under which the San Francisco Public Utilities Commission provides water for landscape irrigation uses.

Rule 1 - Applicability

a) Section F shall apply to all of the following projects and activities.

i. Tier 1: All public agency, residential, and commercial rehabilitated landscape projects with an aggregate modified landscape area equal to or greater than 1,000 square feet and less than 2,500 square feet.

ii. Tier 2: All public agency, residential, and commercial new construction projects with an aggregate landscape area equal to and greater than 500 square feet and rehabilitated landscape projects with an aggregate modified landscape area equal to or greater than 2,500 square feet.

iii. The irrigation and maintenance of any landscape irrigation system.

b) Section F does not apply to:

i. Registered local, state or federal historical sites where the landscape is maintained as part of the historical integrity of the site;

ii. Ecological restoration projects that do not require a permanent irrigation system; and

iii. Plant collections or animal habitat areas, as part of botanical gardens, zoological gardens, and arboretums open to the public.

c) The General Manager may waive some or all of the requirements of Section F for landscape rehabilitation projects proposed by San Francisco Public Utilities Commission's retail water customers located outside the boundaries of the City and County of San Francisco, if after consultation with the local agency having jurisdiction pursuant to California Government Code sections 65591, et. seq., the General Manager determines that the retail water customer must comply with the local agency's ordinance requirements. If the General Manager determines that the retail water customer is not required to comply with the local agency's ordinance requirements, the retail water customer must comply with Section F of the San Francisco Public Utilities Commission Rules for Water Service Customers.

d) The General Manager may waive some or all of the requirements of Section F if, after a site inspection, the General Manager determines that compliance is not feasible due to one or more of the following conditions.

i. Wet soil conditions stemming from proximity to naturally occurring water features such as a high water table, springs, ponds, lakes, creeks, and wetlands.

ii. Substantial health or safety related risk of injury or harm to property owner, users or workers.

iii. Disproportionately high costs for achieving minor or minimal water savings.

e) A process for document submissions and approvals pursuant to Section F will be developed by the General Manager in conjunction with the Department of Building Inspection, with the purpose of administrative efficiency and effective customer service.

Rule 2 - Definitions
The terms used in this section have the following meanings.

i) **Applied water:** the portion of water supplied by the irrigation system to the landscape.

j) **Automatic irrigation controller:** a timing device used to remotely control valves that operate an irrigation system. Automatic irrigation controllers are able to self-adjust and schedule irrigation events using either evapotranspiration (weather-based) or soil moisture data.

k) **Backflow prevention device:** a safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.

l) **Certificate of Landscape Completion:** the document required under Rule 13.

m) **Certified irrigation designer:** a person certified to design irrigation systems by an accredited academic institution, a professional trade organization, or other program such as the US Environmental Protection Agency's WaterSense Partners irrigation designer certification program and the Irrigation Association's Certified Irrigation Designer program.

n) **Certified landscape irrigation auditor:** a person certified to perform landscape irrigation audits by an accredited academic institution, a professional trade organization, or other program such as the US Environmental Protection Agency's WaterSense irrigation auditor certification program and the Irrigation Association's Certified Landscape Irrigation
Auditor program.

o) **Check valve or anti-drain valve:** a valve located under a bubbler and sprinkler head, or other location in the irrigation system, to hold water
in the system to prevent low head drainage from sprinkler heads when
the sprinkler is off.

p) **Common interest developments:** community apartment projects, condominium projects, planned developments, and stock cooperatives per California Civil Code Section 1351.

q) **Compost:** the safe and stable product of controlled biologic decomposition of organic materials that is beneficial to plant growth.

r) **Conversion factor of 0.62:** the number that converts acre-inches per year to gallons per square foot per year.

s) Distribution uniformity: the measure of the uniformity of irrigation water over a defined area.

t) Drip irrigation: any non-spray low volume irrigation system utilizing emission devices with a flow rate measured in gallons per hour.

u) Ecological restoration project: a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

v) Emitter: a drip irrigation emission device that delivers water slowly from the system to the soil.

w) Established landscape: the point at which plants in the landscape have developed significant root growth into the soil. Typically, most plants are established after 1 or 2 years of growth while native habitat mitigation areas and tree may need 3 to 5 years.

x) Estimated Total Water Use (ETWU): the total water used for the landscape.

y) ET adjustment factor (ETAF): a factor of 0.55 for residential areas and 0.45 for non-residential areas, that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape. ETAF for a Special Landscape Area shall not exceed 1.0. ETAF for existing non-rehabilitated landscapes is 0.8.

z) ETo or reference evapotranspiration: a standard measurement of environmental parameters which affect the water use of plants. ETo is expressed in inches per day, month, or year and is an estimate of the evapotranspiration of a large field of four-to seven-inch tall, cool-season grass that is well watered. Reference evapotranspiration is used as the basis of determining the Maximum Applied Water Allowance so that regional differences in climate can be accommodated.

aa) Evapotranspiration rate: the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.

ab) Existing landscape area: a landscape area of any size that has not been rehabilitated or constructed within the previous 12 months.

ac) First construction document: the first building permit issued for a project or, in the case of a site permit, the first building permit addendum issued orother document that authorizes construction of the project. “First construction document” shall not include permits or addenda for demolition, grading, shoring, pile driving, or site preparation work.

ad) Flow rate: the rate at which water flows through pipes, valves, and emission devices, measured in gallons per minute, gallons per hour, or cubic feet per second.

ae) Flow sensor: an inline device installed at the supply point of the irrigation system that produces a repeatable signal proportional to the flow rate. Flow sensors must be connected to an automatic irrigation controller, or flow monitor capable of receiving flow signals and operating master valves.

af) Friable: a soil condition that is easily crumbled or loosely compacted down to a minimum depth per planting material requirements, whereby the root structure of newly planted material will be allowed to spread.

ag) General Manager: the General Manager of the Public Utilities Commission, or his or her designee.

ah) Hardscape: any durable material (pervious and non-pervious).

ai) Hydrozone: a portion of the landscaped area having plants with similar water needs. A hydrozone may be irrigated or non-irrigated.

aj) Infiltration rate: the rate of water entry into the soil expressed as a depth of water per unit of time (e.g., inches per hour).

ak) Invasive plant species: species of plants not historically found in California that spread outside cultivated areas and can damage environmental or economic resources. Invasive species may be regulated by county agricultural agencies as noxious species. “Noxious weeds” means any weed designated by the Weed Control Regulations in the Weed Control Act and identified on a Regional District noxious weed control list. Lists of invasive plants are maintained at the California Invasive Plant Inventory and USDA invasive and noxious weeds database.

al) Irrigation audit: an in-depth evaluation of the performance of an irrigation system conducted by a Certified Landscape Irrigation Auditor. An irrigation audit includes, but is not limited to: inspection, system test with distribution uniformity or emission uniformity, precipitation rates, reporting deficiencies in the system, reporting overspray or runoff that causes overland flow, and preparation of an irrigation schedule. An irrigation audit may include suggested upgrades, current estimated water usage, and suggested system upgrades.

am) Irrigation efficiency (IE): the measurement of the amount of water beneficially used divided by the amount of water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. The irrigation efficiency for purposes of this ordinance is

0.75 for overhead spray devices and 0.81 for drip systems.

an) **Landscape Application:** the documents required under Rule 3 for Tier 1 compliance.

ao) **Landscape architect:** a person who holds a license to practice landscape architecture in the state of California pursuant to California Business and Professions Code.

ap) **Landscape area:** all the planting areas, turf areas, and water features in a landscape design plan subject to the Maximum Applied Water Allowance calculation, including any adjacent planted areas in the public right-of-way for which the property owner is responsible pursuant to the Section 400.1 or Section 805 of the Public Works Code. The landscape area does not include footprints of buildings or structures unless the footprints include planted areas such as living roofs. The landscape area also does not include sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other pervious or non-pervious hardscapes, and other non-irrigated areas designated for non- development such as open spaces and existing native vegetation.

aq) **Landscape contractor:** a person licensed by the State of California to construct, maintain, repair, install, or subcontract the development of landscape systems.

ar) **Landscape Documentation Deadline:** the date by which Tier 1 or Tier 2 documentation must be submitted for approval by the General Manager. This date shall be not more than 100 days after the issuance of the first construction document, or as determined by the General Manager in consultation with the Director of Department of Building Inspection.

as) **Landscape Documentation Package:** the documents required under Rule 8 for Tier 2 compliance.

at) **Landscape water meter:** an inline device installed as a separate utility water meter that measures the flow of water into the irrigation system.

au) **Landscape rehabilitation project or rehabilitated landscape:** includes any modifications to landscape areas over a 12-month period at a site that cumulatively exceeds 1,000 square feet. A landscape rehabilitation project or rehabilitated landscape does not include turf replacements on sports fields where the turf replaced provides a playing surface, routine weeding, brush removal where no new plant materials are installed, seasonal plantings, and areas dedicated solely to edible plants. A rehabilitated landscape does not include landscape areas where only the irrigation system is retrofitted for the use of recycled water and only plantings that restore areas disturbed by the recycled water retrofits are installed. Recycled water irrigation retrofit projects shall

employ best management practices to prevent runoff, ponding and overspray as directed in their recycled water use permit and comply with all applicable local and state regulation.

av) Lateral line: the water delivery pipeline that supplies water to the emitters or sprinklers from the valve.

aw) Low volume irrigation: the application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip, drip lines, and bubblers. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

ax) Low water use plants or climate appropriate plants: plants, shrubs, groundcovers or tree species that meet at least one of the following conditions.

i. The species has a water use ranking of "low" or "very low" in Region 1 (North-Central Coast) as established in the California Department of Water Resources 2014 publication "Water Use Classification of Landscape Species" or subsequent editions as it may be updated.

ii. The species has a water use ranking of "no water", "little water," or "little to moderate water" in the climate zone for the planting location as established in the Sunset Western Garden Book, Ninth Edition, published by Oxmoor House on February 7, 2012 or subsequent editions as it may be updated.

iii. The plantings are part of an engineered stormwater management feature approved by the General Manager pursuant to the San Francisco Stormwater Design Guidelines established by the Public Utilities Commission.

iv. The Department of Public Works, the Recreation and Park Department, or the General Manager has determined that the species, when watered for sufficient plant health and appearance, is low water use based on the agency's experience with the species, and the agency has added the species to the Low Water Use and Climate Appropriate Plant List maintained by the General Manager.

v. The species appears on the San Francisco Street Tree Species List established by the Department of Public Works Bureau of Urban Forestry.

vi. The planting is part of a species test approved by the Department of Public Works or the Recreation and Park Department.

vii. The species has been permitted at the site by the Department of Public Works or the General Manager based on wet soil conditions stemming from proximity to naturally occurring water features such as a high water table, springs, ponds, lakes, creeks, and wetlands.

ay) Master shut-off valve: is an automatic valve installed at the irrigation supply point which controls water flow into the irrigation system. When this valve is closed, water will not be supplied to the irrigation system, greatly reducing any water loss due to a leaky station valve.

az) Maximum Applied Water Allowance (MAWA): the amount of annual applied water established by the San Francisco Public Utilities Commission for a landscaped area, using state mandated formulas and accounting for local climatic conditions, that serves as an upper limit for lawful water use for irrigating landscaped areas. The MAWA is based upon the area's reference evapotranspiration, the ET Adjustment Factor, and the size of the landscape area. The Estimated Total Water Use shall not exceed the Maximum Applied Water Allowance. Special Landscape Areas, including recreation areas, areas permanently and solely dedicated to edible plants such as fruit and nut trees and vegetable gardens, and areas irrigated with non-potable water, are subject to the MAWA with an ETAF not to exceed 1.0.

ba) Mulch or mulching product: any organic material such as leaves, bark, straw, compost, or inorganic mineral materials such as rocks, gravel, and decomposed granite left loose and applied to the soil surface for the beneficial purposes of reducing evaporation, suppressing weeds, moderating soil temperature, and preventing soil erosion.

bb) New construction: a new building or structure with a landscape, or other new landscape, such as a park, playground, median strip, or greenbelt without an associated building or structure.

bc) New construction landscape project: the total area of landscape in the project as defined in "landscape area," and the modified landscape area for a landscape rehabilitation project.

bd) Non-potable water: includes recycled water, blackwater, graywater, foundation drainage, or harvested rain water. Non-potable water is suitable for uses such as landscape irrigation or water features. This water is not intended for human consumption.

be) Non-residential landscape: landscapes in commercial, institutional, industrial, mixed use residential and public settings that may have areas designated for recreation or public assembly.

bf) Operating pressure: the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.

bg) Overhead sprinkler irrigation systems: systems that deliver water through the air (e.g., spray heads and rotors).

bh) Overspray: the irrigation water which is delivered beyond the landscape area.

bi) Permit: an authorizing document issued by the General Manager or Department of Building Inspection.

bj) Pervious: any surface or material that allows the passage of water through the material and into the underlying soil.

bk) Plant factor or plant water use factor: a factor that, when multiplied by ETo, estimates the amount of water needed by plants. The plant factor range for very low water use plants is 0 to 0.1, low water use plants is 0.1 to 0.3, the plant factor range for moderate water use plants is 0.4 to 0.6, and the plant factor range for high water use plants is 0.7 to 1.0. Plant factors for any plant shall be as established in the publication "Water Use Classification of Landscape Species" or subsequent additions. Plants used in the landscape project that are not found in WUCOLS shall use the plant factor of a similar species included on WUCOLS.

bl) Project applicant: the person or entity applying for approval of a landscape project for a new construction project or a landscape rehabilitation project. A project applicant may be the property owner or his or her designee.

bm) Property owner: the legal owner of a property.

bn) Rain sensor: a rain sensing shutoff device that automatically suspends an irrigation event when it rains.

bo) Recreational area: areas dedicated to active play or public assembly such as parks, sports fields, and golf courses where turf provides a playing surface.

bp) Residential landscape: landscape surrounding a single or multi-family home.

bq) Runoff: water which is not absorbed by the soil or landscape to which it is applied and flows from the landscape area. For example, runoff may result from water that is applied at too great a rate (application rate exceeds infiltration rate) or when there is a slope.

br) Soil moisture sensor: a device that measures the amount of water in the soil. The device may also suspend or initiate an irrigation event.

bs) Soil texture: the classification of soil based on its percentage of sand, silt, and clay.

bt) Special Landscape Area (SLA): an area of the landscape dedicated solely to edible plants, recreational areas, and water features and irrigated areas using all or part of non-potable water.

bu) Sprinkler head: a device which delivers water through a nozzle.

bv) Static water pressure: the pipeline or municipal water supply pressure when water is not flowing.

bw) Station: an area served by one valve or by a set of valves that operate simultaneously.

bx) Submeter: a metering device to measure water applied to the landscape that is installed after the primary utility water meter.

by) Swing joint: an irrigation component that provides a flexible, leakfree connection between the emission device and lateral pipeline to allow movement in any direction and to prevent equipment damage.

bz) Turf: a ground cover surface of mowed grass, including but not limited to Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, Tall fescue, Bermudagrass, Kikuyugrass, Seashore Paspalum, St. Augustinegrass, Zoysiagrass, and Buffalo grass.

ca) Valve: a device used to control the flow of water in the irrigation system.

cb) Water feature: a design element where open water performs an aesthetic or recreational function. Water features include artificial ponds, lakes, waterfalls, streams, fountains, spas, and swimming pools. The surface area of water features is included in the high water use hydrozone of the landscape area. Constructed wetlands used for on-site wastewater treatment or stormwater best management practices that are not irrigated and used solely for water treatment or stormwater retention are not water features and, therefore, are not subject to the water budget calculation.

cc) WUCOLS: the Water Use Classification of Landscape Species published by the University of California Cooperative Extension, the Department of Water Resources 2014, or subsequent editions as it may be updated.

Rule 3 - Tier 1 - Landscape Rehabilitation Projects with 1,000 – 2,500 square feet of landscape area

Beginning January 1, 2016, project applicants for all public agency, commercial, and residential landscape rehabilitation projects, with a modified landscape area equal to or greater than 1,000 square feet and less than 2,500 square feet, shall comply with the following:

a) Landscape irrigation shall not exceed the applicable Maximum Applied Water Allowance (MAWA) established in Rule 7.

b) Any turf area, planned or installed, shall not exceed 25 percent of the landscape area. Landscape projects exceeding the 25 percent turf limit shall be considered a Tier 2 landscape project and must follow the requirements for Tier 2 as described in Rule 4.

c) At least 75 percent of the landscape area shall consist of low water use plants or climate appropriate plants as defined in Rule 2. Landscape projects with less than 75 percent of the landscape area consisting of low water use plants or climate appropriate plants shall be considered a Tier 2 landscape project and must follow the requirements for Tier 2 as described in Rule 4.

d) Prior to commencing installation or modification of landscape that is not an edible plant, and prior to the issuance of the first construction document, if applicable, the project applicant shall:

   i. Submit and have approved by the General Manager a Tier 1 Landscape Application including:

      A. Tier 1 landscape project checklist, which serves as a preliminary summation of selected landscape components to determine whether a proposed landscape is consistent with the applicable MAWA established in Rule 7; and

      B. List of plants, trees, shrubs, or other vegetation that are to remain or be installed in the landscape area.

   ii. For landscape projects installed as part of the construction or renovation of a building, the Tier 1 Landscape Application shall be submitted prior to the Landscape Documentation Deadline; and

   iii. In the case of project applicants or property owners that are not required to obtain permits and approvals from the City's Department of Building Inspection, a Tier 1 Landscape Application shall be submitted to and approved by the General Manager prior to commencing installation or modification of landscape.

e) Following the installation of the landscape and any irrigation system, the project applicant shall submit a Certificate of Landscape Completion which certifies that the installed landscape and/or irrigation area does not consume water at a rate that exceeds the applicable MAWA established in Rule 7.

f) Landscape areas that are part of a compliance plan pursuant to Section F Rule 5 shall be required to provide Tier 1 compliance documents as set forth in the provisions of the compliance plan.

g) If complete documentation for Tier 1 compliance has not been submitted to the General Manager on or before the Landscape Documentation Deadline, the General Manager shall request to the Director of Department of Building Inspection that an address restriction shall be placed on the property such that no further construction permits or addenda shall be issued and no further inspections by the Department of Building Inspection shall occur, unless and until all landscape documentation, developed in accordance with the provisions of this chapter and the Public Utilities Commission's rules and regulations has been submitted to the General Manager for approval.

Rule 4 - Tier 2 - New construction projects with 500 square feet or more of landscape area and rehabilitation landscape projects with more than 2,500 square feet of landscape area

Beginning January 1, 2016, project applicants for all public agency, commercial, and residential new construction landscape projects with a landscape area equal to or greater than 500 square feet; and landscape rehabilitation projects with a modified landscape area equal to or greater than 2,500 square feet; or a project under Tier 1 with a turf limitation exceeding 25 percent of the landscape area or with less than 75 percent of the landscape area consisting of low water use plants or climate appropriate plants, shall comply with the following.

a) Prior to commencing installation or modification of landscape, the project applicant shall submit and have approved by the General Manager, a Landscape Documentation Package consistent with the Water Efficient Design and Operation Elements in Rule 6.

b) For landscape projects installed as part of the construction or renovation of a building, the Tier 2 Landscape Documentation Package shall be submitted prior to the Landscape Documentation Deadline.

c) In the case of project applicants or property owners that are not required to obtain permits and approvals from the City's Department of Building Inspection, a Tier 2 Landscape Documentation Package shall be submitted to and approved by the General Manager prior to commencing installation or modification of landscape.

d) Submit and have approved by the General Manager, prior to the submittal date of a first certificate of occupancy or prior to sign off on a landscape project authorization, the Landscape Documentation Package and a Certificate of Landscape Completion. The General Manager may authorize issuance of a first certificate of occupancy prior to approval of a Certificate of Landscape Completion, subject to conditions determined by the General Manager.

e) Landscape areas that are part of a compliance plan pursuant to Rule 5 shall be required to provide Tier 2 compliance documents as set forth in the provisions of the compliance plan.

f) If complete documentation for Tier 2 compliance has not been submitted to the General Manager on or before the Landscape Documentation Deadline, the General Manager shall request to the Director of Department of Building Inspection that an address restriction shall be placed on the property such that no further construction permits or addenda shall be issued and no further inspections by the Department of Building Inspection shall occur, unless and until all landscape documentation, developed in accordance with the provisions of this chapter and the Public Utilities Commission's rules and regulations has been submitted to the General Manager for approval.

Rule 5 - Compliance Plans for Large Irrigated Landscapes

Property owners maintaining a total irrigated landscape of 10 acres or greater may submit compliance plans for approval by the General Manager that support a

programmatic approach to compliance with Section F, rather than through the review and approval of individual landscape rehabilitation projects.

a) The General Manager shall establish a deadline for each property owner to develop and submit a compliance plan, which shall not exceed 3 years following the date of the property owner's initial request for review and approval of a compliance plan.

b) The property owner shall comply with all the terms of the approved compliance plan. The property owner's failure to comply with provisions of the compliance plan is a violation of Section F and subject to enforcement under the provisions of these rules or any other remedy available to the General Manager.

c) The compliance plan shall prioritize the phased implementation of landscape projects, beginning with the projects with the greatest water savings, to the extent feasible when balanced with other project objectives.

d) The compliance plan, if authorized by the General Manager, supersedes the process and procedures set forth in Rules 3 and 4.

e) The compliance plan shall ensure compliance with the requirements of Rule 6 and shall include a date or dates by which the components of the compliance plan shall be completed.

Rule 6 - Water Efficient Landscape Design and Operation Elements

The elements of a landscape shall be designed to achieve water efficiency. Tier 1 projects with a landscape area greater than 1,000 square feet, but less than 2,500 square feet, shall demonstrate water efficiency and compliance with this rule by providing appropriate responses to specific checklist items and certification pursuant to Section F Rule 3.

Tier 2 projects with a landscape area greater than 2,500 square feet require a complete Landscape Documentation Package and shall comply with all applicable criteria of this rule.

a) Plant Material

i. Plants shall be chosen and arranged appropriately based upon the site's climate, soil characteristics, sun exposure, wildfire susceptibility and other factors. Plants with similar water needs shall be grouped within hydrozones.

ii. Turf is not allowed on slopes greater than 25 percent.

iii. Turf areas shall not be less than 10 feet wide.

iv. The turf grass limitation excludes parklands or public recreation areas, sports fields, golf courses, cemeteries, or public areas, and areas irrigated with non-potable water.

v. The use of invasive plant species or noxious weeds is prohibited.

vi. The use of local California native plant species is encouraged in order to reduce water use and promote wildlife habitat.

vii. The architectural guidelines of a common interest development, which include community apartment projects, condominiums, planned developments, and stock cooperatives, shall not prohibit or include conditions that have the effect of prohibiting the use of low-water use plants as a group.

b) Irrigation System

i. Landscape water meters are required for landscape areas greater than 1,000 square feet to facilitate water management.

A. Non-residential projects with 1,000 to 5,000 square feet of landscape area shall install a privately owned submeter or a utility landscape water meter.

B. Any project with a landscape area greater than 5,000 square feet shallinstall a utility landscape water meter.

ii. Automatic irrigation controllers utilizing either evapotranspiration or soil moisture sensor data utilizing non-volatile memory shall be required.

iii. Rain sensors either integral or auxiliary, which suspend or alter irrigation operation during unfavorable weather conditions, shall be required on all irrigation systems.

iv. Master shut-off valves are required on all projects except landscapes that make use of technologies that allow for the individual control of sprinklers that are individually pressurized in a system equipped with low pressure shut down features.

v. Flow sensors are required for all non-residential landscapes and residential landscapes 5,000 square feet or larger.

vi. The irrigation hardware for each hydrozone shall include a separate valve.

vii. The irrigation systems shall be designed to prevent runoff, low head drainage, overspray and other similar conditions.

viii. Low volume irrigation shall be required in mulched areas, in areas with slope greater than 25 percent, within 24 inches of a non-permeable surface or in any irregularly shaped areas that are less than eight (8) feet in width. These restrictions do not apply if:

A. The landscape area is adjacent to permeable surfacing and no runoff occurs; or

B. The adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping. Irrigation systems shall be designed, maintained, and managed to meet or exceed an average landscape irrigation efficiency of 81 percent for drip irrigation and 75 percent for overhead spray.

ix. Irrigation emission devices must meet the requirements set in the American National Standards Institute (ANSI) standards, American Society of Agricultural Biological Engineers'/International Code Council's (ASABE/ICC) 802-2014 "Landscape Irrigation Sprinkler and Emitter Standard," All sprinklers in the landscape must document a distribution uniformity low quarter of 0.65 or higher using the protocol defined in ASABE/ICC 802-2014.

c) Hydrozones

i. Each valve shall irrigate only hydrozones with similar plant factors or site conditions such as: slope, sun exposure, and soil conditions.

ii. Sprinkler heads and other emission devices shall be selected based on what is appropriate for the plant type within that hydrozone.

iii. Where feasible, trees shall be placed on separate valves from shrubs, groundcovers, and turf.

iv. Individual hydrozones that mix plants of moderate and low water use shall use the higher water using plant factor. High water use plants shall not be mixed with low or moderate water use plants.

v. On the landscape design plan and irrigation design plan, hydrozone areas shall be designated by number, letter, or other designation. On the irrigation design plan, designate the areas irrigated by each valve, and assign a number to each valve.

d) Soil Preparation, Mulch and Amendments

i. Prior to the planting of any materials, compacted soils shall be transformed to a friable condition. On engineered slopes, only amended planting holes need to meet this requirement.

ii. A minimum three-inch (3″) layer of mulch shall be applied on all exposed soil surfaces of planting areas except in direct seeding applications (i.e. hydro-seed).

iii. Compost at a rate of a minimum of four cubic yards per 1,000 square feet of permeable area shall be incorporated to a depth of six inches (6") into the soil for planting areas. Soils with greater than 6 percent organic matter in the top six inches (6") of soil are exempt from adding compost and tilling.

iv. Stabilizing mulching products shall be used on slopes.

v. Soil amendments shall be incorporated according to recommendations of the soil report and what is appropriate for the plants selected.

vi. Organic mulch materials made from recycled or post-consumer shall take precedence over inorganic materials or virgin forest products unless the recycled post-consumer organic products are not locally available. Organic mulches are not required where prohibited by local Fuel Modification Plan Guidelines or other applicable local ordinances.

e) Water Features

i. Recirculating water systems shall be used for water features.

ii. Where available, non-potable water shall be used as a source for decorative water features.

iii. Surface area of a water feature shall be included in the high water use hydrozone area of the water budget calculation.

f) Irrigation Scheduling

Irrigation schedules shall be developed, managed, and evaluated to utilize the minimum amount of water required to maintain plant health. Irrigation schedules shall meet the following criteria.

i. Irrigation scheduling shall be regulated by automatic irrigation controllers.

ii. Overhead irrigation shall be scheduled between 8:00 p.m. and 10:00 a.m. unless weather conditions prevent it.

iii. Irrigation schedules for each station shall consider:

A. Irrigation interval (days between irrigation);
B. Irrigation run times (time period per irrigation event to avoid runoff);
C. Number of cycle starts required for each irrigation event to avoid runoff;
D. Application rate setting;
E. Plant type setting;
F. Soil type; and
G. Slope factor setting.

g) Landscape and Irrigation Maintenance Schedule

Landscapes shall be maintained to ensure water use efficiency. A regular maintenance schedule shall be submitted with the Certificate of Landscape Completion and shall include the following.

i. Routine inspection; adjustment and repair of the irrigation system and its components; aerating and de-thatching turf areas; replenishing mulch; fertilizing; pruning; weeding in all landscape areas; replacement of failed plants with same or equivalent plants; and removing obstruction to emission devices.

ii. Repair of all irrigation equipment shall be done with the originally installed components or their equivalents.

h) Irrigation Audits

Landscape and irrigation assessments for new or rehabilitated landscapes shall be conducted after the landscaping and irrigation system have been installed. The findings of the assessment shall be consolidated into the Certificate of Completion submittal and may include, but are not limited to inspection, system tune-up, system test with distribution uniformity, reporting overspray or runoff that causes overland flow, and preparation of an irrigation schedule.

i. For Tier 1 projects, the audit shall be conducted by the project applicant, a designated PUC water service inspector, or by a certified landscape irrigation auditor.

ii. For Tier 2 projects, the irrigation audit shall be conducted by a PUC water service inspector or by a certified landscape irrigation auditor.

iii. The General Manager shall administer programs that may include, but not be limited to, irrigation water use analysis, irrigation audits, and irrigation surveys for compliance with the Maximum Applied Water Allowance.

Rule 7 - Maximum Applied Water Allowance (MAWA)

The operation of irrigation systems in new construction landscapes and landscape rehabilitation projects subject to Rules 3, 4, and 5 shall adhere to a Maximum Applied Water Allowance which shall be the upper limit of water that may be lawfully applied through the irrigation system. The MAWA for an irrigation system installed for a new construction landscape or landscape rehabilitation project shall be calculated using the following equation and the corresponding ET Adjustment Factor (ETAF) of 0.55 for residential areas and 0.45 for non-residential areas.

MAWA = (35.1) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]

Where: MAWA = Maximum Applied Water Allowance (gallons per year)
35.1 = ETo or Reference Evapotranspiration for San Francisco (inches per year)
0.62 = Conversion Factor (to gallons)
ETAF = ET Adjustment Factor for residential (0.55), non-residential (0.45) landscapes
LA = Landscape Area including SLA (square feet)
1-ETAF = Additional Water Allowance for SLA for new or modified landscapes SLA = Special Landscape Area (square feet)

Rule 8 - Landscape Documentation Package

Tier 2 projects applications shall include at a minimum:

a) Project information sheet;

b) Water Efficient Landscape Worksheets which establish the project's MAWA and ETWU;

c) Soil management report;

d) Landscape design plan;

e) Irrigation design plan; and

f) Grading design plan.

Rule 9 - Soil Management Report

a) In order to reduce runoff and encourage healthy plant growth, a soil management report shall be completed by all Tier 2 project applicants where significant mass grading is planned. The soil management report or other documentation approved by the General Manager, shall document the various soil characteristics such as:

   i. Soil texture;

   ii. Infiltration rate determined by laboratory test or soil texture infiltration rate table;

   iii. pH;

   iv. Total soluble salts;

   v. Sodium;

   vi. Percent organic matter; and

   vii. Recommendations

b) The project applicant shall comply with one of the following:

   i. If project includes podium plantings using all imported soil, the project applicant shall submit a copy of the soil specification as part of the Landscape Documentation Package; or

   ii. If significant mass grading is not planned, the soil analysis shall be submitted as part of the Landscape Documentation Package; or

   iii. If significant mass grading is planned, the soil analysis report shall be submitted as part of the Certificate of Landscape Completion.

The soil analysis report shall be made available, in a timely manner, to the designers preparing the landscape design plans and irrigation design plans to make any necessary adjustments to the design plans.

The project applicant shall submit documentation verifying implementation of soil analysis report recommendations to the General Manager with the Certificate of Landscape Completion.

Rule 10 - Landscape Design Plan

Tier 2 landscapes shall be carefully designed for the intended function of the project. A landscape design plan shall meet the following design criteria and shall be submitted as part of the Landscape Documentation Package. The landscape design plan, at a minimum, shall:

a) Include all applicable elements of Rule 6: Water Efficient Landscape Design and Operation Elements;

b) Identify all plants to be installed as part of the landscape project including: common name, botanical name, quantity, type (e.g. grass, succulent, vine, shrub, and tree), and plant factor as defined in Rule 2;

c) Delineate and label each hydrozone by number, letter, or other method;

d) Identify each hydrozone as low, moderate, high water, or mixed (low/ moderate) water use, as defined by WUCOLS;

e) Include temporarily irrigated areas of the landscape in a low water use hydrozone for the purpose of water budget calculation;

f) Identify recreational areas;

g) Identify areas permanently and solely dedicated to edible plants or edible fruit or nut trees;

h) Identify areas irrigated with gray water or harvested rain water;

i) Identify type of mulch and application depth;

j) Identify soil amendments, type, and quantity;

k) Identify type and surface area of water features;

l) Identify hardscapes (pervious and non-pervious);

m) Identify location and installation details of any applicable stormwater best management practices that demonstrate compliance with the San Francisco Stormwater Design Guidelines for on-site retention and infiltration of stormwater. Examples include, but are not limited to: rain gardens, bioretention areas, infiltration basins, constructed wetlands, pervious pavements, and rain water harvesting systems;

n) Contain the following statement: “I have complied with the requirements of the Water Efficient Irrigation Ordinance and Section F of the San Francisco Public Utilities Commission Rules and Regulations Governing Water Service Customers, and I have applied the requirements for the efficient use of water in this landscape design plan;” and

o) Bear the signature of a licensed landscape architect, licensed landscape contractor, or other person authorized by the General Manager.

Rule 11 - Irrigation Design Plan

Irrigation systems shall meet all the requirements listed in this section and the manufacturers’ recommendations. The irrigation system and its related components shall be planned and designed to allow for proper installation, management, and maintenance. An irrigation design plan meeting the following design criteria shall be submitted as part of the Landscape Documentation Package. The irrigation design plan, at a minimum, shall contain:

a) Include all applicable elements of Rule 6: Water Efficient Landscape Design and Operation Elements;

b) Location and size of separate water meters for landscape (if applicable);

c) Location, type and size of all components of the irrigation system, including controllers, main and lateral lines, valves, sprinkler heads, moisture or rain sensing devices, quick couplers, pressure regulators, and backflow prevention devices;

d) Static water pressure at the point of connection to the public water supply. If a booster pump is used, include the operating pressure downstream from the pump;

e) Flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (pressure per square inch) for each station;

f) Indication of where any non-potable water irrigation systems are used;

g) The following statement: “I have complied with the requirements of the Water Efficient Irrigation Ordinance and Section F of the San Francisco Public Utilities Commission Rules and Regulations Governing Water Service Customers, and I have applied the requirements for the efficient use of water in this landscape design plan;” and

h) The signature of a licensed landscape architect, certified irrigation designer, licensed landscape contractor, or other person authorized by the General Manager to design an irrigation system.

Rule 12 - Grading Design Plan
If the Tier 2 landscape project area will be graded, the grading shall be designed to minimize soil erosion, runoff, and water waste; and a grading plan shall be submitted as part of the Landscape Documentation Package.

The project applicant shall submit a landscape grading plan that indicates finished configurations and elevations of the landscape area including:

a) Height of graded slopes;

b) Drainage patterns;

c) Pad elevations;

d) Finish grade; and

e) Stormwater retention improvements, if applicable.

The grading design plan shall contain the following statement: “I have complied with the requirements of the Water Efficient Irrigation Ordinance and Section F of the San Francisco Public Utilities Commission Rules and Regulations Governing Water Service Customers, and I have applied the requirements for the efficient use of water in this landscape design plan;” and shall bear the signature of a licensed civil engineer or landscape architect as authorized by law.

Rule 13 - Certificate of Landscape Completion
For all Tier 1 and Tier 2 projects, the project applicant shall submit to the General Manager the Certificate of Landscape Completion. The Certificate of Landscape Completion shall include the following elements.

a) For Tier 1, certification by the project applicant that the landscape project has been installed per the approved Tier 1 Landscape Application. For Tier 2, certification by the signer of the landscape design plan, the signer of the irrigation design plan, or the licensed landscape contractor that landscape project has been installed per the Landscape Documentation Package.

b) Irrigation scheduling parameters used to set the controller.

c) Landscape and irrigation maintenance schedule.

d) For Tier 2, irrigation audit report.

Rule 14 - Irrigation Audits for Landscape Areas

The General Manager may require irrigation audits to evaluate water use on landscape areas. Such audits may be initiated as a coordinated effort between the General Manager and the water service customer as part of the General Manager's Landscape Conservation Program, or if violation is reported to or discovered by the General Manager. When such audit is required, it must be completed by a certified landscape irrigation auditor.

a) Following the findings and recommendations of the certified landscape irrigation auditor, the General Manager may require adjustments to the irrigation usage, irrigation hardware, and/or landscape materials to reduce irrigation water use.

b) The landscape shall comply with the Maximum Applied Water Allowance for landscapes. The ET Adjustment Factor for existing landscapes is 0.8 and the ET Adjustment Factor for new construction landscapes and rehabilitated landscapes is 0.55 for residential areas and 0.45 for non-residential areas.

c) The MAWA for an irrigation system for an existing landscape area of any size shall be calculated using the following equation. MAWA = (35.1) (0.62) [(0.8 x LA) + (0.2 x SLA)]

Where: MAWA = Maximum Applied Water Allowance (gallons per year)
35.1 = ETo or Reference Evapotranspiration (inches per year)
0.62 = Conversion Factor (to gallons)
0.8 = ET Adjustment Factor (ETAF)
LA = Landscape Area including SLA (square feet)
0.2 = Additional Water Allowance for SLA
SLA = Special Landscape Area (square feet)

d) The MAWA for an irrigation system for a new construction landscape or rehabilitated landscape shall be as defined in Rule 7.

Rule 15 - Non-Potable Water

a) For purposes of Section F, a rehabilitated landscape does not include landscape areas where only the irrigation system is retrofitted for the use of recycled water and only plantings that restore areas disturbed by the recycled water retrofits are installed. Recycled water irrigation retrofit projects shall employ best management practices to prevent runoff, ponding and overspray as directed in their recycled water use permit and comply with all applicable local and state regulation. The installation of recycled water irrigation systems shall be required if the General Manager finds that recycled water meeting all applicable requirements is available for irrigation uses.

b) The San Francisco Public Utilities Commission encourages the installation of non-potable water irrigation systems for current and future use. New, rehabilitated and existing landscapes using nonpotable water shall be considered Special Landscape Areas. An ET Adjustment Factor for the total landscape shall not exceed 1.0. Existing Special Landscape Areas shall be allowed more water by using an ET Adjustment Factor of 0.8 and additional water allowance of 0.2 or 20 percent. New or rehabilitated Special Landscape Areas shall be allowed more water by using an ET Adjustment Factor of 0.55 for residential areas and 0.45 for non-residential areas and additional water allowances of 0.45 or 45 percent and 0.55 or 55 percent respectively.

c) Landscapes using non-potable water are exempt from the turf limitations subject to Rule 6, but shall comply with the Maximum Applied Water Allowance of the landscape.

d) Irrigation systems and decorative water features shall use non-potable water as permitted by local regulations, codes and standards.

e) All non-potable water systems shall be designed and operated in accordance with all applicable local and State laws.

Rule 16 - Water Waste Prevention

a) For landscaped areas of any size in the City and County of San Francisco, water runoff leaving the landscape area due to low head drainage, overspray, broken irrigation hardware, or other similar conditions where water flows onto adjacent property, walks, roadways, parking lots, structures, or non-irrigated areas, is prohibited.

b) In the event this rule or any other rule is violated, the General Manager may issue a written warning, entered on the user's water service record and delivered to the customer via mail, personal service, or other reasonable means. The letter willinclude information regarding the violation, education information on the restrictions, resources available from the General Manager to assist in complying with regulations, and a deadline for correcting the violation.

c) If the violations are not corrected to the satisfaction of the General Manager, the property owner, and project applicant where appropriate, shall be subject to enforcement in accordance with San Francisco Public Utilities Commission rules for limitation or termination of service, Chapter 100 of the San Francisco Administrative Code with respect to administrative penalties, and any other available legal remedies, at the sole discretion of the General Manager

Rule 17 - Potable Water and Nonfunctional Turf

a) To support State policies related to water conservation, the California State Legislature passed Assembly Bill 1572 (Water Code sections 10608.12 and 10608.14, as amended). This law prohibits using potable (drinking) water to irrigate nonfunctional turf (grass) at public properties, commercial, industrial and institutional (CII) properties, and the common areas at common interest developments (CIDs) like homeowner associations (HOAs), mobile home parks, and senior communities.

b) Therefore, the use of potable water for the irrigation of nonfunctional turf located on public properties, CII properties, common areas of the properties of homeowner associations, CIDs, and Community Service Organizations or similar entities is prohibited as of the following dates:

   i. Publicly Owned Properties, except those specified in Section (ii): January 1, 2027

   ii. Public Owned Properties in a designated disadvantaged community: January 1, 2031, or the date upon which a state funding source is made available to fund conversion of nonfunctional turf on these properties to climate-appropriate landscapes, whichever is later

   iii. Commercial, Industrial and Institutional Properties: January 1, 2028

   iv. Common areas of CIDs, HOAs, and Community Service Organizations or similar entities: January 1, 2029

c) This Rule 17 does not apply to:

   i. Cemeteries, active use areas of parks, sports fields, and golf courses

   ii. Single-family properties

   iii. Areas that are the exclusive use of the occupants of an individual dwelling unit

   iv. When used to ensure the health of trees and other perennial non-turf plantings

   v. Areas irrigated with recycled water

d) Beginning June 30, 2030, and every three years thereafter through 2039, owners of CII property with greater than 5,000 square feet of irrigated area, except for cemeteries, shall certify to the State Water Resources Control Board that their property is in compliance with Water Code section 10608.14, as amended. Contact the State Water Resources Control Board for additional details.

e) Beginning June 30, 2031, and every three years thereafter through 2040, HOAs, CIDs, and community service organizations or similar entities with more than 5,000 square feet of irrigated common area shall certify to the State Water Resources Control Board that their property is in compliance with Water Code section 10608.14, as amended. Contact the State Water Resources Control Board for additional details.

f) The SFPUC encourages properties covered under Rule 17 to identify any nonfunctional turf irrigated with potable water and to replace it with climate appropriate, low water use plants or nonpotable irrigation before the compliance deadline. The SFPUC provides various landscape and irrigation resources. See sfpuc.gov/savewater for more information.

g) The State Water Board may, upon a showing of good cause for reasons including economic hardship, critical business need, and potential impacts to human health or safety, postpone a compliance deadline under Rule 17(b) and Water Code section 10608.14(a) by up to three years.

h) Noncompliance by a person or entity with the requirements of AB 1572 (Water Code section 10608.14) shall be subject to civil liability and penalties set forth in Section 1846 of the Water Code, and Rule 16 – Water Waste Prevention of Section F. The SFPUC will notify SFPUC customers and other entities subject to this Rule 17 that it observes or are publicly reported to be in violation and advise them of corrective action. Notification methods may include letter, phone call, and dispatch of an inspector. SFPUC customers and other entities subject to this Rule 17 may be subject to enforcement that could include fines on their water bill, installation of flow restriction devices, injunctions, or other actions as deemed appropriate.

i) Definitions.

i. **Common area:** means that portion of a common interest development or of a property owned or managed by a homeowners' association or a community service organization that is not assigned or allocated to the exclusive use of the occupants of an individual dwelling unit within the property.

ii. **Common Interested Development (CID)** shall have the same meaning as in Civil Code section 4100.

iii. **Community Service Organizations or similar entities** shall have the same meaning as in Civil Code section 4110.

iv. **Functional turf:** means a ground cover surface of turf located in a recreational area or community space. Turf enclosed by fencing or other barriers to permanently preclude human access for recreation or assembly is not functional turf.

v. **Homeowners' association:** means an "association" as defined in Section 4080 of the Civil Code.

vi. **Nonfunctional turf:** means any turf that is not functional turf, and includes turf located within street rights-of-way and parking lots.

vii. **Potable water:** means water that is suitable for human consumption.

viii. **Publicly Owned Property** means properties owned by the Department of General Services, local governments, local or regional public agencies, and public water systems.

Section G – Cross-Connection Control

(Section amended December 10, 2024, Resolution No. 24-0252 , and September 9, 2025, Resolution No. 25-0131)

Rule 1 - Applicability

a) As a condition of receiving water service from the Public Water System, all Property Owners and Customers shall comply with this Section G of the SFPUC's Rules and Regulations Governing Water Service to Customers and any other applicable rule or legal requirement under San Francisco, state, or federal law. Section G's requirements also apply to Authorized Backflow Prevention Assembly Testers and Authorized Cross-Connection Control Specialists and the companies that employ them, as well as User Supervisors designated by Property Owners. Section G is promulgated in conformance with the California State Water Resources Control Board's standards for backflow protection and cross-connection control, implemented through the California Cross-Connection Control Policy Handbook (effective July 1, 2024); California Health and Safety Code Division 104, Part 12, Chapter 5, Article 2, section 116800; and San Francisco Health Code Article 12A.

b)Property Owners and Customers shall properly install and ensure that an approved Backflow Preventer is in use at all times at the Water Service Connection in accordance with Section G's requirements if the Property or location at which they receive water service contains any of the following facilities, serves any of the following functions, or wherever any of the following conditions exists:

i. Agricultural Property
ii. Airport
iii. Auxiliary Water supply
iv. Biotech facility
v. Business park with a single meter serving multiple businesses
vi. Buildings four stories or more in height or water supply greater than 40 feet above the water meter
vii. Car wash
viii. Cemetery
ix. Chemical plant

x. Dedicated irrigation service
xi. Dental office with water-connected equipment
xii. Dockside watering point or marine facility
xiii. Drinking water storage tank overflow connected to a sump or storm drain
xiv. Dry cleaner facility
xv. Dual-Plumbed Property
xvi. Electronics manufacture
xvii. Fire protection systems
xviii. Fire station
xix. Gas station
xx. Hazardous substances handled in any way the substances could enter the Public Water System
xxi. Hotel/motel
xxii. Industrial or commercial laundry facility
xxiii. Incarceration facility (prison)
xxiv. Intricate plumbing and piping arrangements
xxv. Kidney dialysis facility
xxvi. Laboratory
xxvii. Medical facility/hospital/clinic
xxviii. Metal-plating facility
xxix. Mobile home park, recreational vehicle park, or campgrounds with recreational vehicle hookups
xxx. Mortuary
xxxi. Multiple standard Water Service Connections, at least one of which requires Backflow protection for Containment
xxxii. Pet grooming
xxxiii. Petroleum processing or storage plant
xxxiv. Premises with irrigation system into which fertilizers, herbicides, or pesticides are or can be injected
xxxv. Private water distribution main
xxxvi. Radioactive material storage, processing plant, or nuclear reactor
xxxvii. Railroad maintenance facility
xxxviii. Repeated history of Cross-Connections being established or re-established
xxxix. Restricted entry to a Property or parts of a Property so that Hazard Assessments cannot be made with sufficient frequency or at sufficiently short notice to ensure that Cross-Connections do not exist
xl. Self-contained, self-cleaning public toilet
xli. Sewage handling facility
xlii. Solid waste disposal facility
xliii. Temporary connections to existing water service line during construction (non-standard service).
xliv. Temporary connection to hydrants for miscellaneous uses, including construction, street sweeping, and special events
xlv. Veterinarian facility

xlvi. Wastewater lift stations and pumping stations
xlvii. Wastewater treatment processes, handling, or pumping equipment that is interconnected with a piping system connected to the Public Water System
xlviii. Water storage facility not under control of the Public Water System
xlix. Unabated internal Cross-Connection
l. Any other On-Site Hazard that the General Manager identifies as requiring abatement for the protection of the Public Water System

Rule 2 - Definitions

The terms used in this section have the following meanings.

a) Applicant: A Person who seeks to obtain a Permit to Operate under San Francisco Health Code Article 12A and these Rules and Regulations.

b) Air Gap Separation (AG): A physical vertical separation of at least two times the effective pipe diameter between the free-flowing discharge end of a potable water supply pipeline and the flood level of an open or non-pressurized receiving vessel, which is in no case less than 1 inch.

c) Approved Water Supply: A water source that the State Water Resources Control Board has approved for domestic use in a Public Water System and is designated as such in a domestic water supply permit issued pursuant to California Health and Safety Code §116525.

d) Authorized Backflow Prevention Assembly Tester: A Person who possesses a valid certification to test Backflow Prevention Assemblies and to inspect Air Gap Separations and is authorized by the General Manager to do such work in accordance with San Francisco Health Code Article 12A and these Rules and Regulations.

e) Authorized Cross-Connection Control Specialist: A Person who possesses a valid certification to conduct Hazard Assessments and is authorized by the General Manager to do such work in accordance with San Francisco Health Code Article 12A and these Rules and Regulations.

f) Authorized Representative: A Person designated by a company employing Authorized Backflow Prevention Assembly Testers or Authorized Cross-Connection Control Specialists to obtain Backflow Tags on behalf of the company.

g) Auxiliary Water: Any water other than that from an Approved Water Supply. This category of water includes, but is not limited to, municipally supplied recycled water, wastewater, graywater, groundwater, rainwater, foundation drainage, black water, and alternate water sources as defined in San Francisco Health Code Article 12C and accompanying rules and regulations.

h) Backflow: An undesired or unintended reversal of flow of water and/or other liquids, gases, or other substances into a Public Water System's distribution system or Approved Water Supply.

i) Backflow Preventer: A Backflow Prevention Assembly or an Air Gap Separation.

j) Backflow Prevention Assembly: A mechanical assembly designed and constructed to prevent Backflow, such that while in-line, it can be maintained and its ability to prevent Backflow, as designed, can be field tested, inspected, and evaluated.

k) Backflow Tag: The tag provided by the General Manager that an Authorized Backflow Prevention Assembly Tester or Authorized Cross-Connection Control Specialist shall affix to a Backflow Preventer after it has been inspected and passed testing in accordance with San Francisco Health Code Article 12A and these Rules and Regulations.

l) Citation: A written citation issued by the General Manager to a Person that describes the facts and events that are the basis of the Person's violation(s) of San Francisco Health Code Article 12A and these Rules and Regulations, through which the General Manager may enforce Article 12A and these Rules and Regulations.

m) City: The City and County of San Francisco.

n) Containment: Protection of the Public Water System's distribution system from Backflow from a Property through the installation of one or more Backflow Preventers, installed as close as practical to the Property's Water Service Connection, in a manner that isolates the Property from the Public Water System's distribution system.

o) Cross-Connection: Any actual or potential connection or structural arrangement between (1) the Public Water System, including a piping system connected to the Public Water System and located on a Property or available to the Property Owner, and

p) (2) any source or distribution system containing liquid, gas, or other substances not from an Approved Water Supply.

q) Cross-Connection Test: A test supervised by an Authorized Cross-Connection Control Specialist to verify that no Cross-Connections exist between the potable water piping and any Auxiliary Water piping system.

r) Customer: The Person that receives water service from the SFPUC at a Property and is listed as the customer of record for the Property in the SFPUC Customer Service Bureau database. The Customer may be the Property Owner or the Property Owner's agent.

s) Double-Check Detector Backflow Prevention Assembly (DCDA): A DC that includes a bypass with a water meter and DC, with the bypass's water meter accurately registering flow rates up to two gallons per minute and visually showing a registration for all rates of flow.

t) Double-Check Detector Backflow Prevention Assembly Type II (DCDA-II): A DC that includes a bypass around the second check, with the bypass having a single check valve and a water meter accurately registering flow rates up to two gallons per minute and visually showing a registration for all rates of flow.

u) Double-Check Valve Backflow Prevention Assembly (DC): A Backflow Prevention Assembly consisting of two independently acting, internally loaded check valves, with tightly closing shutoff valves located at each end of the assembly (upstream and downstream of the two check valves) and fitted with test cocks that enable accurate field testing of the assembly.

v) Dual-Plumbed System: A plumbing system that utilizes separate piping systems for Auxiliary Water and potable water within a Property.

w) General Manager: The General Manager of the SFPUC, or any SFPUC employee or City agency designated by the General Manager to act on the General Manager's behalf. The Water Quality Division Director is designated to act for the General Manager in relation to this Section G of these Rules and Regulations.

x) Hazard Assessment: An assessment by an Authorized Cross-Connection Control Specialist to evaluate the types and degrees of hazard on a Property.

y) High-Hazard Cross-Connection: A Cross-Connection that poses a threat to the potability or safety of the Public Water System. Materials entering the Public Water System through a High-Hazard Cross-Connection are contaminants, or health hazards.

z) License Fee: A license fee paid annually to the San Francisco Tax Collector as provided in the San Francisco Business and Tax Regulations Code, Section 249.14.

aa) Low-Hazard Cross-Connection: A Cross-Connection that does not pose a threat to the potability or safety of the Public Water System but may adversely affect the aesthetic quality of the Potable Water System. Materials entering the Public Water System through a Low-Hazard Cross-Connection are pollutants, or non-health hazards.

ab) On-Site Hazard: Any actual or potential hazard to the Public Water System that may be created as a result of conditions existing on a Property.

ac) Permit to Operate: A permit issued by the General Manager to a Person to work as an Authorized Backflow Prevention Assembly Tester or as an Authorized Cross-Connection Control Specialist in accordance with San Francisco Health Code Article 12A and these Rules and Regulations.

ad) Permittee: A Person that receives a Permit to Operate from the General Manager in accordance with San Francisco Health Code Article 12A and these Rules and Regulations.

ae) Person: Any individual, company, corporation, firm, partnership, association, organization, or government entity, including local, state and federal governments.

af) Point of Connection: A Customer's water meter for all SFPUC-provided water services, except for dedicated fire services, for which the Point of Connection is the junction of the SFPUC water supply lateral and the Customer's fire protection system.

ag) Property: Any parcel, premises, building, or other structure that receives potable water service from the Public Water System.

ah) Property Owner: The legal owner of a Property or the agent of the legal owner of a Property.

ai) Public Water System (PWS): A potable water system as defined in California Health and Safety Code §116275(h). For the purposes of these Rules and Regulations, the term Public Water System refers to the potable water system operated and maintained by the SFPUC.

aj) Recycled Water: Wastewater that, as a result of treatment, is suitable for uses other than potable uses.

ak) Reduced Pressure Principle Backflow Prevention Assembly (RP): A Backflow Prevention Assembly with two independently acting, internally loaded check valves, with a hydraulically operating, mechanically independent differential-pressure relief valve located between the check valves and below the upstream check valve. The assembly shall have shutoff valves, located upstream and downstream of the two check valves, and test cocks to enable accurate field testing of the assembly.

al) Reduced Pressure Principle Detector Assembly (RPDA): An RP that includes a bypass with a water meter and RP, with the bypass's water meter accurately registering flow rates up to two gallons per minute and visually showing a registration for all rates of flow.

am) Reduced Pressure Principle Detector Assembly Type II (RPDA-II): An RP that includes a bypass around the second check, with the bypass having a single check valve and a water meter accurately registering flow rates up to two gallons per minute and visually showing a registration for all rates of flow.

an) Rules and Regulations: The SFPUC Rules and Regulations Governing Water Service to Customers, including but not limited to this Section G, Cross-Connection Control, as may be amended from time to time.

ao) SFPUC: The San Francisco Public Utilities Commission as an operating department of the City and County of San Francisco.

ap) Swivel-ell: An RP combined with a changeover piping configuration (also known as a swivel-ell connection) that is designed and constructed pursuant to the California Cross-Connection Control Policy Handbook.

aq) User Supervisor: A Person designated by a Property Owner to oversee a Property and be responsible for the avoidance of Cross-Connections. This term includes site supervisors in charge of Properties with municipally supplied Recycled Water or Auxiliary Water systems.

ar) Water Quality Division: The SFPUC Water Quality Division.

as) Water Service Connection: A Property's connection to the Public Water System.

Rule 3 - Type and Level of Backflow Prevention Required

a) Property Owners shall only install Backflow Preventers and associated pipe, fittings, solder, and flux that are "lead-free," as defined in the California Health and Safety Code §116875.

b) Property Owners shall only install Backflow Prevention Assemblies that are (1) on the "List of Approved Backflow Prevention Assemblies" maintained by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research or (2) certified by a comparable organization approved by the General Manager.

c) Property Owners shall only install Air Gap Separations that meet the requirements set forth in the San Francisco Plumbing Code, Chapter 6, section 603.3.1.

d) For Containment at permanent Water Service Connections, Property Owners shall install one the following types of Backflow Preventers, listed in increasing level of protection: (1) a Double-Check Valve Backflow Prevention Assembly (DC), (2) a Reduced Pressure Principle Backflow Prevention Assembly (RP), or (3) an Air Gap Separation (AG). For Containment at temporary connections to the Public Water System, the required level of protection is an RP, AG, or spring-loaded check valve (San Francisco Fire Department only).

   i. The type of Backflow Preventer installed and in use shall meet at least the minimum level of protection for the applicable hazard at the Property that is identified in Table 1 below. A DC may only be used to protect against Low-Hazard Cross-Connections. An RP or AG is required to protect against High-Hazard Cross-Connections. On fire services, a DCDA/DCDA-II or RPDA/RPDA-II is required in lieu of a DC or RP, respectively.

   ii. If Table 1 identifies two types of Backflow Preventers as the required level of protection for the same hazard criterion, or does not specify the type, the General Manager shall determine through a Hazard Assessment which is required for the particular hazard criterion.

   iii. If more than one hazard criterion applies to a Property, the hazard criterion requiring the greatest level of protection in Table 1 shall apply.

   iv. If the General Manager is unable to assess a Property to determine the type of hazard(s) present, the Property Owner shall install an RP at the Point of Connection to the Public Water System.

e) For isolation of a hazard within a Property, Property Owners shall install a Backflow Preventer that meets the minimum level of protection required in Chapter 6 of the California Plumbing Code, unless one or more of the hazard criteria identified in Table 2 applies to the Property, requiring that the Property Owner install an RP or AG.

f) For Containment protection at Properties that may temporarily switch between municipally supplied Recycled Water and potable water from the Public Water System: A Property Owner may install a Swivel-ell for Containment, in lieu of an Air Gap Separation, as long as the following conditions are met.

v. Property Owners shall only install Swivel-ells that are approved by the State Water Resources Control Board and adhere to the design and construction-related requirements in the California Cross-Connection Control Policy Handbook.

vi. Property Owners that install Swivel-ells shall:

- Enter into a legally binding agreement with the SFPUC Water Quality Division regarding the installation and use of the Swivel-ells.
- Notify the Water Quality Division at least 24 hours before all switchovers to or from potable water and provide an estimate of the timeframe until the next switchover.
- Ensure that a Water Quality Division Water Service Inspector who is a Cross- Connection Control Specialist is present at each switchover.
- Have the Swivel-ell RP tested by an Authorized Backflow Prevention Assembly Tester within 72 hours of each switchover to potable water use and at least every 12 weeks the Property is supplied with potable water, with a visual inspection of the RP immediately upon each switchover to potable water use. Documentation of the tests shall be submitted to the Water Quality Division within five business days of each test.
- Inspect the Swivel-ell at least every 12 months and provide documentation to the Water Quality Division within five business days of the inspection that confirms ongoing compliance with the design and construction-related requirements in the California Cross-Connection Control Policy Handbook.

Table 1: Hazard Criteria and Required Backflow Protection for Containment

Attention: See footnotes for important information.

Hazard Criteria	Required Level of Protection
Hazardous Substances/Wastewater	
• Hazardous substances handled in any way the substances could enter the Public Water System • Mobile home park, recreational vehicle park, or campgrounds with recreational vehicle hookups • Self-contained, self-cleaning public toilet • Sewage handling facility	AG or RP[1]
Hazard Criteria	
• Wastewater lift stations and pumping stations • Wastewater treatment processes, handling, or pumping equipment that is interconnected to a piping system connected to the Public Water System	
Medical/Laboratory/Research	
• Biotech facility • Dental office with water-connected equipment • Kidney dialysis facility • Laboratory • Medical facility/hospital/clinic • Mortuary • Veterinarian facility	AG or RP[1]
Manufacturing/Processing/Storage	
• Chemical plant • Electronics manufacture • Metal-plating facility • Petroleum processing or storage plant • Radioactive material storage, processing plant, or nuclear reactor	AG or RP[1]
Commercial	
• Business park with a single meter serving multiple businesses • Car wash • Dry cleaner facility • Gas station • Hotel/motel • Industrial or commercial laundry facility • Pet grooming	AG or RP[1]

Hazard Criteria	Required Level of Protection
Irrigation Systems	
• Cemetery • Dedicated irrigation service • Premises with irrigation system into which fertilizers, herbicides, or pesticides are or can be injected	RP
Water Storage Tanks	
• Drinking water storage tank overflow connected to a sump or storm drain • Water storage facility not under control of the PWS	AG
Other	
• Agricultural premises • Airport • Auxiliary Water supply • Dual-Plumbed Property • Dockside watering point or marine facility • Fire station • Incarceration facility (prison) • Private water distribution main • Railroad maintenance facility • Solid waste disposal facility	AG or RP[1]
Miscellaneous Conditions	
• Intricate plumbing and piping arrangements[3] • Repeated history of Cross-Connections being established or re-established2 • Restricted entry to a Property or parts of a Property such that Hazard Assessments cannot be made with sufficient frequency or at sufficiently short notice to assure that Cross-Connections do not exist • Unabated internal Cross-Connections • Any other On-Site Hazard that the General Manager identifies as requiring abatement for the protection of the Public Water System	AG or RP[1]
Properties with Multiple Service Connections to the PWS	
Properties with multiple service connections, excluding fire services, at least one of which requires Backflow protection for Containment	Varies[3]
Buildings 4 or More Stories High or Water Supply Over 40 Feet Above Water Meter	
Buildings 4 stories or more in height or water supply greater than 40 feet above the water meter	RP[4]

Hazard Criteria	Required Level of Protection
Fire Protection Systems	
Properties where the fire protection system is supplied from the PWS and interconnected with an onsite Auxiliary Water supply	AG
Properties where the fire protection system is supplied from the PWS with no interconnections with Auxiliary Water supplies	DCDA or DCDA-II
Properties where chemicals can be injected into the fire system	RPDA or RPDA-II
Properties under the jurisdiction of the San Francisco Port Authority	RPDA or RPDA-II
Construction/Miscellaneous Hydrant Use	
• Temporary connections to hydrants for miscellaneous uses, including construction and special events • Temporary connection to existing water service line during construction (non-standard service)	RP[5]
Temporary connections to hydrants for filling water tanks on vehicles, such as for street sweeping	RP or AG[5]
Temporary Connections to Hydrants for Firefighting	
Fire trucks that are connected to low-pressure hydrants shall not be connected at the same time to any high-pressure hydrants that are a part of the San Francisco Auxiliary Water Supply System, also known as the San Francisco Emergency Firefighting System	Spring-loaded check valve[6]

Notes for Table 1:

[1] The General Manager will determine the required level of protection based upon a Hazard Assessment.

[2] In addition to the required level of protection for the identified hazard criterion, the General Manager may also require the Property Owner to designate a User Supervisor, and the Property Owner and User Supervisor shall comply with the requirements of Rule 12.

[3] All service connections, excluding fire services, must have at least the same level of protection, which must address the highest degree of hazard on the Property. For example, if one connection requires an RP, then every connection must have an RP.

[4] The General Manager may, within the General Manager's sole discretion, authorize the installation of a DC instead of an RP if flooding is a concern (e.g., a substantial risk to life or property). This allowance may be considered for new BPA installations and replacements starting in 2026. DCs installed before 2026 are considered to be in compliance. Future replacements of any such DCs must be an RP unless the General Manager authorizes a DC.

[5] All Customer plumbing must be downstream of the SFPUC-issued meter and RP that Customers are required at all times to use when accessing temporary water supply through low-pressured hydrants, in accordance with all SFPUC rules and regulations.

[6] The State Water Resources Control Board approved the use of spring-loaded check valves on hydrants during firefighting in Compliance Order 02-04-95CO-006. The order requires a Water Quality Division Water Service Inspector who is also a Cross-Connection Control Specialist to respond to all two-alarm and higher fires to check for Cross-Connections between the Public Water System and the San Francisco Auxiliary Water Supply System, also known as the Emergency Firefighting Water System.

Table 2: Hazard Criteria and Required Backflow Protection for Isolation of Hazards within a Property

Hazard Criteria	Required Level of Protection
Auxiliary Water storage tank with potable water makeup supply	AG
Irrigation systems into which fertilizers, herbicides, or pesticides are or can be injected	RP
Carbonators in systems with upstream copper pipe	RP
Industrial water chillers	RP
Sewage and hazardous or potentially hazardous substances: at the connection of potable water piping within a facility to a system conveying a fluid that is not potable	AG

Rule 4 - Installation, Replacement, and Relocation Requirements for Backflow Preventers

g) No Person shall install, replace, or relocate a Backflow Preventer unless that Person is a licensed plumber.

h) No Person shall install, replace, or relocate a Backflow Preventer without a valid permit from the City's Department of Building Inspection, Plumbing Inspection Division, unless the Property at which the Backflow Preventer is to be installed, replaced, or relocated is under the jurisdiction of the Port of San Francisco, California Department of Health Care Access and Information, California Office of the State Fire Marshal, or federal government. In the latter case, a permit must be obtained from the authority having jurisdiction.

i) Property Owners shall install Backflow Preventers for Containment as close as practical but in any case within 25 feet of the downstream side of the Point of Connection to the Public Water System. If any part of a service line extends over bay or ocean waters, the Property Owner shall install a Backflow Prevention Assembly upstream of the seawall and within 25 feet of the Point of Connection.

j) No Person shall make any connection between the Point of Connection and a Backflow Preventer for Containment. Similarly, no appurtenances shall be installed between the Point of Connection and a Backflow Preventer for Containment, except that a Y strainer may be attached directly upstream of the number 1 shutoff valve of a Backflow Prevention Assembly as long as (1) no connections are made to the Y strainer, (2) the Y strainer is protected from tampering, and (3) the Y strainer is inspected at least annually by an Authorized Backflow Prevention Assembly Tester.

k) Property Owners shall install Backflow Prevention Assemblies in the orientation intended by the manufacturer and approved by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research or comparable organization approved by the General Manager. No modifications may be made to the approved assembly configuration, except that flanged shutoff valves 2.5 inches or larger may be rotated by one bolt hole.

l) All Backflow Preventers shall be accessible for field testing, inspection, and maintenance after installation. If a Backflow Preventer is installed in an enclosure, the enclosure shall be large enough or removable to allow for testing and maintenance.

m) Notwithstanding any other provision in this Section G, it shall remain the sole responsibility of the Property Owner to ensure:

vii. their Property contains sufficient collection and drainage facilities to safely collect and drain water that may be released due to the functioning or presence of the installed Backflow Prevention Assembly away from their property, and

viii. the continuing proper functioning and maintenance of Backflow Prevention Assemblies, and the collection and drainage facilities.

n) Backflow Preventers shall not be installed below grade in pits, vaults, or confined spaces. DCs, DCDAs, DCDA-IIs, RPs, RPDAs, and RPDA-IIs shall be a minimum of 12 inches and a maximum of 36 inches above grade as measured from the bottom of the assembly.

o) DCs, DCDAs, DCDA-IIs, RPs, RPDAs, and RPDA-IIs shall have clearances of at least 12 inches on all sides. On the side of the assembly that contains the test cocks, a side clearance of at least 24 inches is required.

p) Backflow Prevention Assemblies shall be installed so that the make and serial number are visible in a readily accessible location. These identifiers shall not be painted over or otherwise made illegible.

q) When an RP, RPDA, or RPDA-II is installed indoors, drainage shall also be installed to prevent flooding.

r) Air Gap Separations used for Containment shall meet the following requirements:

ix. The receiving water container shall be located on the Property at the Water Service Connection, unless the General Manager approves an alternate location.

x. The Air Gap Separation shall be located outside of the receiving water container.

xi. All piping between the Water Service Connection and the discharge location at the receiving water container shall be above finished grade and be accessible for visual inspection, unless the General Manager approves an alternative piping configuration.

xii. All new installations of Air Gap Separations at Water Service Connections shall be reviewed and approved by the State Water Board before installation.

Rule 5 - Testing, Inspection, and Repair Requirements for Backflow Preventers

a) All testing, inspections, and repairs of Backflow Preventers shall be conducted at the sole expense of the Property Owner.

b) Property Owners shall ensure that their Backflow Preventers are inspected and/or tested at least annually and are in proper working order.

c) Backflow Prevention Assemblies:

xiii. All Backflow Prevention Assemblies shall be tested by an Authorized Backflow Prevention Assembly Tester following installation, repair, depressurizing for winterizing, or permanent re-location, and at least annually thereafter. The General Manager may also require more frequent testing if determined to be necessary. Property Owners shall comply with all such testing requirements.

xiv. Any Backflow Prevention Assembly that fails a field test shall be repaired or replaced within 30 days of notification of the failure and immediately retested before being placed into service. If a Backflow Prevention Assembly cannot be repaired or otherwise made functional on the same day as the initial field test, the Authorized Backflow Prevention Assembly Tester shall report the test data to the Water Quality Division by the close of business on that same day. The General Manager may allow an extension of the 30-day requirement for repair or replacement in this paragraph at the General Manager's sole discretion.

xv. Authorized Backflow Prevention Assembly Testers shall notify the Water Quality Division if a Backflow Prevention Assembly has been modified from the approved orientation provided in Rule 4(e).

d) Air Gap Separations:

i. All Air Gap Separations shall be visually inspected by an Authorized Backflow Prevention Assembly Tester or Authorized Cross-Connection Control Specialist at least annually. The General Manager may require more frequent inspections if determined to be necessary. Property Owners shall comply with all such requirements.

ii. If an inspection reveals that an Air Gap Separation is not in compliance with the requirements of Chapter 6 of the California Plumbing Code, the Authorized Backflow Prevention Assembly Tester or Authorized Cross-Connection Control Specialist that conducted the inspection shall report the deficiency to the Water Quality Division by the close of business on that same day.

iii. The Property Owner shall have an Air Gap Separation inspected and repaired when notified by the General Manager to do so.

e) After a Backflow Preventer has passed a test/inspection, the Authorized Backflow Prevention Assembly Tester or Authorized Cross-Connection Control Specialist (Air Gap Separations only) shall affix a Backflow Tag to it.

Rule 6 - Backflow Prevention Assembly Test Tags

a) Backflow Tags may only be obtained from the SFPUC by Authorized Backflow Prevention Assembly Testers, Authorized Cross-Connection Control Specialists, and Authorized Representatives.

b) Backflow Tags may be purchased in person at the SFPUC Customer Service Bureau or by mail. The form for purchases by mail is available at sfpuc.gov/backflow.

c) The cost of Backflow Tags is set forth in the SFPUC's Rate Schedules & Fees for Water and Sewer Service, Schedule W-45, which is available on the SFPUC website and is subject to change at the beginning of each fiscal year (July 1 to June 30).

Rule 7 - Water Quality Division Inspections of New Water Services

a) All new water services that require a Backflow Preventer at the Water Service Connection to the Public Water System under San Francisco Health Code Article 12A and these Rules and Regulations must receive and pass an initial and final inspection by the Water Quality Division. The Property Owner shall call the Water Quality Division at (650) 652-3199 to schedule these inspections in the timeframes specified in (b) and (c) below. These inspections are separate from those required by other City departments for other purposes.

b) An initial inspection is required after the installation of a Backflow Preventer at the Water Service Connection to the Public Water System. The SFPUC will not provide a water service line and meter until the Backflow Preventer has passed the initial inspection.

c) A final inspection is required within 48 hours of the start of receiving water service. If this inspection is not conducted within this timeframe, water service will be turned off and will not be restored until the final inspection has been passed.

d) The fee for the Water Quality Division's inspections is set forth in the SFPUC's Rate Schedules & Fees for Water and Sewer Service, Schedule W-41A, which is available on the SFPUC website and is subject to change at the beginning of each fiscal year.

Rule 8 - Permits to Operate

a) A valid Permit to Operate as an Authorized Backflow Prevention Assembly Tester is required at all times for any Person to test Backflow Prevention Assemblies at a Property.

b) A valid Permit to Operate as an Authorized Cross-Connection Control Specialist is required at all times for any Person to conduct Hazard Assessments and Cross-Connection Tests at a Property.

c) A Person may apply for a Permit to Operate as either an Authorized Backflow Prevention Assembly Tester or an Authorized Cross-Connection Control Specialist. A Person that seeks a Permit to Operate as both a tester and a specialist shall submit two separate applications for two separate Permits to Operate.

d) Application Process: To apply for a Permit to Operate, an Applicant shall:

li. Submit a completed application form and application fee as instructed on the SFPUC's website at sfpuc.gov/backflow.

lii. Provide a copy of the Applicant's current certification as a backflow prevention assembly tester or a cross-connection control specialist, as applicable, from one of the following organizations:

- American Society of Sanitary Engineers
- California-Nevada section of the American Water Works Association
- Other organization approved by the General Manager

liii. Provide proof of use of a calibrated test kit (Authorized Cross-Connection Control Testers only).

liv. Provide the Applicant's certificate of general liability insurance in full force and effect, at the Applicant's expense, for all activities to be performed under the Permit to Operate, unless the Applicant is a City employee. Such insurance shall include coverage for bodily injury, personal injury, including death resulting therefrom, and property damage (including water damage) insurance, with limits not less than $2 million each occurrence combined single limit. The City, its officers, and employees shall be named as additional insureds under the policy, and a cross-liability clause shall be attached. Such insurance shall provide 10-day prior written notice of cancellation, non-renewal, or material change to the General Manager.

lv. Complete a written examination administered by the General Manager with a passing grade of at least 70 percent.

e) Permit Approval and Issuance: The decision whether to approve or deny any application for a Permit to Operate shall be at the sole and absolute discretion of the General Manager. Upon approval, Applicant information is forwarded to the City's Office of the Treasurer and Tax Collector, which will accept the Applicant's payment of the License Fee. The Permit to Operate is issued upon the Applicant's payment of the License Fee.

f) Maintaining a Permit to Operate: The duration of a Permit to Operate is one year. To maintain a Permit to Operate in good standing, the Permittee shall:

i. Maintain a current certificate of competency and current general liability insurance meeting the requirements of these Rules and Regulations. If an Authorized Backflow Prevention Assembly Tester, the Permittee shall also maintain proof of use of a calibrated test kit.

ii. Notify the Water Quality Division within 24 hours of becoming aware of either of the following conditions:

- The Permittee's certificate of competency has expired or been revoked.
- The Permittee's general liability insurance has been cancelled, not renewed, or changed materially.

iii. Maintain all documentation required under these Rules and Regulations and any other local or state law or regulation and make all such documentation available for inspection at the request of the General Manager.

iv. Attend the Water Quality Division's Annual Meeting for Authorized Backflow Prevention Assembly Testers or complete alternative annual training provided by the Water Quality Division.

v. Comply with all other requirements of these Rules and Regulations, San Francisco Health Code Article 12A, and any other applicable rule or legal requirement under local, state, or federal law.

vi. Follow all procedures in the Water Quality Division's Instructions for Authorized Backflow Prevention Assembly Testers and Instructions for Authorized Cross- Connection Control Specialists, which are available on the SFPUC's website at sfpuc.gov/backflow and may be periodically updated to reflect current policies and procedures.

g) Annual Renewal: To annually renew a Permit to Operate, the Permittee shall:

i. Have a Permit to Operate in good standing.

ii. Pay the License Fee to the City's Office of the Treasurer and Tax Collector before the current expiration date of the Permit to Operate.

iii. Provide to the General Manager before the current expiration date of the Permit to Operate:

- A copy of the Permittee's renewed certificate of competency, if the previous certificate has expired.
- A certificate of general liability insurance in full force and effect meeting the requirements of Rule 8(d)(iv).
- Proof of use of a calibrated test kit (Authorized Cross-Connection Control Testers only).

h) No Transfer: Permits to Operate are issued to individual persons and are not transferable. If a Permittee ceases to work for an employer that held the Permittee's certificate of liability insurance, the Permittee shall submit to the General Manager within five business days valid evidence of liability insurance, as described in Rule 8(d)(iv) above, to maintain a valid Permit to Operate.

i) Suspension and Revocation of Permits to Operate:

i. The General Manager may suspend or revoke any Permit to Operate upon a determination that the Permittee has failed to meet any of the requirements in this Rule 8; has violated any other requirement of these Rules and Regulations or San Francisco Health Code Article 12A; has engaged in conduct in connection with activities covered by the Permit to Operate that violates other local, state, or federal laws; or has made a material misrepresentation when applying for a Permit to Operate.

ii. Before the suspension or revocation of any Permit to Operate, the General Manager will issue a written notice to the Permittee at the Permittee's address on record specifying the reason why the General

Manager intends to suspend or revoke the Permit to Operate and provide the Permittee with an opportunity to challenge the suspension or revocation in accordance with the administrative review procedure outlined in Rule 15. Notwithstanding the foregoing, the General Manager may immediately suspend any Permit to Operate pending a noticed hearing on suspension or revocation when, in the opinion of the General Manager, the public health or safety requires such immediate suspension. The General Manager will issue written notice of such immediate suspension to the Permittee in person or by registered letter to the Permittee's address on record.

j) Appeals: The final decision of the General Manager to grant, deny, suspend, or revoke a Permit to Operate in accordance with these Rules and Regulations may be appealed to the San Francisco Board of Appeals in the manner prescribed in San Francisco Business and Tax Regulations Code Article 1.

Rule 9 - Companies Employing Authorized Backflow Prevention Assembly Testers and Authorized Cross-Connection Control Specialists

a) Companies that employ Authorized Backflow Prevention Assembly Testers and Authorized Cross-Connection Control Specialists shall register with the General Manager as instructed on the SFPUC's website at sfpuc.gov/backflow. Companies must provide a business name, contact phone number and email address, website, and proof of liability insurance meeting the requirements of Rule 8(d)(iv).

b) Companies shall maintain general liability insurance in full force and effect, at company expense, for all activities performed by the Authorized Backflow Prevention Assembly Testers and Authorized Cross-Connection Control Specialists that they employ. Such insurance shall include coverage for bodily injury, personal injury, including death resulting therefrom, and property damage (including water damage) insurance, with limits not less than $2 million each occurrence combined single limit. The City, its officers, and employees shall be named as additional insureds under the policy, and a cross-liability clause must be attached. The insurance shall provide 10-day prior written notice of cancellation, non- renewal, or material change to the General Manager.

c) Companies shall provide the names of the Authorized Backflow Prevention Assembly Testers and Authorized Cross-Connection Control Specialists that they employ at the time of registration. Companies shall notify the General Manager by email within five business days of a tester or specialist's first or last day of employment.

d) Companies may designate up to two people to act as Authorized Representatives for the purchase of Backflow Tags on behalf of the company. Companies shall provide written notice to the General Manager of the names of those authorized as well as written notice of any changes in designation when they occur.

e) Companies shall maintain continuous records of all activities that they and the Authorized Backflow Prevention Assembly Testers and Authorized Cross-Connection Control Specialists that they employ perform in relation to Backflow prevention for a period of three years. These records shall include the dates and locations of all tests, repairs, and inspections of Backflow Preventers; Hazard Assessments and Cross-Connection Tests; and the names of the individuals who performed them. Companies shall make these records available to the General Manager within five business days of the General Manager's request.

Rule 10 - Inspection and Testing Requirements for Dual-Plumbed Systems

a) All inspections, testing, and repairs of Dual-Plumbed Systems shall be conducted at the sole expense of the Property Owner.

b) Before being put into service, all Dual-Plumbed Systems shall pass an initial inspection and Cross-Connection Test supervised by an Authorized Cross-Connection Control Specialist in the presence of a representative of the Water Quality Division. The initial Cross-Connection Test shall be a shutdown test.

c) After the initial inspection and Cross-Connection Test, Property Owners shall conduct Cross-Connection Tests of Dual-Plumbed Systems every four years. Subsequent Cross-Connection Tests shall be shutdown tests, unless a Property Owner submits a request in writing to the General Manager to conduct a pressure differential test in lieu of a shutdown test, and the General Manager approves the request, at the General Manager's sole discretion. Property Owners shall also conduct additional inspections and Cross-Connection Tests under the following circumstances:

   i. Whenever directed by the General Manager to do so.

   ii. Whenever there is material reason to believe that the separation between the Property's potable and non-potable systems has been compromised, for example, based on a visual inspection or following water quality complaints.

   iii. Immediately after remediation of a discovered Cross-Connection.

d) All Cross-Connection Tests for Dual-Plumbed Systems shall be administered by an Authorized Cross-Connection Control Specialist in the presence of the User Supervisor for the Property. The Authorized Cross-Connection Control Specialist shall submit a written report documenting the results of each test to the Water Quality Division within five business days following completion of the test and include a verification within the report that the User Supervisor was present.

e) Fees for Cross-Connection Tests overseen by the Water Quality Division are set forth in the SFPUC's Rate Schedules & Fees for Water and Sewer Service, Schedule W-45, available on the SFPUC website and subject to change at the beginning of each fiscal year.

f) Any changes to Auxiliary Water systems shall be done under permit from the San Francisco City's Department of Building Inspection and in conformance with the requirements of the California Plumbing Code, the SFPUC Rules and Regulations for Users Receiving Recycled Water Service in the City and County of San Francisco, San Francisco Health Code Article 12C, and any other state or local law or regulations, as applicable. In the case of conflicting requirements, the more stringent requirements shall apply. If the change to the Auxiliary Water system will alter the existing degree of hazard (e.g., a blackwater treatment system will be installed), the Property Owner shall inform the Water Quality Division at least 30 calendar days before the change is made.

g) Property Owners shall maintain records of all inspections and Cross-Connection Tests of Dual-Plumbed Systems on their Properties for a period of four years and shall make all records available to the General Manager within five business days of the General Manager's request.

Rule 11 - Emergency Cross-Connection Response Plan for Standard-Plumbed and Dual-Plumbed Systems

a) All emergency response activities and repairs on the Customer side of the water meter for standard-plumbed systems and for operating Dual-Plumbed Systems shall be conducted at the sole expense of the Property Owner.

b) Upon the discovery of any Cross-Connection, the Property Owner shall immediately notify the SFPUC by calling Millbrae Dispatch at (650) 872-5900 and asking to speak with the on- call Water Quality Division Water Service Inspector. The Property Owner shall inform the Water Service Inspector of the nature of the Cross-Connection, the date and time it was discovered, and the contact information of the Person reporting the Cross-Connection.

c) The Property Owner shall also submit written notification to the Water Quality Division within 24 hours of the incident and include an explanation of the nature of the Cross- Connection, the date and time it was discovered, and the contact information of the Person reporting the Cross-Connection.

d) For Dual-Plumbed systems, the Property Owner shall shut down and drain the Auxiliary Water system.

e) For Dual-Plumbed systems, the General Manager shall shut down the potable water supply at the Point of Connection. For standard-plumbed systems, the General Manager may shut down the potable water supply at the Point of Connection.

f) The Property Owner shall immediately locate and disconnect the Cross-Connection. If necessary, the Property Owner shall obtain a plumbing permit from the appropriate jurisdiction, as described in Rule 4(a).

g) The Property Owner shall provide potable drinking water for the Property's occupants, if applicable, until the Property's internal potable water system is deemed safe to drink.

h) After the Cross-Connection has been remediated, a Property Owner with a standard- plumbed system shall contact the Water Quality Division, which may conduct a visual inspection of the Property to confirm that the Cross-Connection has been eliminated; a Property Owner with a Dual-Plumbed System shall itself conduct a visual inspection and Cross-Connection Test, in accordance with Rule 10.

i) The Property Owner shall disinfect the Property's internal potable water plumbing system in accordance with the California Plumbing Code, section 609.10.

j) Twenty-four hours after disinfection, the Property Owner shall flush the Property's internal potable water system and conduct a standard bacteriological test. The Property Owner may request that the Water Quality Division conduct the standard bacteriological test for the fee specified in the SFPUC's *Rate Schedules & Fees for Water and Sewer Service,* Schedule W-43, available on the SFPUC website and subject to change at the beginning of each fiscal year.

k) If the results of the bacteriological test are acceptable, the General Manager will restore potable water service.

l) The Property Owner shall prepare a written report and include an explanation of the nature of the Cross-Connection, the date and time it was discovered, the remedial action taken, and the results of the Cross-Connection Test and bacteriological test. The report shall be submitted to the Water Quality Division within two business days of resumption of potable water service.

Rule 12 - User Supervisor

a) If required by the Water Quality Division, the Property Owner shall designate a User Supervisor when the Property has a multi-piping system that conveys various types of fluids, some of which may be hazardous, and where changes in the piping system are frequently made.

b) The Property Owner shall provide the Water Quality Division with written notice of the User Supervisor's designation within five business days of the designation. The Property Owner shall promptly communicate any changes in designation to the Water Quality Division and ensure that the current contact information of the User Supervisor is on file with the Water Quality Division at all times.

c) The User Supervisor shall be responsible for the avoidance of Cross-Connections during the installation, operation, and maintenance of a Property Owner's pipelines and equipment.

d) The Property Owner shall ensure that the User Supervisor has, at a minimum, the following qualifications:

   iv. Understanding of the safe, effective operation of the piping systems and components on the Property.

   v. Understanding of how to avoid Cross-Connections between piping systems on the Property.

   vi. Training on the fluids used on the Property.

e) The Property Owner shall ensure that User Supervisors attend an initial training provided by the SFPUC. If there are significant changes to these Rules and Regulations or applicable laws, rules, or regulations, or there are significant changes to the piping systems on the Property, the SFPUC may require User Supervisors to attend an updated training.

f) The User Supervisor shall inform the Water Quality Division of changes in piping by contacting the Water Quality Division at least 15 calendar days before making the changes.

g) If a Cross-Connection is discovered at the Property, the User Supervisor shall follow the emergency response plan described in Rule 11.

h) The Property Owner is responsible for the User Supervisor's compliance with the requirements of this Rule 12. Property Owners who fail to comply with this Rule may be subject to enforcement as described in Rule 14.

Rule 13 - General Manager Notices and Inspections

a) A Property Owner shall eliminate any unprotected Cross-Connection within seven calendar days of receipt of a notice from the General Manager regarding the unprotected Cross- Connection, unless the General Manager authorizes an alternate deadline for remediation within the notice. If a Property Owner refuses or fails to eliminate a Cross-Connection within the timeframe required in the General Manager's notice, the General Manager may proceed with enforcement activities in accordance with Rule 14.

b) A Property Owner shall provide information about water uses within its Property to the General Manager as directed in any notice from the General Manager requesting such information, as necessary to comply with State of California regulatory requirements for Hazard Assessments. Any Property Owner that does not comply with the General Manager's request for information within

the timeframe specified in the notice will be subject to enforcement activities in accordance with Rule 14. Enforcement actions may include, but are not limited to, requiring the Property Owner to install a Reduced Pressure Principal Backflow Prevention Assembly, at the Property Owner's expense, at the Point of Connection to the Public Water System.

c) Right of Entry: As a condition of receiving water service, a Property Owner shall permit the General Manager to inspect any Property subject to these Rules and Regulations and the requirements of San Francisco Health Code Article 12A to determine compliance with these Rules and Regulations, Article 12A, and any other applicable laws and regulations. The General Manager may exercise this right of entry during normal business hours in the absence of advance notice.

d) High Risk of Hazard: Whenever the General Manager determines that an existing or potential unprotected Cross-Connection at the Property poses a high risk of hazard to the Public Water System and requires immediate abatement, the General Manager may immediately terminate water service to the subject Property without notice until the Cross- Connection has been eliminated and charge the Property Owner applicable fees.

Rule 14 - Enforcement, Citations, and Fines

a) The General Manager may enforce the requirements of San Francisco Health Code Article 12A and these Rules and Regulations by issuance of a written notice establishing a deadline for compliance; modification or termination of water service with the assessment of applicable fees; issuance of Citations; imposition of administrative fines and penalties; and any other available enforcement action. Any action that the General Manager takes may be in addition to, and is not exclusive of or preclusive of, any other available remedy that the SFPUC may pursue in a particular case to ensure a Person's compliance with Article 12A, these Rules and Regulations, and any other applicable law or regulation.

b) Deadline for Compliance: The General Manager may issue a written notice advising the Person that has violated San Francisco Health Code Article 12A and these Rules and Regulations of the required corrective action and establish a deadline for compliance. The Person may seek to meet and confer with the Water Quality Division to establish a plan for compliance.

c) Modification or Termination of Water Service: The General Manager may modify or terminate water service, with written notice to the Property Owner, as well as the Customer if the Property Owner is not the Customer, by:

i. Installing a flow restrictor on all non-fire service lines to the Property to minimize the Backflow hazards until they have been corrected, with appropriate fees applied to the Customer's water bill.

ii. Disconnecting the noncompliant water service(s) until the Cross-Connection has been eliminated, with appropriate fees applied to the Customer's water bill.

iii. Testing the Backflow Prevention Assembly installed at the Property or otherwise correcting the Cross-Connection, with the cost of the test or correction applied to the Customer's water bill.

iv. Any other action related to the modification or termination of water service deemed necessary by the General Manager to protect the Public Water System.

d) Citations and Fines: Where the General Manager has determined that a Person has violated any provision of San Francisco Health Code Article 12A or any of these Rules and Regulations, the General Manager may enforce Article 12A and these Rules and Regulations by issuing a Citation to the Person in a manner consistent with Chapter 100 of the San Francisco Administrative Code, "Procedures Governing the Imposition of Administrative Fines," as that Chapter may be amended from time to time, and the enforcement provisions of Article 12A. The Citation will be served upon the Person and will specify the amount of the fine imposed for each violation, which shall be up to $1,000 per violation per day. Each day that a violation continues or there is non-compliance shall constitute a separate violation that may be subject to a separate fine. All violations and respective fines may be cumulative of each other (one Citation may contain multiple fines) and shall be imposed in addition to, and neither exclusive nor preclusive of, any other civil or criminal federal, state, or local fine or penalty under the law or of any other remedy available to the SFPUC under the law. Administrative fines shall be paid to the Treasurer of the City and County of San Francisco.

e) The General Manager may recover any costs and fees, including but not limited to attorney fees, for enforcement initiated through and authorized under San Francisco Health Code Article 12A and these Rules and Regulations. Fees related to enforcement actions under this Rule will be applied to the Customer's water bill.

Rule 15 - Administrative Review and Appeal

a) Any Person who has been served with a Citation may seek administrative review of the Citation by filing an appeal with the SFPUC in accordance with the appeal procedures outlined in Chapter 100 of the San Francisco Administrative Code. Consistent with San Francisco Health Code Article 12A, the General Manager shall appoint a hearing officer to conduct the hearing for the appeal, who will determine the time and place of the hearing and provide appropriate notice. The hearing officer shall have no personal knowledge of the incident resulting in

the Citation being challenged, and the hearing officer's regular job duties will be outside the direct chain of command of the citing official. The hearing officer may request additional information from the appellant; appellant's failure to provide the information within the time specified by the hearing officer shall result in a decision based on the information available. The hearing officer may, at the hearing officer's sole discretion, invite both the appellant and a representative of the SFPUC Water Enterprise or other City department with knowledge of the Citation to the hearing to state their respective positions and answer questions posed by the hearing officer. Any such hearing may be in person, virtual, or submitted in writing as directed by the hearing officer. The hearing officer shall issue an administrative decision upholding, modifying, or vacating the Citation. The hearing officer's decision shall be final on the date issued. The hearing officer shall issue a decision within 60 calendar days of the date of the receipt of the written appeal.

b) Any Permittee who has been served with a notice of suspension or revocation of a Permit to Operate may seek administrative review of the suspension or revocation by submitting a request for review to the General Manager, with a written explanation and supporting documentation, as instructed on the notice. A request for review must be received within 30 days of issuance of the notice. Failure to submit a timely request for review shall be deemed acceptance of the suspension or revocation. The General Manager shall appoint a hearing officer, and the hearing officer shall conduct a hearing on the suspension or revocation, as described in Rule 15(a). The hearing officer shall issue an administrative decision upholding, modifying, or vacating the suspension or revocation. The hearing officer's decision shall be final on the date issued. The hearing officer shall issue a decision within 60 calendar days of the date of the receipt of the request for review, which may be appealed to the San Francisco Board of Appeals in the manner prescribed in San Francisco Business and Tax Regulations Code Article 1.

Rule 16 - Variances

Any request for a variance from the requirements of these Rules and Regulations shall be made in writing and submitted to the General Manager. The General Manager may, at the General Manager's sole discretion, grant variances from specific requirements of these Rules and Regulations on a limited basis provided that the variances do not pose a threat to the Public Water System and are consistent with applicable state and local laws and regulations. All variances are subject to additional mitigation that the Property Owner will be required to implement and maintain.

APPENDIX

Sample Calculations of Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use (ETWU)

MAXIMUM APPLIED WATER ALLOWANCE (MAWA): The example calculations below are hypothetical to demonstrate proper use of the MAWA equation pursuant to Rule 7 and required water budget calculations.

Example 1: A hypothetical residential landscape rehabilitation project in San Francisco with a modified landscape area of 2,500 square feet without any Special Landscape Area (SLA= 0, no edible plants, recreational areas, or use of non-potable water). To calculate MAWA, the annual reference evapotranspiration for San Francisco is 35.1 inches. The ETAF for a residential landscape project is 0.55.

MAWA = (35.1) (0.62) [(0.55 x LA) + (0.45 x SLA)]
MAWA = (35.1) (0.62) [(0.55 x 2,500 square feet) + (0.45 x 0)] = 29,920 gallons per year
To convert from gallons per year to gallons per day: 29,920/365 = 82 gallons per day
Water meters measure flow in hundred-cubic-feet (CCF). 1 CCF = 748 gallons, so in this example the MAWA is 40 CCF per year

Example 2: A new construction project to build a recreation center in San Francisco has a total landscape area of 100,000 square feet. Within the 100,000 square foot project, there is a 75,000 square foot area to be planted with turf for a soccer field. This 75,000 square foot area is considered to be a Special Landscape Area. The ETAF for a non-residential landscape project is 0.45.

MAWA = (35.1) (0.62) [(0.45 x LA) + (0.55 x SLA)]
MAWA = (35.1) (0.62) [(0.45 x 100,000 square feet) + (0.55 x 75,000 square feet)]
= 21.76 x [45,000 + 41,250]
= 21.76 x 86,250
= 1,876,800 gallons per year, or 5,142 gallons per day, or 2,509 CCF per year

ESTIMATED TOTAL WATER USE (ETWU): The example calculations below are hypothetical to demonstrate proper use of the Estimated Total Water Use. The sum of the ETWU calculated for all hydrozones shall not exceed the MAWA.

ETWU = (35.1)[(0.62)((PF x HA)/IE) + SLA]

Where:
ETWU = Estimated Total Water Use per year (gallons)
35.1 = ETo or Reference Evapotranspiration (inches per year)
0.62 = Conversion Factor
PF = Plant Factor from WUCOLS
HA = Hydrozone Area [high, medium, and low water use areas (square feet)
IE = Irrigation Efficiency (0.75 for overhead spray and 0.81 for drip systems)
(PF/IE) = ET Adjustment Factor (ETAF)
SLA = Special Landscape Area (square feet)

Example 1: A new construction landscape area is 50,000 square feet; plant water use type, plant factor, and hydrozonearea are shown in the table below. In San Francisco the ETo value is 35.1 inches per year. There are no Special Landscape Areas (recreational area, area permanently and solely dedicated to edible plants, or area irrigated with gray water or harvested rain water) in this example.

Regular Landscape Areas								
Hydrozone	Plant Water Use Type(s)	Plant Factor (PF)*	Irrigation Method	Irrigation Efficiency (IE)	ETAF (PF/IE)	Hydrozone Area (HA)	PF x HA	Est. Total Water Use (ETWU)
1	High	0.8	Spray	0.75	1.07	6,000	6,400	139,277
2	High	0.7	Spray	0.75	0.93	7,000	6,533	142,178
3	Medium	0.5	Drip	0.81	0.62	13,000	8,025	174,633
4	Low	0.3	Drip	0.81	0.37	10,000	3,704	80,600
5	Low	0.2	Drip	0.81	0.25	14,000	3,457	75,227
					Sum	50,000	28,119	
Special Landscape Areas								
--					1	--	--	--
--					1	--	--	--
					Sum			
							ETWU Total	**611,915**
							MAWA Total	**598,455**

Compare ETWU with MAWA. For this example:

MAWA = (35.1) (0.62) [(0.55 x 50,000) + (0.45 x 0)] = 598,455 gallons per year.

ETWU (611,915 gallons per year) is more than MAWA (598,455 gallons per year).

For this example, the project's estimated water use does not comply with the MAWA.

Example 2: A new construction non-residential landscape project has 32,000 square feet of landscape area, with 2,000 square feet planted with edible plants. The edible plant area is considered a Special Landscape Area (SLA). In San Francisco, ETo is 35.1 inches per year. The plant type, plant factor, irrigation type, and hydrozone areas are shown in the table below.

Regular Landscape Areas								
Hydrozone	Water Use Type(s)	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency (IE)	ETAF (PF/IE)	Hydrozone Area (HA)	ETAF x HA	Est. Total Water Use (ETWU)
1	High	0.8	Spray	0.75	1.07	1,500	1,600	34,819
2	High	0.7	Spray	0.75	0.93	1,000	933	20,311
3	Medium	0.5	Spray	0.75	0.67	2,500	1,667	36,270
4	Low	0.3	Drip	0.81	0.37	12,000	4,444	96,720
5	Low	0.2	Drip	0.81	0.25	15,000	3,704	80,600
					Sum	32,000	12,348	
Special Landscape Areas								
--					1	2,000	2,000	43,524
					Sum	2,000	2,000	
							ETWU Total	**312,244**
							MAWA Total	**337,311**

Compare ETWU with MAWA. For this example:

MAWA = (35.1) (0.62) [(0.45 x 32,000) + (0.55 x 2,000)] = 337,311 gallons per year.

The ETWU (312,244 gallons per year) is less than MAWA (337,311 gallons per year).

For this example, the project's estimated water use complies with the MAWA.

Notes:

