

AWARD/CONTRACT	1. This Contract is a Rated Order under the Defense Priorities and Allocations System (DPAS) - Code of Federal Regulations - at 15 CFR 700.	RATING	PAGE OF PAGES 1 24
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2. CONTRACT (Procurement, Instruction, Identification) NUMBER 89233125CNA000390	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQUEST/PROJECT NUMBER
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5. ISSUED BY NNSA Specialty Acq Branch NA-PAS-311 Albuquerque Complex P.O. Box 5400 Albuquerque NM 87185-5400	CODE 05113	6. ADMINISTERED BY (If other than Item 5) NNSA Specialty Acquisition Branch NA-PAS-311 Albuquerque Complex P.O. Box 5400 Albuquerque, NM 87185-5400	CODE 05113
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7. NAME AND ADDRESS OF CONTRACTOR (Number, Street, County, State and ZIP Code) San Francisco, City & County of Attn: Sanda Thaik 525 Golden Gate Avenue 4th floor San Francisco, CA 94102-3220	8. DELIVERY <input type="checkbox"/> FREE ON BOARD (FOB) ORIGIN <input checked="" type="checkbox"/> OTHER (See below)
	9. DISCOUNT FOR PROMPT PAYMENT NET 30
	10. SUBMIT INVOICES (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN ITEM SOW

11. SHIP TO/MARK FOR NNSA Livermore Field Office NA-LL NNSA/Livermore Field Office 7000 East Avenue M/S L-293 Livermore, CA 94551	CODE 027659064	FACILITY CODE 05006	12. PAYMENT WILL BE MADE BY See Statement of Work for Billing Instructions	CODE 99999
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13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION UNDER THE UNITED STATES CODE AT: <input checked="" type="checkbox"/> 10 U.S.C. 3204 (a) () <input type="checkbox"/> 41 U.S.C. 3304 (a) ()	14. ACCOUNTING AND APPROPRIATION DATA See Schedule
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15A. ITEM NUMBER	15B. SUPPLIES/SERVICES	15C. QUANTITY	15D. UNIT	15E. UNIT PRICE	15F. AMOUNT
Continued					

15G. TOTAL AMOUNT OF CONTRACT \$66,436,590.00

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CONTRACTING OFFICER WILL COMPLETE ITEM 17 (SEALED-BID OR NEGOTIATED PROCUREMENT) OR 18 (SEALED-BID PROCUREMENT) AS APPLICABLE

17. <input checked="" type="checkbox"/> CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return <u>1</u> copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)	18. <input type="checkbox"/> SEALED-BID AWARD (Contractor is not required to sign this document.) Your bid on Solicitation Number _____, including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your bid, and (b) this award/contract. No further contractual document is necessary. (Block 18 should be checked only when awarding a sealed-bid contract.)
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19A. NAME AND TITLE OF SIGNER (Type or print)	20A. NAME OF CONTRACTING OFFICER Shakiesha S. Donley		
19B. NAME OF CONTRACTOR San Francisco, City & County of	19C. DATE SIGNED	20B. UNITED STATES OF AMERICA	20C. DATE SIGNED
BY _____ (Signature of person authorized to sign)		BY _____ (Signature of the Contracting Officer)	

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
89233125CNA000390

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NAME OF OFFEROR OR CONTRACTOR

San Francisco, City & County of

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
00001	<p>UEI: LFNSYLNF7C84 Accounting Info: 00000-2024-01-000000-00000-0000000-0000000-0000000 -0000000 Fund: 00000 Appr Year: 2024 Allottee: 01 Report Entity: 000000 Object Class: 00000 Program: 0000000 Project: 0000000 WFO: 0000000 Local Use: 0000000 FOB: Destination Period of Performance: 01/01/2025 to 12/31/2034</p> <p>LINE ITEM 00001: PRIMARY POTABLE WATER SERVICE TO NNSA LIVERMORE FIELD OFFICE (NA-00-LL).</p> <p>A. The Contractor shall furnish all personnel, facilities, services, materials, supplies (except as may be expressly set forth in this contract as furnished by the Government) and otherwise do all things necessary for, or incidental to, providing the requirements specified in Attachment 1, Statement of Work entitled "Primary Potable Water Service San Francisco Public Utilities Commission".</p> <p>B. A review of this contract will be conducted by the NNSA each year to ensure the annual rates are current. If the rates have changed, ensure that the changes are appropriately adjusted and/or a copy of the new rates will be obtained and will be made a part of this contract by incorporation as an Attachment. The contract award amount, if necessary, shall be adjusted to reflect the change(s) in the rates.</p> <p>C. The estimated annual cost is \$6,643,659.00.</p> <p>F. The estimated ten (10) year cost for the performance period of this contract is \$66,436,590.00, which includes an overall estimated annual cost increase per discussions with the San Francisco Public Utilities Commission representative.</p> <p>G. The ten-year period of performance begins 1 January 2025 and ends 31 December 2034.</p> <p>----- Line item value is: \$66,436,590.00 Incrementally Funded Amount: \$0.00</p>				66,436,590.00

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<u>Section A - Solicitation/Contract Form</u>	

52.204-7 System for Award Management. (OCT 2018)

Section B - Supplies or Services/Prices

NNS-B-1002 CONTRACT TYPE: FIRM-FIXED-PRICE

Total Price \$66,436,590.00

Applicable to following Line Items: 00001, Primary Potable Water Service to NNSA Livermore Field Office.

Section C - Description/Specifications

DOE-C-2001 Statement of Work (OCT 2014)

See Attachment 1, Statement of Work entitled "Primary Potable Water Service San Francisco Public Utilities Commission".

(End of Clause)

Section D - Packaging and Marking

THIS SECTION IS INTENTIONALLY LEFT BLANK

Section E - Inspection and Acceptance

52.246-2 Inspection of Supplies - Fixed-Price. (AUG 1996)

Section F - Deliveries or Performance

52.242-15 Stop-Work Order. (AUG 1989)

52.242-17 Government Delay of Work. (APR 1984)

52.247-29 F.o.b. Origin. (FEB 2006)

DOE-F-2003 Period of Performance (OCT 2014)

The Contractor shall commence performance of this contract in accordance with the contract terms and conditions on 1 January 2025 and continue through 31 December 2034.

(End of Clause)

Section G - Contract Administration Data

DOE-G-2001 Contracting Officer Authority (OCT 2014)

The Contracting Officer is responsible for administration of the contract. The Contracting Officer may appoint a Contracting Officer's Representative (COR), in accordance with the clause entitled Contracting Officer's Representative, to perform specifically delegated functions. The Contracting Officer is the only individual who has the authority on behalf of the Government, among other things, to take the following actions under the contract.:

- (a) Assign additional work within the general scope of the contract..
- (b) Issue a change in accordance with the clause entitled Changes.
- (c) Change the cost or price of the contract..
- (d) Change any of the terms, conditions, specifications, or services required by the contract..
- (e) Accept non-conforming work.
- (f) Waive any requirement of the contract..

(End of Clause)

DOE-G-2002 Contracting Officer's Representative (OCT 2014)

Pursuant to the clause at DEAR 952.242-70, Technical Direction, the Contracting Officer shall designate in writing a Contracting Officer's Representative (COR) for this contract, and provide a copy of such designation to the contractor, including the delegated responsibilities and functions. The COR does not have authority to perform those functions reserved exclusively for the Contracting Officer.

(End of Clause)

Section H - Special Contract Requirements

NNS-H-1014 LIMITATION OF GOVERNMENT'S OBLIGATION

(a) Of the price of \$66,436,590.00, the sum of \$6,643,659.00 is presently available for payment and allotted to this contract. It is anticipated that from time to time additional funds will be allotted to this contract until the total price of said item is allotted.

(b) The Contractor agrees to perform or have performed work on said item up to the point at which, in the event of termination of this contract pursuant to FAR Clause 52.249-2 "Termination for Convenience of the Government (Fixed Price)" the total amount payable by the Government (including amounts payable in respect of subcontracts and settlement costs), pursuant to paragraph (e) thereof, would in the exercise of reasonable judgment by the Contractor approximate the total amount at the time allotted to the contract. The Government shall not be obligated in any event to pay or reimburse the Contractor in excess of the amount from time to time allotted to the contract, anything to the contrary in the FAR Clause "Termination for Convenience of the Government (Fixed Price)" notwithstanding.

(c) It is contemplated that funds presently allotted to this contract will cover the work to be performed until 31 December 2025. The Contractor will notify the Contracting Officer in writing at least 60 days prior to the date when, in the Contractor's best judgment, the work will reach the point at which the total amount payable by the Government, including any cost for termination for convenience, will approximate 85 percent of the total amount then allotted to the contract for performance of the applicable items. The notice shall state the estimated date when such point will be reached and the estimated amount of additional funds required to continue performance to the above or an agreed substituted date. The Contractor shall, 30 days prior to the date above written or agreed substitute date, advise the Contracting Officer in writing as to the estimated amount of additional funds which will be required for the timely performance of the contract for a further period, as may be specified in the contract or otherwise agreed to by the parties. If, after such later notification, additional funds are not allotted by the date above, the Contracting Officer will terminate any items for which additional funds have not been allotted, pursuant to FAR Clause 52.249-2 "Termination for Convenience of the Government (Fixed Price)."

(d) When additional funds are allotted from time to time for continued performance of the work under this contract, the parties shall agree on the applicable period of contract performance which shall be covered by such funds. The provisions of paragraphs (b) and (c) above shall apply to such additional allotted funds and substituted date pertaining thereto and the contract amended accordingly.

(e) If the Contractor incurs additional costs, or is delayed in the performance of the work under this contract, solely by reason of the failure of the Government to allot additional funds in amounts sufficient for the timely performance of this contract, and if additional funds are allotted, an equitable adjustment shall be made in the price or prices of said items or in the time of delivery or both. Failure to agree to any such equitable adjustment hereunder shall be a dispute concerning a question of fact within the meaning of the clause in this contract entitled "Disputes."

(f) The Government may at any time prior to termination, and with the consent of the Contractor, after notice of termination, allot additional funds for this contract.

(g) Nothing in this clause shall affect the right of the Government to terminate this contract pursuant to FAR Clause 52.249-2 "Termination for Convenience of the Government (Fixed Price)."

(End of clause)

DOE-H-2013 Consecutive Numbering (OCT 2014)

Due to automated procedures employed in formulating this document, clauses and provisions contained within may not always be consecutively numbered.

(End of Clause)

Section I - Contract Clauses

52.202-1 Definitions. (JUN 2020)

52.203-3 Gratuities. (APR 1984)

52.203-5 Covenant Against Contingent Fees. (MAY 2014)

52.203-6 Restrictions on Subcontractor Sales to the Government. (JUN 2020)

52.203-6 Restrictions on Subcontractor Sales to the Government. (JUN 2020) - Alternate I (NOV 2021)

52.203-7 Anti-Kickback Procedures. (JUN 2020)

52.203-17 Contractor Employee Whistleblower Rights. (NOV 2023)

52.204-10 Reporting Executive Compensation and First-Tier Subcontract Awards. (JUN 2020)

(a) *Definitions.* As used in this clause:

Executive means officers, managing partners, or any other employees in management positions.

First-tier subcontract means a subcontract awarded directly by the Contractor for the purpose of acquiring supplies or services (including construction) for performance of a prime contract. It does not include the Contractor's supplier agreements with vendors, such as long-term arrangements for materials or supplies that benefit multiple contracts and/or the costs of which are normally applied to a Contractor's general and administrative expenses or indirect costs.

Month of award means the month in which a contract is signed by the Contracting Officer or the month in which a first-tier subcontract is signed by the Contractor.

Total compensation means the cash and noncash dollar value earned by the executive during the Contractor's preceding fiscal year and includes the following (for more information see 17 CFR 229.402(c)(2)):

(1) *Salary and bonus.*

(2) *Awards of stock, stock options, and stock appreciation rights.* Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Financial Accounting Standards Board's Accounting Standards Codification (FASB ASC) 718, Compensation-Stock Compensation.

(3) *Earnings for services under non-equity incentive plans.* This does not include group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives, and are available generally to all salaried employees.

(4) *Change in pension value.* This is the change in present value of defined benefit and actuarial pension plans.

(5) *Above-market earnings on deferred compensation which is not tax-qualified.*

(6) Other compensation, if the aggregate value of all such other compensation (e.g., severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the executive exceeds \$10,000.

(b) Section 2(d)(2) of the Federal Funding Accountability and Transparency Act of 2006 (Pub. L. 109-282), as amended by section 6202 of the Government Funding Transparency Act of 2008 (Pub. L. 110-252), requires the Contractor to report information on subcontract awards. The law requires all reported information be made public, therefore, the Contractor is responsible for notifying its subcontractors that the required information will be made public.

(c) Nothing in this clause requires the disclosure of classified information.

(d)(1) *Executive compensation of the prime contractor.* As a part of its annual registration requirement in the System for Award Management (SAM) (Federal Acquisition Regulation (FAR) provision 52.204-7), the Contractor shall report the names and total compensation of each of the five most highly compensated executives for its preceding completed fiscal year, if-

(i) In the Contractor's preceding fiscal year, the Contractor received-

(A) 80 percent or more of its annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants), cooperative agreements, and other forms of Federal financial assistance; and

(B) \$25,000,000 or more in annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants), cooperative agreements, and other forms of Federal financial assistance; and

(ii) The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>).

(2) *First-tier subcontract information.* Unless otherwise directed by the Contracting Officer, or as provided in paragraph (g) of this clause, by the end of the month following the month of award of a first-tier subcontract valued at or above the threshold specified in FAR 4.1403(a) on the date of subcontract award, the Contractor shall report the following information at <http://www.fsrs.gov> for that first-tier subcontract. (The Contractor shall follow the instructions at <http://www.fsrs.gov> to report the data.)

(i) Unique entity identifier for the subcontractor receiving the award and for the subcontractor's parent company, if the subcontractor has a parent company.

(ii) Name of the subcontractor.

(iii) Amount of the subcontract award.

(iv) Date of the subcontract award.

(v) A description of the products or services (including construction) being provided under the subcontract, including the overall purpose and expected outcomes or results of the subcontract.

(vi) Subcontract number (the subcontract number assigned by the Contractor).

(vii) Subcontractor's physical address including street address, city, state, and country. Also include the nine-digit zip code and congressional district.

(viii) Subcontractor's primary performance location including street address, city, state, and country. Also include the nine-digit zip code and congressional district.

(ix) The prime contract number, and order number if applicable.

(x) Awarding agency name and code.

(xi) Funding agency name and code.

(xii) Government contracting office code.

(xiii) Treasury account symbol (TAS) as reported in FPDS.

(xiv) The applicable North American Industry Classification System code (NAICS).

(3) *Executive compensation of the first-tier subcontractor.* Unless otherwise directed by the Contracting Officer, by the end of the month following the month of award of a first-tier subcontract valued at or above the threshold specified in FAR 4.1403(a) on the date of subcontract award, and annually thereafter (calculated from the prime contract award date), the Contractor shall report the names and total compensation of each of the five most highly compensated executives for that first-tier subcontractor for the first-tier subcontractor's preceding completed fiscal year at <http://www.fsrs.gov>, if-

(i) In the subcontractor's preceding fiscal year, the subcontractor received-

(A) 80 percent or more of its annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants), cooperative agreements, and other forms of Federal financial assistance; and

(B) \$25,000,000 or more in annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants), cooperative agreements, and other forms of Federal financial assistance; and

(ii) The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/excomp.htm>.)

(e) The Contractor shall not split or break down first-tier subcontract awards to a value below the threshold specified in FAR 4.1403(a), on the date of subcontract award, to avoid the reporting requirements in paragraph (d) of this clause.

(f) The Contractor is required to report information on a first-tier subcontract covered by paragraph (d) when the subcontract is awarded. Continued reporting on the same subcontract is not required unless one of the reported data elements changes during the performance of the subcontract. The Contractor is not required to make further reports after the first-tier subcontract expires.

(g)(1) If the Contractor in the previous tax year had gross income, from all sources, under \$300,000, the Contractor is exempt from the requirement to report subcontractor awards.

(2) If a subcontractor in the previous tax year had gross income from all sources under \$300,000, the Contractor does not need to report awards for that subcontractor.

(h) The FSRS database at <http://www.fsrs.gov> will be prepopulated with some information from SAM and the FPDS database. If FPDS information is incorrect, the contractor should notify the contracting officer. If the SAM information is incorrect, the contractor is responsible for correcting this information.

(End of clause)

52.204-12 Unique Entity Identifier Maintenance. (OCT 2016)

52.204-13 System for Award Management Maintenance. (OCT 2018)

(a) *Definitions.* As used in this clause-

Electronic Funds Transfer (EFT) indicator means a four-character suffix to the unique entity identifier. The suffix is assigned at the discretion of the commercial, nonprofit, or Government entity to establish additional System for Award Management (SAM) records for identifying alternative EFT accounts (see subpart 32.11) for the same entity.

Registered in the System for Award Management (SAM) means that-

- (1) The Contractor has entered all mandatory information, including the unique entity identifier and the EFT indicator (if applicable), the Commercial and Government Entity (CAGE) code, as well as data required by the Federal Funding Accountability and Transparency Act of 2006 (see subpart 4.14), into SAM;
- (2) The Contractor has completed the Core, Assertions, Representations and Certifications, and Points of Contact sections of the registration in SAM;
- (3) The Government has validated all mandatory data fields, to include validation of the Taxpayer Identification Number (TIN) with the Internal Revenue Service (IRS). The Contractor will be required to provide consent for TIN validation to the Government as a part of the SAM registration process; and
- (4) The Government has marked the record "Active".

System for Award Management (SAM) means the primary Government repository for prospective Federal awardee and Federal awardee information and the centralized Government system for certain contracting, grants, and other assistance-related processes. It includes-

- (1) Data collected from prospective Federal awardees required for the conduct of business with the Government;
- (2) Prospective contractor-submitted annual representations and certifications in accordance with FAR subpart 4.12; and
- (3) Identification of those parties excluded from receiving Federal contracts, certain subcontracts, and certain types of Federal financial and non-financial assistance and benefits.

Unique entity identifier means a number or other identifier used to identify a specific commercial, nonprofit, or Government entity. See www.sam.gov for the designated entity for establishing unique entity identifiers.

(b) If the solicitation for this contract contained the provision 52.204-7 with its Alternate I, and the Contractor was unable to register prior to award, the Contractor shall be registered in SAM within 30 days after award or before three days prior to submission of the first invoice, whichever occurs first.

(c) The Contractor shall maintain registration in SAM during contract performance and through final payment of any contract, basic agreement, basic ordering agreement, or blanket purchasing agreement. The Contractor is responsible for the currency, accuracy and completeness of the data within SAM, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in SAM after the initial registration, the Contractor is required to review and update on an annual basis, from the date of initial registration or subsequent updates, its information in SAM to ensure it is current, accurate and complete. Updating information in SAM does not alter the terms and conditions of this contract and is not a substitute for a properly executed contractual document.

(d)(1)(i) If a Contractor has legally changed its business name or "doing business as" name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of-name agreements in subpart 42.12, the Contractor shall provide the responsible Contracting Officer a minimum of one business day's written notification of its intention to-

- (A) Change the name in SAM;

(B) Comply with the requirements of subpart 42.12 of the FAR; and

(C) Agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor shall provide with the notification sufficient documentation to support the legally changed name.

(ii) If the Contractor fails to comply with the requirements of paragraph (d)(1)(i) of this clause, or fails to perform the agreement at paragraph (d)(1)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of-name agreement, the SAM information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect information within the meaning of the "Suspension of Payment" paragraph of the electronic funds transfer (EFT) clause of this contract.

(2) The Contractor shall not change the name or address for EFT payments or manual payments, as appropriate, in SAM record to reflect an assignee for the purpose of assignment of claims (see FAR subpart 32.8, Assignment of Claims). Assignees shall be separately registered in SAM. Information provided to the Contractor's SAM record that indicates payments, including those made by EFT, to an ultimate recipient other than that Contractor will be considered to be incorrect information within the meaning of the "Suspension of Payment" paragraph of the EFT clause of this contract.

(3) The Contractor shall ensure that the unique entity identifier is maintained with the entity designated at www.sam.gov for establishment of the unique entity identifier throughout the life of the contract. The Contractor shall communicate any change to the unique entity identifier to the Contracting Officer within 30 days after the change, so an appropriate modification can be issued to update the data on the contract. A change in the unique entity identifier does not necessarily require a novation be accomplished.

(e) Contractors may obtain additional information on registration and annual confirmation requirements at <https://www.sam.gov>.

(End of clause)

52.204-19 Incorporation by Reference of Representations and Certifications. (DEC 2014)

The Contractor's representations and certifications, including those completed electronically via the System for Award Management (SAM), are incorporated by reference into the contract.

(End of clause)

52.204-23 Prohibition on Contracting for Hardware, Software, and Services Developed or Provided by Kaspersky Lab Covered Entities. (DEC 2023)

52.204-25 Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment. (NOV 2021)

52.204-27 Prohibition on a ByteDance Covered Application. (JUN 2023)

52.209-6 Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment. (NOV 2021)

52.209-9 Updates of Publicly Available Information Regarding Responsibility Matters. (OCT 2018)

52.209-10 Prohibition on Contracting With Inverted Domestic Corporations. (NOV 2015)

52.211-5 Material Requirements. (AUG 2000)

52.215-8 Order of Precedence - Uniform Contract Format. (OCT 1997)

Any inconsistency in this solicitation or contract shall be resolved by giving precedence in the following order:

- (a) The Schedule (excluding the specifications).
- (b) Representations and other instructions.
- (c) Contract clauses.
- (d) Other documents, exhibits, and attachments.
- (e) The specifications.

(End of clause)

52.222-19 Child Labor - Cooperation with Authorities and Remedies. (FEB 2024)

52.222-50 Combating Trafficking in Persons. (NOV 2021)

52.222-50 Combating Trafficking in Persons. (NOV 2021) - Alternate I (MAR 2015)

(a) *Definitions.* As used in this clause-

Agent means any individual, including a director, an officer, an employee, or an independent contractor, authorized to act on behalf of the organization.

Coercion means-

- (1) Threats of serious harm to or physical restraint against any person;
- (2) Any scheme, plan, or pattern intended to cause a person to believe that failure to perform an act would result in serious harm to or physical restraint against any person; or
- (3) The abuse or threatened abuse of the legal process.

Commercial sex act means any sex act on account of which anything of value is given to or received by any person.

Commercially available off-the-shelf (COTS) item-(1) Means any item of supply (including construction material) that is-

- (i) A commercial product (as defined in paragraph (1) of the definition of "commercial product" at Federal Acquisition Regulation (FAR) 2.101);
 - (ii) Sold in substantial quantities in the commercial marketplace; and
 - (iii) Offered to the Government, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace; and
- (2) Does not include bulk cargo, as defined in 46 U.S.C. 40102(4), such as agricultural products and petroleum products.

Debt bondage means the status or condition of a debtor arising from a pledge by the debtor of his or her personal services or of those of a person under his or her control as a security for debt, if the value of those services as reasonably assessed is not applied toward the liquidation of the debt or the length and nature of those services are not respectively limited and defined.

Employee means an employee of the Contractor directly engaged in the performance of work under the contract who has other than a minimal impact or involvement in contract performance.

Forced Labor means knowingly providing or obtaining the labor or services of a person-

- (1) By threats of serious harm to, or physical restraint against, that person or another person;
- (2) By means of any scheme, plan, or pattern intended to cause the person to believe that, if the person did not perform such labor or services, that person or another person would suffer serious harm or physical restraint; or
- (3) By means of the abuse or threatened abuse of law or the legal process.

Involuntary servitude includes a condition of servitude induced by means of-

- (1) Any scheme, plan, or pattern intended to cause a person to believe that, if the person did not enter into or continue in such conditions, that person or another person would suffer serious harm or physical restraint; or
- (2) The abuse or threatened abuse of the legal process.

Recruitment fees means fees of any type, including charges, costs, assessments, or other financial obligations, that are associated with the recruiting process, regardless of the time, manner, or location of imposition or collection of the fee.

- (1) Recruitment fees include, but are not limited to, the following fees (when they are associated with the recruiting process) for-
 - (i) Soliciting, identifying, considering, interviewing, referring, retaining, transferring, selecting, training, providing orientation to, skills testing, recommending, or placing employees or potential employees;
 - (ii) Advertising;
 - (iii) Obtaining permanent or temporary labor certification, including any associated fees;
 - (iv) Processing applications and petitions;
 - (v) Acquiring visas, including any associated fees;
 - (vi) Acquiring photographs and identity or immigration documents, such as passports, including any associated fees;
 - (vii) Accessing the job opportunity, including required medical examinations and immunizations; background, reference, and security clearance checks and examinations; and additional certifications;
 - (viii) An employer's recruiters, agents or attorneys, or other notary or legal fees;
 - (ix) Language interpretation or translation, arranging for or accompanying on travel, or providing other advice to employees or potential employees;
 - (x) Government-mandated fees, such as border crossing fees, levies, or worker welfare funds;
 - (xi) Transportation and subsistence costs-

(A) While in transit, including, but not limited to, airfare or costs of other modes of transportation, terminal fees, and travel taxes associated with travel from the country of origin to the country of performance and the return journey upon the end of employment; and

(B) From the airport or disembarkation point to the worksite;

(xii) Security deposits, bonds, and insurance; and

(xiii) Equipment charges.

(2) A recruitment fee, as described in the introductory text of this definition, is a recruitment fee, regardless of whether the payment is-

(i) Paid in property or money;

(ii) Deducted from wages;

(iii) Paid back in wage or benefit concessions;

(iv) Paid back as a kickback, bribe, in-kind payment, free labor, tip, or tribute; or

(v) Collected by an employer or a third party, whether licensed or unlicensed, including, but not limited to-

(A) Agents;

(B) Labor brokers;

(C) Recruiters;

(D) Staffing firms (including private employment and placement firms);

(E) Subsidiaries/affiliates of the employer;

(F) Any agent or employee of such entities; and

(G) Subcontractors at all tiers.

Severe forms of trafficking in persons means-

(1) Sex trafficking in which a commercial sex act is induced by force, fraud, or coercion, or in which the person induced to perform such act has not attained 18 years of age; or

(2) The recruitment, harboring, transportation, provision, or obtaining of a person for labor or services, through the use of force, fraud, or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage, or slavery.

Sex trafficking means the recruitment, harboring, transportation, provision, or obtaining of a person for the purpose of a commercial sex act.

Subcontract means any contract entered into by a subcontractor to furnish supplies or services for performance of a prime contract or a subcontract.

Subcontractor means any supplier, distributor, vendor, or firm that furnishes supplies or services to or for a prime contractor or another subcontractor.

United States means the 50 States, the District of Columbia, and outlying areas.

(b) *Policy.* The United States Government has adopted a policy prohibiting trafficking in persons including the trafficking-related activities of this clause. Contractors, contractor employees, and their agents shall not-

(1) Engage in severe forms of trafficking in persons during the period of performance of the contract;

(2) Procure commercial sex acts during the period of performance of the contract;

(3) Use forced labor in the performance of the contract;

(4) Destroy, conceal, confiscate, or otherwise deny access by an employee to the employee's identity or immigration documents, such as passports or drivers' licenses, regardless of issuing authority;

(5)(i) Use misleading or fraudulent practices during the recruitment of employees or offering of employment, such as failing to disclose, in a format and language understood by the employee or potential employee, basic information or making material misrepresentations during the recruitment of employees regarding the key terms and conditions of employment, including wages and fringe benefits, the location of work, the living conditions, housing and associated costs (if employer or agent provided or arranged), any significant costs to be charged to the employee or potential employee, and, if applicable, the hazardous nature of the work;

(ii) Use recruiters that do not comply with local labor laws of the country in which the recruiting takes place;

(6) Charge employees or potential employees recruitment fees;

(7)(i) Fail to provide return transportation or pay for the cost of return transportation upon the end of employment-

(A) For an employee who is not a national of the country in which the work is taking place and who was brought into that country for the purpose of working on a U.S. Government contract or subcontract (for portions of contracts performed outside the United States); or

(B) For an employee who is not a United States national and who was brought into the United States for the purpose of working on a U.S. Government contract or subcontract, if the payment of such costs is required under existing temporary worker programs or pursuant to a written agreement with the employee (for portions of contracts performed inside the United States); except that-

(ii) The requirements of paragraphs (b)(7)(i) of this clause shall not apply to an employee who is-

(A) Legally permitted to remain in the country of employment and who chooses to do so; or

(B) Exempted by an authorized official of the contracting agency from the requirement to provide return transportation or pay for the cost of return transportation;

(iii) The requirements of paragraph (b)(7)(i) of this clause are modified for a victim of trafficking in persons who is seeking victim services or legal redress in the country of employment, or for a witness in an enforcement action related to trafficking in persons. The contractor shall provide the return transportation or

pay the cost of return transportation in a way that does not obstruct the victim services, legal redress, or witness activity. For example, the contractor shall not only offer return transportation to a witness at a time when the witness is still needed to testify. This paragraph does not apply when the exemptions at paragraph (b)(7)(ii) of this clause apply.

(8) Provide or arrange housing that fails to meet the host country housing and safety standards; or

(9) If required by law or contract, fail to provide an employment contract, recruitment agreement, or other required work document in writing. Such written work document shall be in a language the employee understands. If the employee must relocate to perform the work, the work document shall be provided to the employee at least five days prior to the employee relocating. The employee's work document shall include, but is not limited to, details about work description, wages, prohibition on charging recruitment fees, work location(s), living accommodations and associated costs, time off, roundtrip transportation arrangements, grievance process, and the content of applicable laws and regulations that prohibit trafficking in persons.

(c) *Contractor requirements.* The Contractor shall-

(1) Notify its employees and agents of-

(i)(A) The United States Government's policy prohibiting trafficking in persons described in paragraph (b) of this clause; and

(B) The following directive(s) or notice(s) applicable to employees performing work at the contract place(s) of performance as indicated below:

Document Title	Document may be obtained from:	Applies to performance in/at:
_____	_____	_____
_____	_____	_____

No directives or notices required.

(ii) The actions that will be taken against employees or agents for violations of this policy. Such actions for employees may include, but are not limited to, removal from the contract, reduction in benefits, or termination of employment; and

(2) Take appropriate action, up to and including termination, against employees, agents, or subcontractors that violate the policy in paragraph (b) of this clause.

(d) *Notification.* (1) The Contractor shall inform the Contracting Officer and the agency Inspector General immediately of-

(i) Any credible information it receives from any source (including host country law enforcement) that alleges a Contractor employee, subcontractor, subcontractor employee, or their agent has engaged in conduct that violates the policy in paragraph (b) of this clause (see also 18 U.S.C. 1351, Fraud in Foreign Labor Contracting, and 52.203-13(b)(3)(i)(A), if that clause is included in the solicitation or contract, which requires disclosure to the agency Office of the Inspector General when the Contractor has credible evidence of fraud); and

(ii) Any actions taken against a Contractor employee, subcontractor, subcontractor employee, or their agent pursuant to this clause.

(2) If the allegation may be associated with more than one contract, the Contractor shall inform the contracting officer for the contract with the highest dollar value.

(e) *Remedies.* In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraphs (c), (d), (g), (h), or (i) of this clause may result in-

(1) Requiring the Contractor to remove a Contractor employee or employees from the performance of the contract;

(2) Requiring the Contractor to terminate a subcontract;

(3) Suspension of contract payments until the Contractor has taken appropriate remedial action;

(4) Loss of award fee, consistent with the award fee plan, for the performance period in which the Government determined Contractor non-compliance;

(5) Declining to exercise available options under the contract;

(6) Termination of the contract for default or cause, in accordance with the termination clause of this contract; or

(7) Suspension or debarment.

(f) *Mitigating and aggravating factors.* When determining remedies, the Contracting Officer may consider the following:

(1) *Mitigating factors.* The Contractor had a Trafficking in Persons compliance plan or an awareness program at the time of the violation, was in compliance with the plan, and has taken appropriate remedial actions for the violation, that may include reparation to victims for such violations.

(2) *Aggravating factors.* The Contractor failed to abate an alleged violation or enforce the requirements of a compliance plan, when directed by the Contracting Officer to do so.

(g) *Full cooperation.* (1) The Contractor shall, at a minimum-

(i) Disclose to the agency Inspector General information sufficient to identify the nature and extent of an offense and the individuals responsible for the conduct;

(ii) Provide timely and complete responses to Government auditors' and investigators' requests for documents;

(iii) Cooperate fully in providing reasonable access to its facilities and staff (both inside and outside the U.S.) to allow contracting agencies and other responsible Federal agencies to conduct audits, investigations, or other actions to ascertain compliance with the Trafficking Victims Protection Act of 2000 (22 U.S.C. chapter 78), E.O. 13627, or any other applicable law or regulation establishing restrictions on trafficking in persons, the procurement of commercial sex acts, or the use of forced labor; and

(iv) Protect all employees suspected of being victims of or witnesses to prohibited activities, prior to returning to the country from which the employee

was recruited, and shall not prevent or hinder the ability of these employees from cooperating fully with Government authorities.

(2) The requirement for full cooperation does not foreclose any Contractor rights arising in law, the FAR, or the terms of the contract. It does not-

(i) Require the Contractor to waive its attorney-client privilege or the protections afforded by the attorney work product doctrine;

(ii) Require any officer, director, owner, employee, or agent of the Contractor, including a sole proprietor, to waive his or her attorney client privilege or Fifth Amendment rights; or

(iii) Restrict the Contractor from-

(A) Conducting an internal investigation; or

(B) Defending a proceeding or dispute arising under the contract or related to a potential or disclosed violation.

(h) *Compliance plan.* (1) This paragraph (h) applies to any portion of the contract that-

(i) Is for supplies, other than commercially available off-the-shelf items, acquired outside the United States, or services to be performed outside the United States; and

(ii) Has an estimated value that exceeds \$550,000.

(2) The Contractor shall maintain a compliance plan during the performance of the contract that is appropriate-

(i) To the size and complexity of the contract; and

(ii) To the nature and scope of the activities to be performed for the Government, including the number of non-United States citizens expected to be employed and the risk that the contract or subcontract will involve services or supplies susceptible to trafficking in persons.

(3) *Minimum requirements.* The compliance plan must include, at a minimum, the following:

(i) An awareness program to inform contractor employees about the Government's policy prohibiting trafficking-related activities described in paragraph (b) of this clause, the activities prohibited, and the actions that will be taken against the employee for violations. Additional information about Trafficking in Persons and examples of awareness programs can be found at the Web site for the Department of State's Office to Monitor and Combat Trafficking in Persons at <http://www.state.gov/j/tip/>.

(ii) A process for employees to report, without fear of retaliation, activity inconsistent with the policy prohibiting trafficking in persons, including a means to make available to all employees the hotline phone number of the Global Human Trafficking Hotline at 1-844-888-FREE and its email address at help@befree.org.

(iii) A recruitment and wage plan that only permits the use of recruitment companies with trained employees, prohibits charging recruitment fees to the

employee or potential employee, and ensures that wages meet applicable host-country legal requirements or explains any variance.

(iv) A housing plan, if the Contractor or subcontractor intends to provide or arrange housing, that ensures that the housing meets host-country housing and safety standards.

(v) Procedures to prevent agents and subcontractors at any tier and at any dollar value from engaging in trafficking in persons (including activities in paragraph (b) of this clause) and to monitor, detect, and terminate any agents, subcontracts, or subcontractor employees that have engaged in such activities.

(4) *Posting.* (i) The Contractor shall post the relevant contents of the compliance plan, no later than the initiation of contract performance, at the workplace (unless the work is to be performed in the field or not in a fixed location) and on the Contractor's Web site (if one is maintained). If posting at the workplace or on the Web site is impracticable, the Contractor shall provide the relevant contents of the compliance plan to each worker in writing.

(ii) The Contractor shall provide the compliance plan to the Contracting Officer upon request.

(5) *Certification.* Annually after receiving an award, the Contractor shall submit a certification to the Contracting Officer that-

(i) It has implemented a compliance plan to prevent any prohibited activities identified at paragraph (b) of this clause and to monitor, detect, and terminate any agent, subcontract or subcontractor employee engaging in prohibited activities; and

(ii) After having conducted due diligence, either-

(A) To the best of the Contractor's knowledge and belief, neither it nor any of its agents, subcontractors, or their agents is engaged in any such activities; or

(B) If abuses relating to any of the prohibited activities identified in paragraph (b) of this clause have been found, the Contractor or subcontractor has taken the appropriate remedial and referral actions.

(i) *Subcontracts.* (1) The Contractor shall include the substance of this clause, including this paragraph (i), in all subcontracts and in all contracts with agents. The requirements in paragraph (h) of this clause apply only to any portion of the subcontract that-

(i) Is for supplies, other than commercially available off-the-shelf items, acquired outside the United States, or services to be performed outside the United States; and

(ii) Has an estimated value that exceeds \$550,000.

(2) If any subcontractor is required by this clause to submit a certification, the Contractor shall require submission prior to the award of the subcontract and annually thereafter. The certification shall cover the items in paragraph (h)(5) of this clause.

(End of clause)

52.225-1 Buy American - Supplies. (OCT 2022)

52.225-13 Restrictions on Certain Foreign Purchases. (FEB 2021)

52.226-8 Encouraging Contractor Policies To Ban Text Messaging While Driving. (MAY 2024)

52.232-1 Payments. (APR 1984)

The Government shall pay the Contractor, upon the submission of proper invoices or vouchers, the prices stipulated in this contract for supplies delivered and accepted or services rendered and accepted, less any deductions provided in this contract. Unless otherwise specified in this contract, payment shall be made on partial deliveries accepted by the Government if -

- (a) The amount due on the deliveries warrants it; or
- (b) The Contractor requests it and the amount due on the deliveries is at least \$1,000 or 50 percent of the total contract price.

(End of clause)

52.232-23 Assignment of Claims. (MAY 2014)

52.232-33 Payment by Electronic Funds Transfer - System for Award Management. (OCT 2018)

52.232-39 Unenforceability of Unauthorized Obligations. (JUN 2013)

52.232-40 Providing Accelerated Payments to Small Business Subcontractors. (MAR 2023)

52.233-1 Disputes. (MAY 2014)

52.233-3 Protest After Award. (AUG 1996)

52.233-3 Protest After Award. (AUG 1996) - Alternate I (JUN 1985)

52.233-4 Applicable Law for Breach of Contract Claim. (OCT 2004)

United States law will apply to resolve any claim of breach of this contract.

(End of clause)

52.241-2 Order of Precedence - Utilities. (FEB 1995)

In the event of any inconsistency between the terms of this contract (including the specifications) and any rate schedule, rider, or exhibit incorporated in this contract by reference or otherwise, or any of the Contractor's rules and regulations, the terms of this contract shall control.

(End of clause)

52.241-3 Scope and Duration of Contract. (FEB 1995)

(a) For the period 1 January 2025 through 31 December 2034, the Contractor agrees to furnish and the Government agrees to purchase primary potable water utility service in accordance with the applicable tariff(s), rules, and regulations as approved by the applicable governing regulatory body and as set forth in the contract.

(b) It is expressly understood that neither the Contractor nor the Government is under any obligation to continue any service under the terms and conditions of this contract beyond the expiration date.

(c) The Contractor shall provide the Government with one complete set of rates, terms, and conditions of service which are in effect as of the date of this contract and any subsequently approved rates.

(d) The Contractor shall be paid at the applicable rate(s) under the tariff and the Government shall be liable for the minimum monthly charge, if any, specified in this contract commencing with the period in which service is initially furnished and continuing for the term of this contract. Any minimum monthly charge specified in this contract shall be equitably prorated for the periods in which commencement and termination of this contract become effective.

(End of clause)

52.241-4 Change in Class of Service. (FEB 1995)

(a) In the event of a change in the class of service, such service shall be provided at the Contractor's lowest available rate schedule applicable to the class of service furnished.

(b) Where the Contractor does not have on file with the regulatory body approved rate schedules applicable to services provided, no clause in this contract shall preclude the parties from negotiating a rate schedule applicable to the class of service furnished.

(End of clause)

52.241-5 Contractor's Facilities. (FEB 1995)

52.241-6 Service Provisions. (FEB 1995)

(a) *Measurement of service.* (1) All service furnished by the Contractor shall be measured by suitable metering equipment of standard manufacture, to be furnished, installed, maintained, repaired, calibrated, and read by the Contractor at its expense. When more than a single meter is installed at a service location, the readings thereof may be billed conjunctively, if appropriate. In the event any meter fails to register (or registers incorrectly) the service furnished, the parties shall agree upon the length of time of meter malfunction and the quantity of service delivered during such period of time. An appropriate adjustment shall be made to the next invoice for the purpose of correcting such errors. However, any meter which registers not more than 2 percent slow or fast shall be deemed correct.

(2) The Contractor shall read all meters at periodic intervals of approximately 30 days or in accordance with the policy of the cognizant regulatory body or applicable bylaws. All billings based on meter readings of less than 30 days shall be prorated accordingly.

(b) *Meter test.* (1) The Contractor, at its expense, shall periodically inspect and test Contractor-installed meters at intervals not exceeding one (1) year(s) The Government has the right to have representation during the inspection and test.

(2) At the written request of the Contracting Officer, the Contractor shall make additional tests of any or all such meters in the presence of Government representatives. The cost of such additional tests shall be borne by the Government if the percentage of errors is found to be not more than 2 percent slow or fast.

(3) No meter shall be placed in service or allowed to remain in service which has an error in registration in excess of 2 percent under normal operating conditions.

(c) *Change in volume or character.* Reasonable notice shall be given by the Contracting Officer to the Contractor regarding any material changes anticipated in the volume or characteristics of the utility service required at each location.

(d) *Continuity of service and consumption.* The Contractor shall use reasonable diligence to provide a regular and uninterrupted supply of service at each service location, but shall not be liable for damages, breach of contract or otherwise, to the Government for failure, suspension, diminution, or other variations of service occasioned by or in consequence of any cause beyond the control of the Contractor, including but not limited to acts of God or of the public enemy, fires, floods, earthquakes, or other catastrophe, strikes, or failure or breakdown of transmission or other facilities. If any such failure, suspension, diminution, or other variation of service shall aggregate more than (Not Applicable) hour(s) during any billing period hereunder, an equitable adjustment shall be made in the monthly billing specified in this contract (including the minimum monthly charge).

(End of clause)

52.241-7 Change in Rates or Terms and Conditions of Service for Regulated Services. (FEB 1995)

(a) This clause applies to the extent services furnished under this contract are subject to regulation by a regulatory body. The Contractor agrees to give the Contracting Officer written notice of (1) the filing of an application for change in rates or terms and conditions of service concurrently with the filing of the application and (2) any changes pending with the regulatory body as of the date of contract award. Such notice shall fully describe the proposed change. If, during the term of this contract, the regulatory body having jurisdiction approves any changes, the Contractor shall forward to the Contracting Officer a copy of such changes within 15 days after the effective date thereof. The Contractor agrees to continue furnishing service under this contract in accordance with the amended tariff, and the Government agrees to pay for such service at the higher or lower rates as of the date when such rates are made effective.

(b) The Contractor agrees that throughout the life of this contract the applicable published and unpublished rate schedule(s) shall not be in excess of the lowest cost published and unpublished rate schedule(s) available to any other customers of the same class under similar conditions of use and service.

(c) In the event that the regulatory body promulgates any regulation concerning matters other than rates which affects this contract, the Contractor shall immediately provide a copy to the Contracting Officer. The Government shall not be bound to accept any new regulation inconsistent with Federal laws or regulations.

(d) Any changes to rates or terms and conditions of service shall be made a part of this contract by the issuance of a contract modification unless otherwise specified in the contract. The effective date of the change shall be the effective date by the regulatory body. Any factors not governed by the regulatory body will have an effective date as agreed to by the parties.

(End of clause)

* Note: Insert language prescribed in 41.501(d)(1).

52.241-11 Multiple Service Locations. (FEB 1995)

(a) At any time by written order, the Contracting Officer may designate any location within the service area of the Contractor at which utility service shall commence or be discontinued. Any changes to the service specifications shall be made a part of the contract by the issuance of a contract modification to include the name and location of the service, specifying any different rate, the point of delivery, different service specifications, and any other terms and conditions.

(b) The applicable monthly charge specified in this contract shall be equitably prorated from the period in which commencement or discontinuance of service at any service location designated under the Service Specifications shall become effective.

(End of clause)

52.242-13 Bankruptcy. (JUL 1995)

In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish, by certified mail or electronic commerce method authorized by the contract, written notification of the bankruptcy to the Contracting Officer responsible for administering the contract. This notification shall be furnished within five days of the initiation of the proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of Government contract numbers and contracting offices for all Government contracts against which final payment has not been made. This obligation remains in effect until final payment under this contract.

(End of clause)

52.243-1 Changes - Fixed-Price. (AUG 1987)

(a) The Contracting Officer may at any time, by written order, and without notice to the sureties, if any, make changes within the general scope of this contract in any one or more of the following:

- (1) Drawings, designs, or specifications when the supplies to be furnished are to be specially manufactured for the Government in accordance with the drawings, designs, or specifications.
- (2) Method of shipment or packing.
- (3) Place of delivery.

(b) If any such change causes an increase or decrease in the cost of, or the time required for, performance of any part of the work under this contract, whether or not changed by the order, the Contracting Officer shall make an equitable adjustment in the contract price, the delivery schedule, or both, and shall modify the contract.

(c) The Contractor must assert its right to an adjustment under this clause within 30 days from the date of receipt of the written order. However, if the Contracting Officer decides that the facts justify it, the Contracting Officer may receive and act upon a proposal submitted before final payment of the contract.

(d) If the Contractor's proposal includes the cost of property made obsolete or excess by the change, the Contracting Officer shall have the right to prescribe the manner of the disposition of the property.

(e) Failure to agree to any adjustment shall be a dispute under the Disputes clause. However, nothing in this clause shall excuse the Contractor from proceeding with the contract as changed.

(End of clause)

52.243-1 Changes - Fixed-Price. (AUG 1987) - Alternate I (APR 1984)

52.243-1 Changes - Fixed-Price. (AUG 1987) - Alternate II (APR 1984)

52.243-1 Changes - Fixed-Price. (AUG 1987) - Alternate III (APR 1984)

52.243-1 Changes - Fixed-Price. (AUG 1987) - Alternate IV (APR 1984)

52.243-1 Changes - Fixed-Price. (AUG 1987) - Alternate V (APR 1984)

52.244-6 Subcontracts for Commercial Products and Commercial Services. (FEB 2024)

52.245-1 Government Property. (SEP 2021)

52.249-2 Termination for Convenience of the Government (Fixed-Price). (APR 2012)

52.249-8 Default (Fixed-Price Supply and Service). (APR 1984)

52.252-2 Clauses Incorporated by Reference. (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es): <https://www.acquisition.gov/>.

(End of clause)

52.252-4 Alterations in Contract. (APR 1984)

Portions of this contract are altered as follows:

1. Billing and invoicing shall be performed in accordance with the Statement of Work.

(End of clause)

952.202-1 Definitions.

As prescribed in 902.201, insert the clause at 48 CFR 52.202-1, Definitions, in all contracts. The following shall be added to the clause as paragraph (c):

- (c) When a solicitation provision or contract clause uses a word or term that is defined in the Department of Energy Acquisition Regulation (DEAR) (48 CFR chapter 9), the word or term has the same meaning as the definition in 48 CFR 902.101 or the definition in the part, subpart, or section of 48 CFR chapter 9 where the provision or clause is prescribed in effect at the time the solicitation was issued, unless an exception in (a) applies.

952.242-70 Technical Direction. (DEC 2000)

- (a) Performance of the work under this contract shall be subject to the technical direction of the DOE Contracting Officer's Representative (COR). The term "technical direction" is defined to include, without limitation:

- (1) Providing direction to the Contractor that redirects contract effort, shift work emphasis between work areas or tasks, require pursuit of certain lines of inquiry, fill in details, or otherwise serve to accomplish the contractual Statement of Work.
- (2) Providing written information to the Contractor that assists in interpreting drawings, specifications, or technical portions of the work description.
- (3) Reviewing and, where required by the contract, approving, technical reports, drawings, specifications, and technical information to be delivered by the Contractor to the Government.

- (b) The Contractor will receive a copy of the written COR designation from the Contracting Officer. It will specify the extent of the COR's authority to act on behalf of the Contracting Officer.

- (c) Technical direction must be within the scope of work stated in the contract. The COR does not have the authority to, and may not, issue any technical direction that-

- (1) Constitutes an assignment of additional work outside the Statement of Work;

- (2) Constitutes a change as defined in the contract clause entitled "Changes;"
- (3) In any manner causes an increase or decrease in the total estimated contract cost, the fee (if any), or the time required for contract performance;
- (4) Changes any of the expressed terms, conditions or specifications of the contract; or
- (5) Interferes with the Contractor's right to perform the terms and conditions of the contract.

(d) All technical direction shall be issued in writing by the COR.

(e) The Contractor must proceed promptly with the performance of technical direction duly issued by the COR in the manner prescribed by this clause and within its authority under the provisions of this clause. If, in the opinion of the Contractor, any instruction or direction by the COR falls within one of the categories defined in (c)(1) through (c)(5) of this clause, the Contractor must not proceed and must notify the Contracting Officer in writing within five (5) working days after receipt of any such instruction or direction and must request the Contracting Officer to modify the contract accordingly. Upon receiving the notification from the Contractor, the Contracting Officer must-

- (1) Advise the Contractor in writing within thirty (30) days after receipt of the Contractor's letter that the technical direction is within the scope of the contract effort and does not constitute a change under the Changes clause of the contract;
- (2) Advise the Contractor in writing within a reasonable time that the Government will issue a written change order; or
- (3) Advise the Contractor in writing within a reasonable time not to proceed with the instruction or direction of the COR.

(f) A failure of the Contractor and Contracting Officer either to agree that the technical direction is within the scope of the contract or to agree upon the contract action to be taken with respect to the technical direction will be subject to the provisions of the clause entitled "Disputes."

(End of Clause)

952.245-2 Government property (fixed-price contracts).

Modify FAR 52.245-2 by adding "and the DOE Acquisition Regulation Subpart 945.5," after the reference to FAR Subpart 45.5 in the first sentence of paragraphs (e)(1) and (e)(2) of the clause.

Section J - List of Documents, Exhibits and Other Attachments

Attachment Number	Title	Date
1	STATEMENT OF WORK	10/01/2024
2	RATE SCHEDULES AND FEES FOR WATER AND SEWER SERVICE	10/01/2024
3	RULES AND REGULATIONS GOVERNING WATER SERVICE TO CUSTOMERS	10/01/2024
4	RATEPAYER ASSURANCE POLICY	10/01/2024
5	SITE 300 THOMAS SHAFT CONNECTION(S)	10/01/2024
6	SITE 300 SERVICE AREA	10/01/2024
7	OWNERSHIP OF FACILITIES AND EQUIPMENT	10/01/2024
8	MOCHO SHAFT PROPERTY OWNERSHIP	10/01/2024

STATEMENT OF WORK (SOW)

Livermore Field Office

Primary Potable Water Service San Francisco Public Utilities Commission

Contract No. 89233125CNA000390

January 1, 2025 - December 31, 2034

1.0 Introduction and Background

The San Francisco Public Utilities Commission (SFPUC) is an enterprise department of the City and County of San Francisco (San Francisco) that provides high quality drinking water to retail customers, who are located primarily in San Francisco, and 27 wholesale water customers in Alameda, San Mateo, and Santa Clara counties, as well as wastewater and power services to residents, businesses, and municipal departments in San Francisco. Its governing body is its five-member Commission, which establishes and adjusts rates, fees, and charges for water, power, and sewer services in accordance with San Francisco Charter Section 8B.125. The Commission has also established, and amends from time to time, the SFPUC Rules and Regulations Governing Water Service to Customers, which is included as Attachment 3 to this Contract, and the SFPUC Rates Policy, which is included as Attachment 4 to this Contract.

The SFPUC maintains and operates a complex water supply system, known as the Regional Water System, which stretches from Hetch Hetchy Reservoir in the Sierra Nevada Mountains to San Francisco, and features a series of reservoirs, tunnels, pipelines, and treatment systems. The drinking water it supplies is among the purest in the world. The Regional Water System delivers water almost entirely through the use of gravity, requiring little, if any, fossil fuel consumption to move water from the mountains to customers located in the San Francisco Bay Area.

The SFPUC is the third largest municipal utility in California, supplying water for approximately 2.7 million people in the San Francisco Bay Area. Two thirds of the Regional Water System's deliveries go to the SFPUC's 27 wholesale water customers in Alameda, Santa Clara, and San Mateo counties. The cost of providing utility service is covered by service-based rates, fees, and charges that the SFPUC collects from its customers and the SFPUC's non-operating revenues (e.g., land leases).

The Hetch Hetchy watershed, an area located in Yosemite National Park, provides approximately 85% of the SFPUC service area's total water supply needs, with the remaining 15% sourced primarily from the Alameda and Peninsula watersheds in the San Francisco Bay Area. Spring snow melt from the Tuolumne River fills Hetch Hetchy Reservoir, which is the largest reservoir in the Regional Water System. The SFPUC treats the water sourced from Hetch Hetchy Reservoir, but does not filter it, because of its high quality. During drought periods, the SFPUC may enhance water deliveries to its customers with water from its nearby Cherry and Eleanor Reservoirs, which require filtration for potable use, or other equivalent alternative water supply sources, in place of supply from Hetch Hetchy Reservoir or the Alameda and Peninsula watersheds.

Since June 27, 1960, the SFPUC has sold and delivered water from the Regional Water System to the U.S. Department of Energy (Government) for the Lawrence Livermore National Laboratory (LLNL) Field Office located at 7000 East Avenue, Livermore, CA 94550-0808, which includes LLNL Site 200 (see Exhibit A below) and LLNL Site 300 (see Exhibit B below). LLNL Site 200 receives water from Mocho Shaft of the Coast Range Tunnel of the Hetch Hetchy Aqueduct. LLNL Site 300 receives water from Thomas Shaft of the Coast Range Tunnel of the Hetch Hetchy Aqueduct. Between 1960 and 2014, the Government exercised its option to renew its water service contract with the SFPUC annually, and the parties amended the contract several times. In 2015, the SFPUC and the Government executed a new 10-year water service contract, with a term starting January 1, 2015 and ending December 31, 2024, as authorized by SFPUC Resolution No. 15-0022, dated January 27, 2015 and San Francisco Board of Supervisors Resolution No. 068-15, dated March 10, 2015 (2015 Contract).

2.0 Requirement and Scope

As the term of the 2015 Contract ends on December 31, 2024, the Government has a need for a reliable potable water supply to the LLNL Field Office, including Site 200 and Site 300, during the performance period of January 1, 2025 to December 31, 2034 (Performance Period). The Government’s estimated water usage during the Performance Period is listed in paragraph 4.0 of this SOW.

3.0 Deliverables

1. The SFPUC shall provide potable water services required by the LLNL Field Office in accordance with the terms and conditions of this Water Service Contract (Contract).
2. The SFPUC shall maintain and operate water collection, treatment, and facilities shown as the SFPUC’s responsibility in Attachment (7) for Site 300 (Thomas Shaft of Coast Range Tunnel) and in Attachment (6) for Site 200 (Mocho Shaft of Coast Range Tunnel).
3. The SFPUC shall invoice the Government in accordance with the SFPUC’s current schedule of rates, and/or adjusted rates as periodically updated by the SFPUC. The SFPUC shall invoice the Government for water service at regular monthly intervals with supporting documentation/information to validate the incurred charges, including meter serial numbers, meter begin and end readings, and current water rates for the period of service indicated.

4.0 Government’s Estimated Water Usage in CCF Units for Contract Performance Period January 1, 2025 through December 31, 2034

ANNUAL CCF ESTIMATED USAGE AND COST FOR LIVERMORE FIELD OFFICE-LFO

YEAR	MOCHO SHAFT METER NUMBER 31977472	MOCHO SHAFT METER NUMBER 31977468	THOMAS SHAFT METER NUMBER 0186941	ANNUAL AVERAGE TOTAL CCF USAGE
2025	220,317	203,451	17,378	441,146

2026	220,317	203,451	17,378	441,146
2027	220,317	203,451	17,378	441,146
2028	220,317	203,451	17,378	441,146
2029	220,317	203,451	17,378	441,146
2030	220,317	203,451	17,378	441,146
2031	220,317	203,451	17,378	441,146
2032	220,317	203,451	17,378	441,146
2033	220,317	203,451	17,378	441,146
2034	220,317	203,451	17,378	441,146
TOTAL	2,203,170	2,034,510	173,780	4,411,460
TOTAL CCF				4,411,460
TOTAL ESTIMATED REVENUE @ \$15.06 PER CCF				\$66,436,590.00

- NOTES:
1. Totals include estimated usage with anticipated growth in future years.
 2. Annual water usage may vary depending on growth and conservation measures planned in future years.
 3. Cost factors may vary and therefore total cost would vary.
 4. Total Contract cost is estimated using the average anticipated Commission-approved rates over the life of this Contract.

5.0 Technical Requirements

1. Water Services. The SFPUC shall provide all water services and furnish all labor, materials, tools, equipment, facilities, transportation, and incidentals necessary to provide potable water supply to the point(s) of delivery shown in Attachment (6) for Site 200 and in Attachment (7) for Site 300, in accordance with the terms and conditions of this Contract. The Government shall provide all pumping energy for Site 200. The SFPUC shall provide all pumping energy for Site 300. Water service means traditional utility service, unless otherwise specified in this Contract, which includes supply, transmission, coordination, operation, maintenance, terminal storage, disinfection, and treatment.
2. Annual Rate Schedule. The current SFPUC water service rate schedule that applies to the Government under this Contract is “Schedule W-1C: Commercial, Industrial, Public and General Uses,” contained within Attachment (2) to this Contract, “Rate Schedules & Fees for Water and Sewer Service.” This schedule is effective with meter readings made on or after July 1, 2024 (Fiscal Year 2024-25), and July 1, 2025 (Fiscal Year 2025-26), and will thereafter be adjusted on July 1 of each year during the Performance Period.
3. Meter Size. The SFPUC delivers water to the LLNL Field Office through three meters, which are six-inches in size. The SFPUC shall charge, and the Government shall pay, a monthly service charge for each of these meters, based on their size, in accordance with the applicable rate schedule. The monthly service charge, as of the start of the Performance Period, is shown on Schedule W-1C within Attachment (2) to this Contract. The meter numbers invoiced are: 31977468, 31977472, and 0186941.
4. Charge per 100 Cubic Feet. The SFPUC shall charge, and the Government shall pay, a

charge for all water delivered to the LLNL Field Office based on monthly meter readings, in accordance with the applicable rate schedule. This volumetric charge, as of the start of the Performance Period, is shown on Schedule W-1C within Attachment (2) to this Contract.

5. Meter Reading, Billing, and Collection. All invoices are due upon receipt. See Section D, Rules 1-6, of Attachment (3) to this Contract, entitled “Rules and Regulations Governing Water Service to Customers.”
6. Meter Testing. See Section D, Rules 7 and 8 of Attachment (3) of this Contract, entitled “Rules and Regulations Governing Water Service to Customers.”
7. Scheduled Maintenance. Water supplied by the SFPUC through the Coast Range Tunnel will, from time to time, require interruption due to scheduled maintenance activities. Periods of scheduled water supply interruption will normally not exceed 60 days, but may exceed that time frame depending on the maintenance that is required. The SFPUC will provide at least six months advance notification for all regularly scheduled maintenance periods.
8. Water Supply During Emergencies and Other Situations Beyond the SFPUC’s Control. During emergencies and other situations beyond the SFPUC’s control, water service may be interrupted with little or no advance notification. The SFPUC may extend the period of any such water supply interruption as required to respond to the emergency or other situation and to complete any necessary maintenance or repair.
9. Substitute Source of Water Supply During Water System Shutdowns Due to Scheduled Maintenance and Emergencies. During any periods of water supply interruption due to scheduled maintenance, emergencies, or other situations beyond the SFPUC’s control, the Government is required to obtain a substitute source of water supply for the LLNL Field Office from Zone 7 of the Alameda County Flood Control and Water Conservation District until the SFPUC has completed the required scheduled maintenance or emergency response activities and is able to resume service.
10. Drought. During drought periods when the SFPUC has declared a water shortage emergency under California Water Code Section 350, the SFPUC may take more restrictive measures to conserve water. The SFPUC will notify the Government of the water conservation measure(s) anticipated to be implemented approximately 60 days prior to the date they will take effect or as soon as possible thereafter (depending on the severity of the situation), as well as the estimated duration of the water conservation measure(s), to allow the Government adequate time to invoke alternative resources for its water needs. During such drought periods, the SFPUC may also deliver water from an alternative source of supply to the LLNL Field Office through Zone 7, subject to agreement by Zone 7. The SFPUC will provide at least six months advance notification for such water deliveries.
11. Total Estimated Contract Cost. The estimated cost of services for the Performance Period of this Contract is \$66,436,590.00, based on the SFPUC’s anticipated water rates and the Government’s anticipated water usage.
12. Period of Performance. The Performance Period of this Contract begins January 1, 2025 and ends December 31, 2034.

6.0 Permit for Access, Operation, and Maintenance

Subject to the conditions identified in this Section 6.0, the SFPUC grants the Government a permit to use certain SFPUC property, free of any rental or similar charge, for the following three, limited purposes during the Performance Period:

- (1) Occupying and utilizing the roadway to Thomas Shaft for access, operation, and maintenance of a 10-inch pipe running below grade about 1.54 miles from the point of delivery at the Thomas Shaft Chlorination Facility to Site 300, including access to the backflow assembly at the point of delivery for testing and maintenance; and
- (2) Accessing electrical and remote communication equipment at the Thomas Shaft utility enclosure shown in Attachment (7), and on pages 4 and 5 of Attachment (8), which include electrical panels G1 and G4, radio modem, antenna, and programmable logic controller; and
- (3) Occupying and utilizing the roadway to Mocho Shaft for access, operation and maintenance of a 16-inch pipe that runs below grade approximately 6.1 miles from the point of delivery at Mocho Shaft to Mines Road and the Government owned facilities as shown in Attachment (6).

The areas of SFPUC property identified in the three purposes above are collectively referred to as the "Permit Areas."

The SFPUC grants this permit to the Government subject to the following conditions:

- (1) The grant of permission does not constitute a deed or grant of an easement, and is not transferable or assignable.
- (2) The SFPUC may revoke the permit in the event of:
 - (a) the termination of the Contract and a reasonable time thereafter sufficient for the Government's removal of its facilities; or
 - (b) a material breach of this Contract by the Government as determined by a court of law or administrative agency.
- (3) The Government's use of the Permit Areas is limited solely to the purposes defined in the first paragraph of this Section 6.0, and no additional structures or facilities are allowed unless expressly permitted by the SFPUC following the SFPUC's review and approval of proposed plans and necessary environmental documentation prepared by the Government.
- (4) The Government's use of the Permit Areas shall be subject to the SFPUC's primary rights to use the Permit Areas as fee owner, and in the event of a conflict between use of the Permit Areas by the SFPUC for utility purposes and the Government under this limited permit, the Government shall be required to relocate its facilities and/or equipment in the Permit Areas at its sole expense.
- (5) The Government shall maintain the Permit Areas in good and presentable condition.
- (6) In the event that maintenance or removal of either of the Government's pipelines within the

Permit Areas is required, the Government, at its expense, including any associated cost incurred by the Contractor, shall restore the Permit Areas to their original condition, in accordance with applicable laws, and to the reasonable satisfaction of the SFPUC.

EXHIBIT A

Lawrence Livermore National Laboratory-Site 200
Exhibit E to Contract DE-AC03-76SF16828
1 Sandia National Laboratory

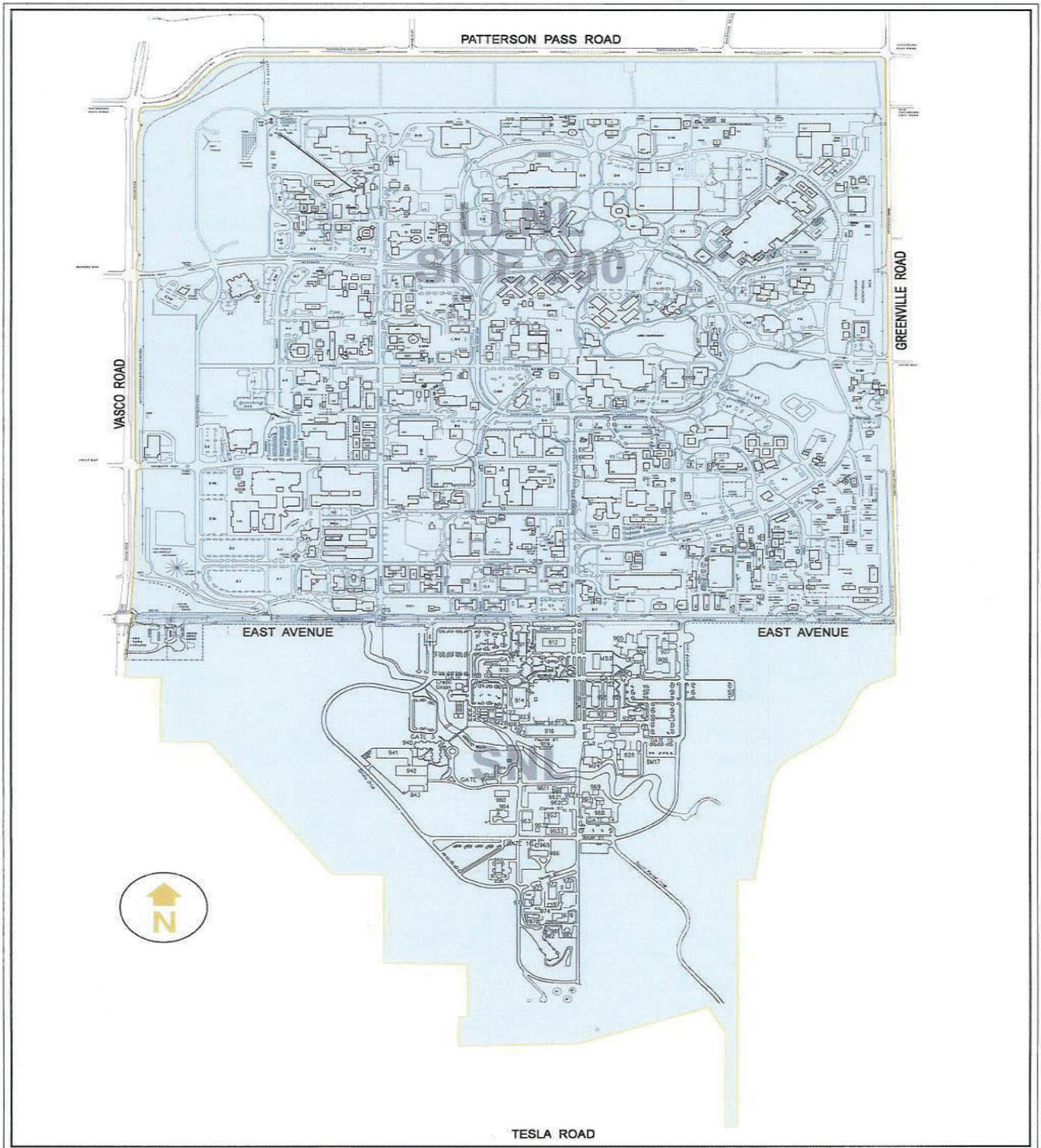
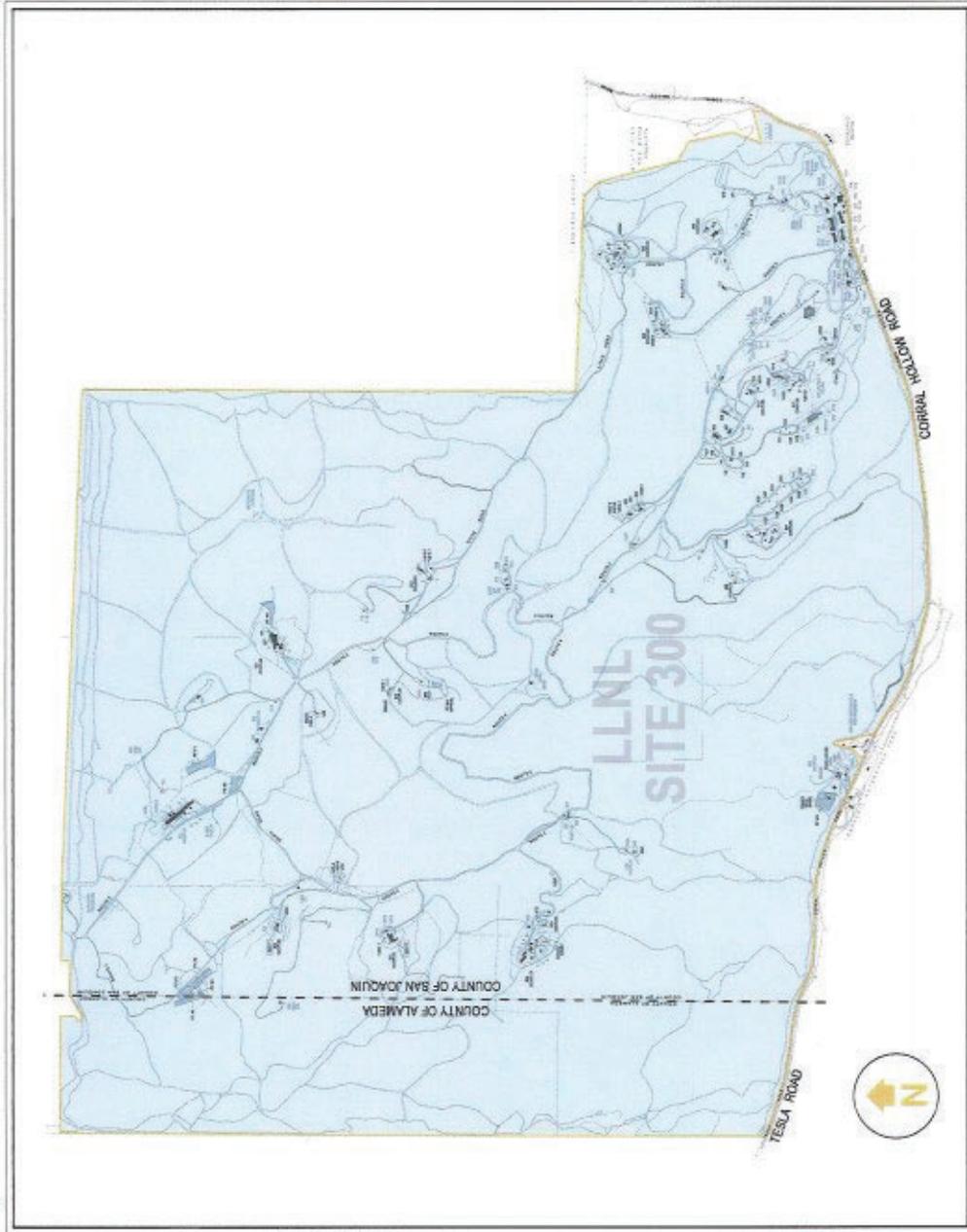


EXHIBIT B

Exhibit E to Contract DE-ACC03-76SF-16828 Lawrence Livermore National Laboratory-Site 300
2



RATE SCHEDULES & FEES for Water and Sewer Service

Effective with meter readings made on or after
July 1, 2024 (Fiscal Year 2024-25),
July 1, 2025 (Fiscal Years 2024-25 and 2025-26)



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

RATE SCHEDULES & FEES **for Water and Sewer Service**

Effective with meter readings made on or after
July 1, 2023 (Fiscal Year 2023-24), July 1, 2024 (Fiscal Year 2024-25),
and July 1, 2025 (Fiscal Year 2025-26)



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

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Introduction

Every day, the San Francisco Public Utilities Commission (SFPUC) delivers high-quality water to 2.7 million Bay Area customers, protects the environment and public health by treating wastewater and stormwater, and generates clean energy for San Francisco residents and businesses. Our mission is to provide our customers with high-quality, efficient, and reliable water, power, and sewer services in a manner that values environmental and community interests and sustains the resources entrusted to our care. Learn more at [sfpuc.gov](https://www.sfpuc.gov).

As a not-for-profit public utility, our rates reflect the true cost of operating, maintaining, and upgrading our water, sewer, and power systems. This Rate Schedules and Fees document for Water and Sewer Services are a compilation of all rate schedules and fees charged to customers of the SFPUC.

Your Dollars at Work

The SFPUC is committed to providing customers with safe, reliable, and affordable drinking water and a combined sewer system that reduces flooding and protects the environment from pollution. These systems require ongoing maintenance and upgrades. Many parts of the SFPUC water system are nearly 100 years old, and the oldest parts of the sewer system date back to the Gold Rush. We need to continue to maintain and upgrade aging systems to prevent breaks, meet regulatory requirements, improve seismic safety, and adapt to storms as the climate changes. Your dollars pay for essential services and projects that protect public health.

The work performed by the SFPUC is almost exclusively funded by rate payer dollars and with this in mind, SFPUC is committed to setting rates that are cost-effective and equitable for our customers. Staff across our agency are proactively addressing the challenges our communities face in all areas of our work – climate change, improving seismic safety; regulatory requirements; making essential improvements to our complex infrastructure to ensure the long-term reliability of vital public assets; and, tackling affordability challenges head on by working to make utility services more affordable for communities that have faced systematic barriers and for customers experiencing financial hardship. Your dollars pay for essential services and projects that help ensure our systems 24 hours a day, 7 days a week.

Retail Water and Sewer Rates, Charges, and Fees

Rate and Fee Changes

In May 2023, the Commission approved three years of water and wastewater service rates for the fiscal years 2023-24, 2024-25, and 2025-26. Rates, charges, and fees for FY 2024-25 and FY 2025-26 will become effective July 1, 2024 and July 1, 2025, respectively.

Water Rate Structure

The water rate structure of the SFPUC is made up of two components:

- (1) a fixed monthly service charge based on meter size and
- (2) a variable charge based on water volumetric usage

The variable charge for residential customers is a two-tier rate structure, while non-residential customers are charged a uniform commodity rate.

Sewer Rate Structure

The sewer rate structure of the SFPUC is made up of three components:

- (1) a fixed monthly sewer service charge.
- (2) a variable wastewater rate based on assumed percentage of metered water usage returned to the sewer system.

Single-family and multi-family residential variable charges are based on a flat rate per discharge unit, calculated from the rate components assuming domestic strength sewage. Non-residential customers are charged unique rates for discharged flows as well as sewage loading (Chemical Oxygen Demand, Total Suspended Solids, and Oils & Grease). The loading rates charged are based on the customer's business type.

- (3) a fixed monthly stormwater component based on the property size and/or parcel characteristics.

The Stormwater component of the sewer bill is assessed on a "simplified" three-tiered structure for residential customers, based on the net parcel size, with smaller parcels being assessed a lower charge that gradually increases for larger parcels. Non-residential, mixed-use, and large residential parcels (over 6,000 square feet or with more than six dwelling units) would be assessed using a "standard charge" based on their total permeable and impermeable surface area.

Drought Surcharge and Conservation

The SFPUC may implement a temporary drought surcharge to cover its operating costs in the event of a declared water delivery reduction that results in decreased water sales. This would apply to the volumetric portions of both water and sewer rates (not to the monthly fixed service charge or stormwater component). The Commission will activate the temporary drought surcharge when it imposes delivery reductions per the Retail Water Shortage Allocation Plan and for either voluntary or mandatory water reduction. At that time, SFPUC will estimate the revenue reduction resulting from water use savings, as well as the surcharge to retail rates necessary to meet the revenue requirement based on lower water sales. The Commission will remove the temporary surcharge when the water use reductions are lifted, per the Retail Water Shortage Allocation Plan.

Water and Sewer Rate and Fee Resolutions

The SFPUC Water and Sewer rates were approved by the following resolutions:

[22-0044](#), approved February 22, 2022. Memorialized Customer Assistance Program.

[23-0074](#), approved on April 11, 2023. Implemented Changes to the Water and Wastewater Customer Assistance Program.

[23-0103](#), approved on May 23, 2023. Adopted three-year schedule of rates for retail water service in San Francisco and suburban areas (FY 2024 – FY 2026).

[23-0104](#), approved on May 23, 2023. Adopted three-year schedule of rates for sewer service in San Francisco (FY 2024 – FY 2026). Stormwater credits are available to customers who install green infrastructure projects to manage runoff from their property.

[23-0105](#), approved on May 23, 2023. Adopted rules and regulations for stormwater credit program.

[24-0090](#), approved on April 9, 2024. Adopted Water Miscellaneous Fee schedules.

[24-0091](#), approved on April 9, 2024. Adopted Wastewater Miscellaneous Fee schedules.

[24-0115](#), approved on May 14, 2024. Adopted FYE 2024-25 Wholesale Water rates.

Manage Your Account

Sign up for My Account to see your water usage at

www.myaccount-water.sfpuc.gov.

Bill Relief

Visit our website, www.sfpuc.gov/learning/conserves-water to learn about ways to save water and money through our water conservation programs.

For information on the Water and Wastewater Customer Assistance Program: www.sfpuc.gov/accounts-services/bill-relief/customer-assistance-program-waterwastewater

Stormwater Component

More information about our Stormwater Component can be found on our Stormwater landing page, <https://www.sfpuc.gov/accounts-services/water-power-sewer-rates>.

This website includes background information about the charge, a bill calculator, and resources available to customers interested in reducing their stormwater component.

Definitions

For this Schedule, the following definitions shall apply unless the context specifically dictates otherwise.

“City”

The City and County of San Francisco.

“COD”

Chemical Oxygen Demand (COD) is a quantitative measure of the amount of oxygen required for chemical oxidation of carbonaceous materials in wastewater using a strong chemical oxidant such as chromic acid (H₂Cr₂O₇).

“Commission”

The San Francisco Public Utilities Commission.

“Customer”

Any person, firm, corporation, partnership, trust, or any other entity including, but not limited to, local, state, and federal governments utilizing the services of the City's utility systems.

“Customer Class”

Users with the same or similar usage characteristics are grouped into Customer Classes for purposes of cost allocation and rate setting.

“Discharge”

The Customer's metered water use multiplied by the Customer's applicable wastewater flow factor.

“Discharge Unit”

100 cubic feet of wastewater discharged to sewerage system. The quantity of wastewater shall be the amount metered, or, in the event quantity is not metered, shall be the metered water use multiplied by the wastewater flow factor.

“Domestic Wastes”

Water-carried human wastes from sanitary conveniences, including but not limited to toilets, sinks, bathtubs, and residential laundry facilities.

“Dwelling Unit”

As defined in San Francisco Planning Code Section 102.7, a room or suite of two or more rooms that is designed for, or is occupied by, one family doing its own cooking therein and having only one kitchen. For the purposes of this resolution, “Dwelling Unit” shall not include a lodging house, rooming house, motel, or hotel, as defined in San Francisco Housing Code Section 410, or a live/work unit, as defined in Section 102.13 of the San Francisco Planning Code.

“Flow Factor”

The percentage of metered water use returned to sewers and the Sewerage System as wastewater. For purposes of determining applicable charges, the percentage of water use returned to sewers is assumed to be 90% for single family Residential Users, 95% for multifamily Residential users and 90% for all other users. The General Manager may establish modified percentages by estimation or based on an inspection of the Residential User’s premises and water use. Residential Users may appeal their assigned flow factor pursuant to procedures set forth in applicable department regulations.

“General Manager”

The General Manager of the Public Utilities Commission or his or her designee.

“Hydrocarbon Oil and Grease”

Hydrocarbon oil and grease (O/G) is the measurement of that fraction of recoverable oil and grease of petroleum origin using a test specified in 40 CFR Part 136.

“Industrial Wastes”

Any solid, liquid, or gaseous wastes including cooling water resulting from any industrial, commercial, or manufacturing process or from the development, recovery, or processing of natural resources.

“Impermeable Surfaces”

A surface that prevents the land’s natural ability to absorb and infiltrate rainfall or stormwater. Impervious surfaces include, but are not limited to building or structures, roof tops, impervious concrete and asphalt, and any other continuous watertight pavement or covering. Landscaped soil and pervious pavement, including pavers with pervious openings and seams, underlain with pervious soil or pervious storage material, are not impermeable surfaces.

“Operations and Maintenance Costs”

Expenditures used for the storage, treatment, and delivery of Retail and Regional water including, but not limited to, the costs of personnel, materials and supplies, energy, and administration.

“Other Wastes”

All decayed wood, sawdust, shavings, bark, lime, refuse, ashes, garbage, offal, oil, tar, chemicals, and all other substances except Sewage, Stormwater, and Industrial Wastes.

“Permeable Surface”

A surface that allows stormwater to infiltrate into the ground. Examples include pasture, native vegetation areas, landscape areas, and permeable pavement.

“Residential Customer”

A Residential Customer is the owner or customer of record of any single-family or multiple-family dwelling unit.

“Sewage”

Water-carried human wastes or a combination of water-carried human or industrial wastes from residences, commercial buildings, institutions, and industrial establishments, together with such ground, surface, storm, or other wastes that may be present.

“Sewage System” or “Sewerage System”

The City’s wastewater system including all properties (real, personal, and tangible or intangible) owned, operated, maintained by and under the jurisdiction of the Commission used for collection, treatment, and disposal of sewage, including all future additions, extensions, replacements, and improvements to the system.

“Standard Industrial Classification” or “SIC”

A coding system established by the United States government to classify businesses and industries. SIC codes are assigned based on common characteristics shared in the products, services, production, and delivery system of a business.

“Stormwater”

Surface water originating from rainfall collected in the sewerage system.

“Total Suspended Solids”

The measurement of the amount of insoluble solids that either float on the surface of wastewater or are suspended in wastewater using a test specified in 40 CFR Part 136.

“Water System”

The City’s water system including all properties (real, personal, and tangible or intangible) owned, operated, maintained by and under the jurisdiction of the Commission used for the gathering, impounding, treatment, transmission, and distribution of water, including all future additions, extensions, replacements, and improvements to the system.

Unlawful Discharge

It shall be unlawful, except as herein provided, for any Customer to discharge Sewage, Stormwater, Industrial Wastes, or Other Wastes into the sewers or sewerage works of the City, unless such Customer shall pay the City its Sewer Service Charge as hereinafter provided.

Water Rates Schedules

Customer Classification

Class Determination

Upon application for new service, each Customer shall be assigned to a Customer Class based on the City's evaluation of the Customer's usage characteristics in accordance with the requirements of SFPUC Commission Resolution 23-0103 and applicable laws and regulations. Such Customer Class determination shall be based on the Customer's description of its current operation and use of the water facilities of the City. Such description shall be subject to verification by the City.

Change in Classification

Customers requiring or requesting a change in their classification shall do so in writing within 30 days of a change in operations.

Water Rates Schedules

SCHEDULE W-1A: Single-Family Residential Service

Applicable to single-family dwelling units inside and outside of the City and County of San Francisco served through a separate meter or bank of meters:

First: A Monthly Service Charge based on the size of the meter.

Meter Size	FY 2024-25 Effective 7/1/24	FY 2025-26 Effective 7/1/25
5/8 in	\$17.48	\$18.36
3/4 in	\$22.19	\$23.30
1 in	\$31.62	\$33.21
1-1/2 in	\$55.19	\$57.95
2 in	\$83.49	\$87.67
3 in	\$158.92	\$166.87
4 in	\$243.79	\$255.98
6 in	\$479.54	\$503.52
8 in	\$762.44	\$800.57
10 in	\$1,186.78	\$1,246.12
12 in	\$2,035.47	\$2,137.25
16 in	\$3,544.25	\$3,721.47

Second: A charge for all water delivered based on monthly meter reading.

	FY 2024-25 Effective 7/1/24	FY 2025-26 Effective 7/1/25
First 4 units per month*	\$10.85	\$11.40
All additional units*	\$12.05	\$12.66

*1 unit or 1 CCF (centi (hundred) cubic feet of measured water consumption is equal to 748 gallons.

SCHEDULE W-1B: Multi-Family Residential Service

Applicable to multi-family accounts within and outside of the City and County of San Francisco consisting of two or more dwelling units served through a separate meter or bank of meters:

First: A Monthly Service Charge based on the size of the meter.

Meter Size	FY 2024-25 Effective 7/1/24	FY 2025-26 Effective 7/1/25
5/8 in	\$17.48	\$18.36
3/4 in	\$22.19	\$23.30
1 in	\$31.62	\$33.21
1-1/2 in	\$55.19	\$57.95
2 in	\$83.49	\$87.67
3 in	\$158.92	\$166.87
4 in	\$243.79	\$255.98
6 in	\$479.54	\$503.52
8 in	\$762.44	\$800.57
10 in	\$1,186.78	\$1,246.12
12 in	\$2,035.47	\$2,137.25
16 in	\$3,544.25	\$3,721.47

Second: A charge for all water delivered based on monthly meter reading.

Multiple-Family Residential	FY 2024-25 Effective 7/1/24	FY 2025-26 Effective 7/1/25
First 3 CCF per month per dwelling unit	\$10.70	\$11.24
All additional units of water*	\$11.49	\$12.07

*1 unit or 1 CCF (centi (hundred) cubic feet of measured water consumption is equal to 748 gallons.

SCHEDULE W-1C: Commercial, Industrial, Public, and General Uses

Applicable to commercial, industrial, public buildings, parks, docks & ships, and other general uses within and outside of the City and County of San Francisco, excluding Wholesale customers, served through a separate meter or bank of meters.

For Street Sprinkling and Flushing when quantities are computed from records of tank wagons and billed as one amount: Schedule W-1C (no service charge to apply).

First: A Monthly Service Charge based on the size of the meter.

Meter Size	FY 2024-25 Effective 7/1/24	FY 2025-26 Effective 7/1/25
5/8 in	\$17.48	\$18.36
3/4 in	\$22.19	\$23.30
1 in	\$31.62	\$33.21
1-1/2 in	\$55.19	\$57.95
2 in	\$83.49	\$87.67
3 in	\$158.92	\$166.87
4 in	\$243.79	\$255.98
6 in	\$479.54	\$503.52
8 in	\$762.44	\$800.57
10 in	\$1,186.78	\$1,246.12
12 in	\$2,035.47	\$2,137.25
16 in	\$3,544.25	\$3,721.47

Second: A charge for all water delivered based on monthly meter reading.

	FY 2024-25 Effective 7/1/24	FY 2025-26 Effective 7/1/25
For all units*	\$11.68	\$12.27

*1 unit of water = 100 cubic feet = 1 ccf = 748 gallons

SCHEDULE W-2: Fire Service

Applicable to private fire service within and outside of the City and County of San Francisco installed and maintained according to the rules, regulations, and Specifications of the San Francisco Water Enterprise.

First: A Monthly Service Charge based on the size of the service.

Service Size	FY 2024-25 Effective 7/1/24	FY 2025-26 Effective 7/1/25
1 in	\$8.86	\$9.31
1-1/2 in	\$9.36	\$9.83
2 in	\$10.22	\$10.74
3 in	\$13.34	\$14.01
4 in	\$18.72	\$19.66
6 in	\$38.00	\$39.90
8 in	\$71.28	\$74.85
10 in	\$121.33	\$127.40
12 in	\$190.71	\$200.25

Second: If water is used for any purpose other than extinguishing accidental fires, the W-1C rates for water delivery shall apply.

SCHEDULE W-4: Docks and Shipping Supply within the City and County of San Francisco.

Applicable to special shipping service, including hose truck and other special services, from open docks through common hydrants where delivery is not through a service and meter for which the customer is responsible:

First: A Docks and Shipping Connection Charge: Schedule W-41B.

Second: A charge for all water delivered based on monthly meter reading: Schedule W-1C.

SCHEDULE W-5: Hydrant Use for Temporary Water Supply

Applicable to temporary metered service connections through fire hydrants within the City and County of San Francisco:

First: A Builders and Contractors Connection Fee: Schedule W-41B.

Second: A Meter Rental Deposit: Schedule W-41B.

Third: A Monthly Service Charge based on the size of the meter.

Meter Size	FY 2024-25 Effective 7/1/24	FY 2025-26 Effective 7/1/25
5/8 in	\$17.48	\$18.36
3/4 in	\$22.19	\$23.30
1 in	\$31.62	\$33.21
1-1/2 in	\$55.19	\$57.95
2 in	\$83.49	\$87.67
3 in	\$158.92	\$166.87
4 in	\$243.79	\$255.98
6 in	\$479.54	\$503.52
8 in	\$762.44	\$800.57
10 in	\$1,186.78	\$1,246.12
12 in	\$2,035.47	\$2,137.25
16 in	\$3,544.25	\$3,721.47

Fourth: A charge for all water delivered based on monthly meter reading: Schedule W-1C.

Fifth: Any customer who fails to report water consumption as required shall be assessed a non-reporting penalty equivalent to the cost of 25 units of water per month at the current Schedule W-1C volumetric rate.

SCHEDULE W-24: Untreated Water Service

Applicable inside and outside the City and County of San Francisco for untreated water service when the customer furnishes all facilities necessary to convey the untreated water from the San Francisco Water Enterprise’s water supply reservoirs to the customer’s point of use.

First: A Monthly Service Charge based on the size of the meter.

Meter Size	FY 2024-25 Effective 7/1/24	FY 2025-26 Effective 7/1/25
5/8 in	\$17.48	\$18.36
3/4 in	\$22.19	\$23.30
1 in	\$31.62	\$33.21
1-1/2 in	\$55.19	\$57.95
2 in	\$83.49	\$87.67
3 in	\$158.92	\$166.87
4 in	\$243.79	\$255.98
6 in	\$479.54	\$503.52
8 in	\$762.44	\$800.57
10 in	\$1,186.78	\$1,246.12
12 in	\$2,035.47	\$2,137.25
16 in	\$3,544.25	\$3,721.47

Second: A charge for all water delivered based on monthly meter reading.

	FY 2024-25 Effective 7/1/24	FY 2025-26 Effective 7/1/25
For all units of water*	\$1.89	\$1.99

*1 unit or 1 CCF (centi (hundred) cubic feet of measured water consumption is equal to 748 gallons.

SCHEDULE W-25: Wholesale Use with Long-Term Contract

For service to municipalities, water districts, and others who under long-term contracts, purchase water for resale:

First: A Monthly Service Charge based on the type and size of the meter.

Meter Size	Turbine Meters (C-701, Class II)	Electronic Meters (C-715, Class II)	Displacement Meters (C-700, Class II)
2 in	-	-	\$143
3 in	\$391	\$314	-
4 in	\$674	\$539	-
6 in	\$1,438	\$719	-
8 in	\$2,517	\$1,798	-
10 in	\$3,775	\$2,697	-
12 in	-	\$3,596	-
16 in	\$7,012	-	-

The meter types have been re-labeled to align with its respective AWWA reference. Displacement meters were previously labeled as “Compound/Disc” meters. Electronic Meters refer to “Electromagnetic/Ultrasonic” meters.

Second: A charge for water delivered based on one-month of meter readings:

\$2,469.47 per acre-foot or \$5.67 per 100 cubic foot

Third: An Untreated Wholesale Water Rate Discount Factor for customers receiving untreated water, based on monthly meter readings:

\$(169.88) per acre-foot or \$(0.39) per 100 cubic foot

Water Drought Surcharge

If the Commission, at a publicly noticed meeting, adopts a resolution declaring a stage of water delivery reduction in accordance with the Retail Water Shortage Allocation Plan (i.e., Stage 1, Stage 2, or Stage 3), the following schedule of drought surcharges shall be applied to the volumetric portion of retail water rates as of the date of the Commission resolution or any effective date designated by the Commission. For residential customers, the surcharges shall assume that the overall demand reduction is split evenly between Tier 1 and Tier 2. Each non-residential customer shall incur the percent drought surcharge uniformly. The overall required surcharge is based on the final formula: surcharge (\$ per CCF) = Water Revenue Shortfall from reduced flow/ Reduced Water Flow.

Water Shortage Contingency Plan Stage	Target Water Usage Reduction	Drought Surcharge on Volumetric Water Rates
Stages 1 - 3	5%	Up to 5%
Stage 4	5-18%	Up to 18%
Stages 5 - 6	18-32%	Up to 32%

The drought surcharges shall remain in effect until the Commission adopts a resolution to rescind the water delivery reduction.

Wastewater Rates Schedules

Customer Classification

Class Determination

Upon application for new service, each Customer shall be assigned to a Customer Class based on the City's evaluation of the Customer's waste discharge characteristics in accordance with the requirements of SFPUC Commission Resolutions 23-0104 and applicable laws and regulations. Such Customer Class determination shall be based on the Customer's description of its current operation and use of the collection, treatment, and disposal facilities of the City. Such description shall be subject to verification by the City.

Change in Classification

Customers requiring or requesting a change in their classification shall do so in writing within 30 days of a change in operations.

Unmetered Service

In circumstances where a Customer's discharge is not measured by metered water consumption, the General Manager is authorized to implement appropriate requirements and procedures for determining a Customer Charge consistent with the requirements of this resolution and applicable state and federal laws.

SCHEDULE A: Residential Wastewater

Applicable to Single-Family and Multi-Family Residential wastewater customers. The rates under this schedule are based upon the typical strengths for Domestic Wastes (SIC Group 4), as determined by the SFPUC. The charges based on discharge units for all Residential wastewater users are as follows:

	FY 2024-25 Effective 7/1/24	FY 2025-26 Effective 7/1/25
Monthly Service Charge	\$5.28	\$5.76
Volume per Discharge Unit*	\$17.80	\$18.72

*1 unit or 1 CCF (centi (hundred) cubic feet of measured water consumption is equal to 748 gallons.

A discharge unit shall be based on the customer’s metered water use multiplied by the flow factor and represents the quantity of metered water use returned to the sewage system as wastewater. By default, residential single-family customers are assumed to have a flow factor of 90% and multi-family residential customers are assumed to have a flow factor of 95%. Customers whose usage of water varies from typical patterns may apply for an adjusted flow factor.

SCHEDULE B: Non-Residential Wastewater

Users other than Residential wastewater users charged under Schedule A (i.e., Non-Residential), shall be charged the cost for each parameter according to the following:

	FY 2024-25 Effective 7/1/24	FY 2025-26 Effective 7/1/25
Monthly Service Charge	\$5.28	\$5.76
Volume per Discharge Unit*	\$10.09	\$10.43
PLUS Chemical Oxygen Demand (COD) per Pound	\$0.925	\$0.994
PLUS Total Suspended Solids (TSS) per Pound	\$1.808	\$1.944
PLUS Oil and Grease (O/G) per Pound	\$1.142	\$1.239

*1 unit or 1 CCF (centi (hundred) cubic feet of measured water consumption is equal to 748 gallons.

A discharge unit shall be based on the customer’s metered water use multiplied by the flow factor and represents the quantity of metered water use returned to the sewage system as wastewater. By default, non-residential customers are assumed to have a flow factor of 90%. Customers whose usage of water varies from typical patterns may apply for an adjusted flow factor.

Those users whose parameter loadings of COD, TSS, and O/G are not based on periodic sampling shall be charged on the basis of standard parameter loadings established by the General Manager for each SIC code in accordance with applicable state and federal laws and regulations, and as summarized in the table below.

SIC Group	SIC Group Description	COD (lb/Unit)	TSS (lb/Unit)	O/G (lb/Unit)
SIC Group 2	Hotel without Eating	1.2111	0.3496	0.1623
SIC Group 3	Nursing and Personal Care	3.9954	1.4920	0.3933
SIC Group 4	Domestic and General Uses	4.2701	1.7417	0.5306
SIC Group 5	Hotel with Eating	4.0016	1.3984	0.5369
SIC Group 6	Fish & Seafood	2.4721	0.3683	0.6243
SIC Group 7	Coin-Op Laundry	8.6588	1.0675	0.6992
SIC Group 8	Commercial and Power Laundry	9.6077	1.1299	0.7803
SIC Group 9	Sausage Manufacturing	10.0884	1.7730	0.8553
SIC Group 10	Restaurant/Kitchen, Default or with Hydro-Mechanical Grease Interceptor	7.1979	1.8916	1.5669
SIC Group 11	Wholesale Bakery	30.7208	8.5589	3.4897
SIC Group 12	Restaurant/Kitchen with Automatic Grease Removal Device or Gravity Grease Interceptor	4.4636	1.8916	0.6243

SCHEDULE C: Standard Stormwater

This schedule shall apply to all non-residential parcels, mixed use parcels, lots without wastewater service, residential parcels greater than 6,000 square feet of net parcel area and/or having more than 6 dwelling units, and/or any other parcels which do not meet the eligibility criteria for Schedule D. Net parcel area is the gross parcel area recorded with the San Francisco Assessor’s Office less any excluded area that does not drain to the SFPUC combined sewer system. The designation of a parcel as non-residential or residential will be based on the presence of wastewater accounts billed under Schedules A and B, above.

Parcels meeting the criteria of the standard stormwater component will be assessed on a per 1,000 square foot basis for all permeable and impermeable area on their property as follows:

	FY 2024-25 Effective 7/1/24	FY 2025-26 Effective 7/1/25
Stormwater Component of Sewer Bill per month		
Permeable Area per 1,000 square feet	\$0.41	\$0.67
Impermeable Area per 1,000 square feet	\$4.11	\$6.72

Permeable and impermeable areas are determined for each parcel using geospatial analysis. Customers may submit evidence of their measured areas if they believe the data for their property should be modified.

In the event that multiple accounts share one Parcel, the charge will be calculated for the total parcel area and shared equally by the number of accounts. The shares charged to each account may be adjusted with written agreement of all account holders on a Parcel.

Customers who install green infrastructure projects to manage stormwater on their property may apply for a stormwater credit and reduce their monthly charge.

SCHEDULE D: Simplified Residential Stormwater

This schedule shall apply to Single-Family and Multi-Family Residential wastewater customers with 6,000 square feet or less net parcel area and with 6 or fewer dwelling units as recorded in the San Francisco Public Utilities Commission’s billing records. Net parcel area is the gross parcel area recorded with the San Francisco Assessor’s Office less any excluded area that does not drain to the SFPUC combined sewer system. The designation of a parcel as non-residential or residential will be based on the presence of wastewater accounts billed under Schedules A and B, above.

The amounts under this schedule are based upon the average permeable and impermeable square footage of parcels within each tier group and the respective rate for parcel area as shown in Schedule C, as determined by the General Manager.

	FY 2024-25 Effective 7/1/24	FY 2025-26 Effective 7/1/25
Stormwater Component of Sewer Bill per month		
Tier 1: 0 - 1,700 square feet parcel area	\$5.04	\$8.24
Tier 2: 1,701 - 3,300 square feet parcel area	\$7.84	\$12.82
Tier 3: 3,301 - 6,000 square feet parcel area	\$11.79	\$19.27

In the event that multiple wastewater accounts share one Parcel, the assessed amount will be calculated for the total parcel area and shared equally by the number of accounts. The shares charged to each account may be adjusted with written agreement of all account holders on a Parcel.

Customers who install green infrastructure projects to manage stormwater on their property may apply for a stormwater credit and reduce the monthly stormwater component of their sewer bill.

Wastewater Drought Surcharge

If the Commission, at a publicly noticed meeting, adopts a resolution declaring a stage of water delivery reduction in accordance with the Retail Water Shortage Allocation Plan (i.e., Stage 1, Stage 2, or Stage 3), the following schedule of drought surcharges shall be applied to the volumetric portion of retail water rates as of the date of the Commission resolution or any effective date designated by the Commission. The overall required surcharge is based on the final formula: surcharge (\$ per CCF) = Wastewater Revenue Shortfall from reduced flow/ Reduced Wastewater Flow.

Water Shortage Contingency Plan Stage	Target Water Usage Reduction	Drought Surcharge on Volumetric Wastewater Rates
Stages 1 - 3	5%	Up to 5%
Stage 4	5-18%	Up to 18%
Stages 5 - 6	18-32%	Up to 32%

The drought surcharges shall remain in effect until the Commission, at a publicly noticed meeting, adopts a resolution rescinding the water delivery reduction.

Capacity Charges

Water Capacity Charge

Any customer request for a new connection, added collection or treatment capacity, or to change an existing connection shall pay a capacity charge. The customer may not sell, trade, or convey in a manner the capacity charge to another site or customer. The capacity charge does not convey or imply ownership in or of any facilities of the Water System. Customers shall pay the water capacity charges as follows:

Meter Size	Charges
5/8 in	\$2,266
3/4 in	\$3,400
1 in	\$5,666
1-1/2 in	\$11,328
2 in	\$18,129
3 in	\$36,255
4 in	\$56,650
6 in	\$113,302
8 in	\$181,281
10 in	\$283,251
12 in	\$487,193
16 in	\$849,758

The SFPUC will adjust the capacity charge by the annual change in the 20 City Average Construction Cost Index (CCI) published by ENR Magazine.

Customers subject to payment of the water capacity charge shall receive a prior use credit equal to the equivalent charge for past usage without regard to any time limit for such credit.

Customers subject to payment of the water capacity charge shall pay the fee prior to issuance of the applicable building permit. Any plan changes will result in a revised capacity charge payment.

Assessment of the applicable capacity charge will be based on the date that the SFPUC receives the final permit application and building plans.

If the customer does not make the full payment, the new or added water services will not be approved.

Wastewater Capacity Charge

Any customer request for a new connection, added collection or treatment capacity, or to change an existing connection shall pay a capacity charge. The customer may not sell, trade, or convey in a manner the capacity charge to another site or customer. The capacity charge does not convey or imply ownership in or of any facilities of the Sewer System. Customers shall pay the sewer capacity charges as follows:

SIC Groups 2-5

Meter Size	SIC Group 2	SIC Group 3	SIC Group 4	SIC Group 5
5/8 in	\$4,856	\$5,699	\$5,948	\$5,868
3/4 in	\$7,284	\$8,549	\$8,922	\$8,802
1 in	\$12,140	\$14,248	\$14,870	\$14,670
1-1/2 in	\$24,278	\$28,495	\$29,740	\$29,341
2 in	\$38,845	\$45,589	\$47,583	\$46,946
3 in	\$77,693	\$91,178	\$95,171	\$93,891
4 in	\$121,397	\$142,465	\$148,704	\$146,704
6 in	\$242,793	\$284,933	\$297,406	\$293,411
8 in	\$388,471	\$455,891	\$475,851	\$469,459
10 in	\$606,986	\$712,330	\$743,518	\$733,528
12 in	\$1,044,016	\$1,225,205	\$1,278,851	\$1,261,667
16 in	\$1,820,956	\$2,136,989	\$2,230,552	\$2,200,586

SIC Groups 6-8

Meter Size	SIC Group 6	SIC Group 7	SIC Group 8
5/8 in	\$5,619	\$6,658	\$6,898
3/4 in	\$8,426	\$9,985	\$10,346
1 in	\$14,045	\$16,643	\$17,244
1-1/2 in	\$28,087	\$33,284	\$34,490
2 in	\$44,944	\$53,252	\$55,183
3 in	\$89,884	\$106,505	\$110,365
4 in	\$140,443	\$166,414	\$172,448
6 in	\$280,887	\$332,830	\$344,895
8 in	\$449,419	\$532,526	\$551,833
10 in	\$702,216	\$832,073	\$862,237
12 in	\$1,207,810	\$1,431,167	\$1,483,049
16 in	\$2,106,648	\$2,496,222	\$2,586,712

SIC Groups 9-11

Meter Size	SIC Group 9	SIC Group 10	SIC Group 11
5/8 in	\$7,154	\$7,686	\$14,323
3/4 in	\$10,732	\$11,529	\$21,485
1 in	\$17,886	\$19,215	\$35,808
1-1/2 in	\$35,773	\$38,434	\$71,614
2 in	\$57,238	\$61,495	\$114,583
3 in	\$114,477	\$122,990	\$229,163
4 in	\$178,870	\$192,169	\$358,069
6 in	\$357,743	\$384,339	\$716,138
8 in	\$572,387	\$614,939	\$1,145,821
10 in	\$894,352	\$960,842	\$1,790,348
12 in	\$1,538,286	\$1,652,650	\$3,079,397
16 in	\$2,683,059	\$2,882,525	\$5,371,042

The capacity charge shall be adjusted on July 1st of each year by the annual change in the 20 City Average Construction Cost Index (CCI) published by ENR Magazine.

Customers subject to payment of the wastewater capacity charge shall receive a prior use credit equal to the equivalent charge for past usage without regard to any time limit for such credit.

Customers subject to payment of the wastewater capacity charge shall pay the fee prior to the issuance of the applicable building permit. Any plan changes will result in a revised capacity charge payment.

Assessment of the applicable capacity charge will be based on the date that the SFPUC receives the final permit application and building plans.

If the customer does not make the full payment, the new or added wastewater services will not be approved.

Water Service Connection and Miscellaneous Fees

SCHEDULE W-40: Meter Resizing

Meter resizing made at the customer’s request except when such resizing is required to maintain service pressure or meet flow requirements:

Charge Type	FY 2024-25 Effective 7/1/24
Decrease From an existing 2" meter to a 1-1/2" meter or From an existing 1" meter to a 3/4" or 5/8" meter or From an existing 3/4" to a 5/8" meter	\$2,075
Increase From an existing 5/8" to a 3/4" meter or From an existing 3/4" to a 1" meter or From an existing 1-1/2" to a 2" meter	
Reset 2" or smaller meter	\$1,584

The SFPUC must approve a change in meter size. These rates do not apply if the change in meter size results in the need for a change in service line size.

The Customer Service Bureau shall consider requests to resize meters and may determine necessity based on the current fixture count for the property and whether a resized meter will deliver adequate flow.

The City Distribution Division will estimate the cost for all requests for meter decrease from services 3 inches and larger to something lesser. The estimate will be either the cost to resize the meter or to install a new meter based on the age, location, and meter configuration of the existing service.

For meter resizing not covered in the above, or when any unusual conditions result in costs more than 15% of scheduled costs, the SFPUC may require the payment of actual costs.

SCHEDULE W-41A: Water Service Installation Fees

Applicable to all water customers for service installations made at the customer's request.

Water Installation Service Charges for Single Service

Service Size	Service Type	FY 2024-25 Effective 7/1/24
1 in.	Standard Service	\$13,169
1 -1/2 in.	Standard Service	\$18,503
2 in.	Standard Service	\$18,503
3 in.	Standard Service	\$52,916
4 in.	Standard Service	\$52,916
6 in.	Standard Service	\$62,117
8 in.	Standard Service	\$71,220
1 -1/2 in.	Fire Service	\$17,616
2 in.	Fire Service	\$17,616
4 in.	Fire Service	\$34,770
6 in.	Fire Service	\$41,181
8 in.	Fire Service	\$47,264
1 in.	Combination Service	\$13,169
1 -1/2 in.	Combination Service	\$18,503
2 in.	Combination Service	\$18,503
1 in.	Non-Standard Service	\$13,169
1 -1/2 in.	Non-Standard Service	\$18,503
2 in.	Non-Standard Service	\$18,503

Water Installation Service Charges for Multiple Services

Service Size	Service Type	FY 2024-25 Effective 7/1/24	
		Primary	Secondary
1 in.	Standard Service	\$10,775	\$5,258
1 -1/2 in.	Standard Service	\$12,862	\$7,039
2 in.	Standard Service	\$12,862	\$7,039
3 in.	Standard Service	\$54,991	\$45,040
4 in.	Standard Service	\$54,991	\$45,040
6 in.	Standard Service	\$64,821	\$54,991
8 in.	Standard Service	\$74,378	\$63,961
1 -1/2 in.	Fire Service	\$14,361	\$8,500
2 in.	Fire Service	\$14,361	\$8,500
4 in.	Fire Service	\$35,617	\$25,946
6 in.	Fire Service	\$42,399	\$32,716
8 in.	Fire Service	\$48,947	\$39,229
1 in.	Combination Service	\$10,775	\$5,258
1 -1/2 in.	Combination Service	\$12,862	\$7,039
2 in.	Combination Service	\$12,862	\$7,039
1 in.	Non-Standard Service	\$10,775	\$5,258
1 -1/2 in.	Non-Standard Service	\$12,862	\$7,039
2 in.	Non-Standard Service	\$12,862	\$7,039

(i) The charge for setting each additional meter on an existing or new service for residential and small commercial use, and (ii) the charge for resetting a meter on an existing usable service, shall be established in the same manner as above.

For installations not covered in the above or when, in the opinion of the General Manager, any unusual conditions may result in costs more than 15% greater than the scheduled costs, the SFPUC may require payments based on actual costs.

All pipes, valves, fittings, equipment, materials, meters, any other facilities, up to and including the outlet equipment, shall remain the property of the SFPUC, and no part of the cost will be refunded.

Additional Fees for Water Service Installations on Regulated Streets

Applicable to water service installations in Schedule W-41A when the installation is located on a street or streets identified by the SFPUC, in consultation with the Municipal Transportation Agency and the Department of Public Works, as requiring extra permitting and additional paving costs.

Fee	FY 2024-25 Effective 7/1/24
Special Streets Additional Fee	\$2,912
Moratorium Streets Additional Fee	\$4,779

Additional Fees for Water Service Installations with Backflow Inspection

Applicable to water service installations in Schedule W-41A when the installation includes a backflow prevention device, and the Water Quality Division must perform a backflow inspection. This charge will be assessed per applicant.

Charge Type	FY 2024-25 Effective 7/1/24
Backflow Inspection Fee	\$610

SCHEDULE W-41B: Water Service Connection Fees

Temporary Hydrant Connection Fee

\$292

Customers who temporarily connect to the system will be assessed a connection charge.

Temporary Hydrant Meter Rental Deposit

Customers that temporarily connect to the system, in addition to payment of a temporary hydrant connection fee, shall also pay a meter deposit of \$2,510 for a 1-inch meter and \$4,710 for a 3-inch meter **plus** a charge equivalent to 50 units (CCF) of water at the current Schedule W-1C water rate, which will be \$584.00 for FY 2024-25. The deposit will be refunded when the account is closed.

Temporary Hydrant Non-Reporting Penalty Fee

Customers that do not report meter reads according to the meter reading schedule, will be assessed a penalty fee equivalent to 25 units (CCF) of water at the effective Schedule W-5 water rate, which will be \$292.00 per every delinquent month during FY 2024-25.

Docks and Shipping Connection Fee

\$1,164

Docks and Shipping customers who connect to the system will pay a connection fee to cover the administrative costs for setting up a billing account and field work to provide connecting equipment.

Hydrant Flushing Fee

\$777

When customers use a portable meter to connect to a hydrant for potable uses which require flushing and water quality testing prior to use, a fee will be assessed for this service **plus** a charge equivalent to 13 units (CCF) of water at the current Schedule W-5 water rate, which will be \$151.84 for FY 2024-25.

After-Hours Temporary Service Water Shut Down Fee

Any customer who requests an after-hours temporary water shut down on water services 3 inches or larger will be assessed either a 4-hour standby fee of \$1,519 or an 8-hour standby fee of \$2,686.

If the work requested exceeds 4 hours, it will automatically be assessed as an 8-hour fee. This service is provided at no charge when the request is scheduled to occur during normal operating hours.

SCHEDULE W-42: Meter and Service Relocations

Customer requested meter and service relocations. The City Distribution Division shall determine the location of the meter:

Charge Type	FY 2024-25 Effective 7/1/24
Relocation of meter no more than 2' on existing 2" copper service	\$4,779
Relocation of meter no more than 2' on existing 1" copper or plastic service	\$2,912

If the SFPUC determines that the relocation of an active meter and/or service connection is required because of the operations of the SFPUC or because of modifications to a street or right-of-way by a public agency, the relocation will be done at no cost to the customer.

If the meter or service to be relocated is not active, the SFPUC may elect to sever the service connection and remove the meter without relocating it. If the SFPUC approves a customer request to relocate or remove the meter, the customer shall pay the greater of the standard charge as described above or the actual cost incurred by the Water Enterprise.

For relocations not covered in the above, or when any unusual conditions result in costs of more than 15% of scheduled costs, the SFPUC may require payment of the actual costs.

SCHEDULE W-43: Flow Restricting Installations

Except as noted, the following service fees apply to all customers except wholesale customers.

Security Deposit

The SFPUC may require a customer to make a refundable security deposit equal to the greater of two months of estimated water charges or \$123. This deposit is refundable after twelve months of satisfactory payment history or termination of service and settlement of the final bill, whichever occurs first.

Late Payment Penalty

Any charge or fee not paid within 30 days shall be subject to a late payment penalty equal to one-half of one percent (0.5%) for each 30 days or fraction thereof on the amount owed. This late payment penalty shall also apply to wholesale customers.

Returned Check Charge

\$50

A returned check charge shall be applied to any account whose payment is not honored by the customer's bank. This charge will apply to every occurrence.

Broken Lock Penalty Fee

\$25

Any customer whose service is shut-off for non-payment will be charged for the cost of a meter lock installed per Water Enterprise regulations.

Meter Test Fee

Any customer who requests to test the accuracy of their water meter will be assessed a fee based on its meter size, as follows:

Meter Size	FY 2024-25 Effective 7/1/24
5/8" Test	\$460
3/4" Test	\$480
1" Test	\$520
1 1/2" Test	\$1,060
2" Test	\$1,200
3" Test	\$1,540
4" Test	\$1,740
6" Test	\$2,040

If the meter registers more than the limit of error specified in the 'Water Rules and Regulations Governing Water Service to Customers,' the fee will be returned.

Manual Meter-Reading Fee**\$28**

Any customer who opted out of automatic meter reads will pay a manual meter-reading charge.

Lien Fee

Any account with an outstanding balance greater or equal to \$50 and which is delinquent by more than one billing cycle may be recorded as a lien against the property. A lien fee will be assessed as provided in the Administrative Code of the City and County of San Francisco.

Lead Test Fee**\$25 per sample**

At the customer's request, the Water Enterprise will provide lead testing of water samples taken from a customer's home or business. The fee covers sample bottle drop-off and pick-up, as well as the analytical tests.

Laboratory Fees

[Laboratory Fee Schedule \(sfpuc.gov\)](http://sfpuc.gov)

www.sfpuc.gov/documents/laboratory-fee-schedule

Each year, the SFPUC will adjust the fees in Schedules W-40 through W-43 by the Consumer Price Index released by the Controller's Office of the City and County of San Francisco. The Returned Check Charge, Lead Test Fee and Lab Fees will not change.

SCHEDULE W-44: Land Use and Facility Rental and Use Fees

Charges for access to or rental of lands, facilities, or right-of-way (ROW) owned by the SFPUC. Customers may lease facilities not listed here based on negotiated contracts.

Fee Name	FY 2024-25
ROW and Land Access Fee	Base Fee: \$902 Per-Day Fee: \$302
Sunol and Pulgas Facility Rental (Wedding)	\$700 per two hours
O'Shaughnessy Cottage 1 Rental Fee (per night)	\$597
O'Shaughnessy Cottage 2 Rental Fee (per night)	\$240
O'Shaughnessy Bunkhouse Rental Fee (per night)	\$303
O'Shaughnessy Meal Fee - Breakfast	\$18
O'Shaughnessy Meal Fee - Lunch	\$20
O'Shaughnessy Meal Fee - Dinner	\$36
Encroachment Permit	\$125

Each fiscal year, the SFPUC will adjust the ROW and Land Access Permit Fee in Schedule W-44 by the Consumer Price Index released by the Controller's Office of the City and County of San Francisco.

The O'Shaughnessy Rental and Meal fees will become effective at the start of the 2025 Calendar Year, on January 1st, 2025. Each calendar year, the O'Shaughnessy Meal Fees will be updated to reflect the latest U.S General Services Administration (GSA) reported meals and incidentals per diem rates for Yosemite. All other fees in Schedule W-44 will not change.

SCHEDULE W-45: Water Enterprise Regulatory Compliance Fees

Backflow Tag Fee

Backflow tag fees for customers who are required to conduct an annual inspection of backflow prevention assemblies per Article 12A of the San Francisco Health Code.

FY 2024-25 Effective 7/1/24	FY 2025-26 Effective 7/1/25
\$27	\$30

Auxiliary Water System Cross-Connection Test Fee

Buildings with auxiliary water systems required to undergo cross-connection testing.

Building Fixture Count	FY 2024-25 Effective 7/1/24
Up to 320 Fixtures	\$2,200
321 to 640 Fixtures	\$3,600
641 to 1,280 Fixtures	\$6,390
1,281 to 1,920 Fixtures	\$9,180
1,921 to 2,560 Fixtures	\$11,970
2,561 to 3,200 Fixtures	\$18,000
3,201 to 3,840 Fixtures	\$20,790
Over 3,840 Fixtures	Contact Water Quality Division

Each year, the SFPUC will adjust the Auxiliary Water System Cross-Connection Test fee by the Consumer Price Index released by the Controller’s Office of the City and County of San Francisco.

Wastewater Service Connection and Miscellaneous Fees

SCHEDULE W-46: Water Enterprise Regulatory Compliance Fees

Pretreatment Permit Application Fees

Applicable to permit applications for Batch Discharge Permits, Industrial User Permits, and Construction Site Runoff Permits (including both Erosion and Sediment Control Plans and Stormwater Pollution Prevention Plans).

Charge Type	FY 2024-25 Effective 7/1/24
Initial Fee	\$1,100
Renewal or Modification of Permit Fee	\$630

The Initial Fee will be charged to first-time customers applying for a Pretreatment Permit and will recover costs to review the application and perform the initial onsite visits and inspections. The Renewal/Modification Fee is assessed for any subsequent requests to alter their permit or to issue any required annual or bi-annual renewal.

Pretreatment Facility Re-Inspection Fee \$470

Applicable to permitted wastewater discharge inspections exceeding the required annual or bi-annual facilities inspection(s) for:

- Batch Discharge Permits
- Industrial User Permits
- Food Service Establishment General Wastewater Discharge Permits
- Mobile Washer General Wastewater Discharge Permits

SCHEDULE W-46: Wastewater Enterprise Regulatory Compliance Fees (Contd.)

Stormwater Control Plan Review Fee

Applicable to projects regulated by the Stormwater Management Ordinance. The assessment of the Initial Submittal Fee is for the review of the Preliminary Stormwater Control Plan. The Subsequent Review Fee is assessed for the review of the Final Stormwater Control Plan and any additional reviews needed.

Project Size	Initial Submittal	Subsequent Review
Small Project (<25,000 gsf)	\$3,163	\$2,940
Medium Project (25,000 – 250,000 gsf)	\$4,184	\$3,451
Large Project (>250,000 gsf)	\$5,546	\$4,302

Each year, the SFPUC will adjust the fees in Schedules W-46 by the Consumer Price Index released by the Controller’s Office of the City and County of San Francisco.



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



525 Golden Gate Avenue
San Francisco, CA 94102-3220

sfpuc.gov



Updated June 30, 2024

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 with
Amendments to December 10, 2019



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

**San Francisco Water Enterprise
Public Utilities Commission**

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525 Golden Gate Avenue
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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 house piping.

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.

Section A

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 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.

Section A

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.

Section A

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.

Section A

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.

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:

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

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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)

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

D Total capacity of facility in gallons per minute (gpm)

C: Total cost of the facility excluding main extension paid by the original applicant

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- 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.

If water is desired through fire hydrants, permit must first be obtained from the Fire Department having jurisdiction. The permit shall then be filed with the Department together with the application for water supply.

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.
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

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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.

REVISED 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 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.

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- 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 allowances 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.

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.

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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:

- (1) retrofitting of showerheads;
- (2) 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;
- (3) excess use charges in the event of mandatory rationing; and
- (4) 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 16-0127 approved June 28, 2016 that updated previous SFPUC Resolution 19.786)

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 consolidation of backfill, dust control, or other nonessential construction purposes if foundation drainage or recycled water is available and approved by the Department of Public Health
- 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

The SFPUC will notify customers 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 may be subject to enforcement that could include fines on their water bill, installation of flow restriction devices, or other actions.

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

SECTION F - WATER EFFICIENT IRRIGATION

(As amended per Resolution 15-0221 that was approved on October 27, 2015.)

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.

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- 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.

- a) **Applied water:** the portion of water supplied by the irrigation system to the landscape.
- b) **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.
- c) **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.
- d) **Certificate of Landscape Completion:** the document required under Rule 13.
- e) **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.
- f) **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.
- g) **Check valve or anti-drain valve:** a valve located under a bubbler and sprinkler head, or other location in the irrigation system, to hold

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water in the system to prevent low head drainage from sprinkler heads when the sprinkler is off.

- h) **Common interest developments:** community apartment projects, condominium projects, planned developments, and stock cooperatives per California Civil Code Section 1351.
- i) **Compost:** the safe and stable product of controlled biologic decomposition of organic materials that is beneficial to plant growth.
- j) **Conversion factor of 0.62:** the number that converts acre-inches per year to gallons per square foot per year.
- k) **Distribution uniformity:** the measure of the uniformity of irrigation water over a defined area.
- l) **Drip irrigation:** any non-spray low volume irrigation system utilizing emission devices with a flow rate measured in gallons per hour.
- m) **Ecological restoration project:** a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.
- n) **Emitter:** a drip irrigation emission device that delivers water slowly from the system to the soil.
- o) **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.
- p) **Estimated Total Water Use (ETWU):** the total water used for the landscape.
- q) **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.
- r) **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.

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- s) **Evapotranspiration rate:** the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.
- t) **Existing landscape area:** a landscape area of any size that has not been rehabilitated or constructed within the previous 12 months.
- u) **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 or other 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.
- v) **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.
- w) **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.
- x) **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.
- y) **General Manager:** the General Manager of the Public Utilities Commission, or his or her designee.
- z) **Hardscape:** any durable material (pervious and non-pervious).
- aa) **Hydrozone:** a portion of the landscaped area having plants with similar water needs. A hydrozone may be irrigated or non-irrigated.
- bb) **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).
- cc) **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.

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- dd) **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.
- ee) **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.
- ff) **Landscape Application:** the documents required under Rule 3 for Tier 1 compliance.
- gg) **Landscape architect:** a person who holds a license to practice landscape architecture in the state of California pursuant to California Business and Professions Code.
- hh) **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.
- ii) **Landscape contractor:** a person licensed by the State of California to construct, maintain, repair, install, or subcontract the development of landscape systems.
- jj) **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.
- kk) **Landscape Documentation Package:** the documents required under Rule 8 for Tier 2 compliance.

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

- mm) **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.

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

- oo) **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.

- pp) **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.

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- 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 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.
- qq) **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.
- rr) **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.
- ss) **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.

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- tt) **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.
- uu) **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.
- vv) **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.
- ww) **Non-residential landscape:** landscapes in commercial, institutional, industrial, mixed use residential and public settings that may have areas designated for recreation or public assembly.
- xx) **Operating pressure:** the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.
- yy) **Overhead sprinkler irrigation systems:** systems that deliver water through the air (e.g., spray heads and rotors).
- zz) **Overspray:** the irrigation water which is delivered beyond the landscape area.
- aaa) **Permit:** an authorizing document issued by the General Manager or Department of Building Inspection.
- bbb) **Pervious:** any surface or material that allows the passage of water through the material and into the underlying soil.
- ccc) **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.
- ddd) **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.
- eee) **Property owner:** the legal owner of a property.

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- fff) **Rain sensor:** a rain sensing shutoff device that automatically suspends an irrigation event when it rains.
- ggg) **Recreational area:** areas dedicated to active play or public assembly such as parks, sports fields, and golf courses where turf provides a playing surface.
- hhh) **Residential landscape:** landscape surrounding a single or multi-family home.
- iii) **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.
- jjj) **Soil moisture sensor:** a device that measures the amount of water in the soil. The device may also suspend or initiate an irrigation event.
- kkk) **Soil texture:** the classification of soil based on its percentage of sand, silt, and clay.
- lll) **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.
- mmm) **Sprinkler head:** a device which delivers water through a nozzle.
- nnn) **Static water pressure:** the pipeline or municipal water supply pressure when water is not flowing.
- ooo) **Station:** an area served by one valve or by a set of valves that operate simultaneously.
- ppp) **Submeter:** a metering device to measure water applied to the landscape that is installed after the primary utility water meter.
- qqq) **Swing joint:** an irrigation component that provides a flexible, leak-free connection between the emission device and lateral pipeline to allow movement in any direction and to prevent equipment damage.
- rrr) **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.
- sss) **Valve:** a device used to control the flow of water in the irrigation system.
- ttt) **Water feature:** a design element where open water performs an aesthetic or recreational function. Water features include artificial

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ponds, lakes, waterfalls, and streams, and 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.

- uuu) **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

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- 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 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.

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- 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 Design and Operation Elements**

The elements of a landscape shall be designed to achieve water efficiency. Tier 1 projects shall demonstrate water efficiency and compliance with this rule by providing appropriate responses to specific checklist items and certification pursuant to Rule 3.

Tier 2 projects 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.

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- 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 shall install 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.

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- 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.
- viii. 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.

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- 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.

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.

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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.

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- 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.

$$\text{MAWA} = (35.1) (0.62) [(ETAF \times LA) + ((1-ETAF) \times SLA)]$$

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

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- 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;

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- 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;

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- 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.

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- 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.

$$\text{MAWA} = (35.1) (0.62) [(0.8 \times \text{LA}) + (0.2 \times \text{SLA})]$$

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) for existing landscapes

LA = Landscape Area including SLA (square feet)

0.2 = Additional Water Allowance for SLA for existing landscapes

SLA = Special Landscape Area (square feet)

Section F

- 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 non-potable 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 customer via mail, personal service, or other reasonable means. The letter will include 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.

APPENDIX - SAMPLE CALCULATIONS OF MAWA AND 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.

$$\text{MAWA} = (35.1) (0.62) [(0.55 \times \text{LA}) + (0.45 \times \text{SLA})]$$

$$\text{MAWA} = (35.1) (0.62) [(0.55 \times 2,500 \text{ square feet}) + (0.45 \times 0)] = 29,920 \text{ gallons per year}$$

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

Section F

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.

$$MAWA = (35.1) (0.62) [(0.45 \times LA) + (0.55 \times SLA)]$$

$$\begin{aligned} MAWA &= (35.1) (0.62) [(0.45 \times 100,000 \text{ square feet}) + (0.55 \times 75,000 \text{ square feet})] \\ &= 21.76 \times [45,000 + 41,250] \\ &= 21.76 \times 86,250 \\ &= 1,876,800 \text{ gallons per year, or } 5,142 \text{ gallons per day, or } 2,509 \text{ CCF per year} \end{aligned}$$

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.

$$ETWU = (35.1) \left[(0.62) \frac{PF \times HA + SLA}{IE} \right]$$

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)

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Example 1: A new construction residential landscape project has 50,000 square feet of landscape area; the plant water use type, irrigation type, plant factor, and hydrozone area 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 non-potable water) in this example.

Regular Landscape Areas								
Hydro-zone	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	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:

$$\text{MAWA} = (35.1) (0.62) [(0.55 \times 50,000) + (0.45 \times 0)] = 598,455 \text{ gallons per year.}$$

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.

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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								
Hydro-zone	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								
6					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.

SECTION G – CROSS-CONNECTION CONTROL

(As amended per Resolution 19-0191 that was approved on October 8, 2019)

Rule 1.

Applicability

- a) As a condition of receiving water service from the public water system, all property owners shall comply with Section G. This section is promulgated in conformance with the California Code of Regulations, Title 17, Division 1, Chapter 5, Subchapter 1, Group 4; 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 shall install an approved backflow preventer at the service connection wherever any of the following conditions exists:
 - i. Wastewater pumping and/or treatment plants.
 - ii. Hazardous substances handled in any way the substances could enter the potable water system.
 - iii. Auxiliary water supply.
 - iv. Dual-plumbed property.
 - v. Intricate plumbing and piping arrangements.
 - vi. Repeated history of cross-connections being established or re-established.
 - vii. Dockside watering points or marine facilities.
 - viii. Dedicated irrigation service.
 - ix. Fire protection systems.
 - x. Buildings whose highest point is equal to or greater than 40 feet in height above the point of connection.
 - xi. Inadequate backflow prevention for any on-site processes that the General Manager identifies as requiring additional protection from backflow.
 - xii. Entry to a property or parts of a property is restricted so that cross-connection inspections cannot be made with sufficient frequency or at sufficiently short notice to assure that cross-connections do not exist.
 - xiii. Multiple standard service connections, at least one of which requires backflow protection for containment.
 - xiv. Water storage facility not under control of the public water system.
 - xv. 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) **Annual License Fee:** License fee paid annually to the Tax Collector pursuant to as provided in the San Francisco Business and Tax Regulations Code, Section 249.24.

- b) **Applicant:** A person who seeks to obtain a permit to operate from the General Manager, or his or her designee, under San Francisco Health Code Article 12A.

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- c) **Approved Air Gap separation (AG):** a physical break between the water supply line and a receiving vessel that has been approved for such use by the General Manager and is in proper working order. The air gap must be located outside of the receiving vessel, be above grade, and be visible for inspection. The air gap must meet all requirements set forth in the California Plumbing Code, Chapter 6, section 603.
- d) **Approved backflow prevention assembly:** an assembly used to prevent the backflow of substances into the public water system. The assembly must be approved for such use by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research, or comparable organization approved by the General Manager, and be in proper working order.
- e) **Authorized Backflow Prevention Assembly Tester:** any person who possesses a valid certification to test, repair and maintain backflow prevention assemblies and is authorized by the General Manager to do such work in the City in accordance with these rules and regulations.
- f) **Authorized Cross-Connection Control Specialist:** any person who possesses a current certification to administer a cross-connection control test and to conduct site surveys to assess cross-connection control requirements and is authorized by the General Manager to do such work in the City in accordance with these rules and regulations.
- g) **Authorized Representative:** a person designated by a company employing Authorized Backflow Prevention Assembly Testers or Authorized Cross-Connection Control Specialists to purchase backflow tags on behalf of the company.
- h) **Auxiliary water:** any water other than potable water received from the public water system. This category 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.
- i) **Backflow:** the flow, from any source or sources, of water that is of unknown or questionable safety for human consumption or of other liquids, gases, mixtures or other substances into the public water system.
- j) **Backflow preventer:** approved backflow prevention assembly or approved air gap separation.
- k) **Backflow tag:** tag provided by the General Manager to be affixed to a backflow preventer after it has passed testing by an Authorized Backflow Prevention Assembly Tester.
- l) **CCAMS:** San Francisco Public Utilities Commission's Cross-Connection Assembly Management System database.
- m) **City:** City and County of San Francisco.

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- n) **Containment:** Protection from backflow at the service connection.
- o) **Cross-connection:** any unprotected actual or potential connection between any part of a potable water system used or potentially used to supply water for drinking purposes and any source or system containing water or any other substance that is not or cannot be approved as safe, wholesome and potable.
- p) **Cross-connection control survey:** an inspection of all parts of a property served by the public water system to identify potential cross-connections.
- q) **Cross-connection test:** a test administered by an Authorized Cross-Connection Control Specialist to verify that no physical uncontrolled connection exists between the potable water piping and any auxiliary water piping system.
- r) **Customer:** The person or entity listed as the customer of record in the Customer Services Bureau database.
- s) **Customer Services Bureau:** Customer Services Bureau of the San Francisco Public Utilities Commission.
- t) **Department of Building Inspection:** San Francisco Department of Building Inspection.
- u) **Double-Check valve backflow prevention assembly (DC):** an assembly of at least two independently acting check valves including tightly closing shut-off valves on each side of the check valve assembly and test cocks available for testing the water-tightness of each check valve.
- v) **Double-Check Detector backflow prevention Assembly (DCDA):** an assembly consisting of a line-sized approved double-check valve assembly with a bypass containing a specific water meter and an approved double-check valve assembly.
- w) **Double-Check Detector backflow prevention Assembly type II (DCDA-II):** an assembly consisting of a line-sized approved double-check valve assembly with a bypass around the second check containing a specific water meter and a check valve.
- x) **Dual-plumbing:** a system that utilizes separate piping systems for auxiliary water and potable water within a property.
- y) **First certificate of occupancy:** either a temporary certificate of occupancy or a Certificate of Final Completion and Occupancy as defined in San Francisco Building Code Section 109A, whichever is issued first.
- z) **General Manager:** General Manager of the San Francisco Public Utilities Commission, or any individual or City agency designated by the General Manager to act on his or her behalf. The Water Quality Division Director is designated to act for the General Manager in relation to Section G of these rules and regulations.
- aa) **On-site hazard:** any actual or potential hazard to the public water supply that may be created as a result of conditions existing on a property.

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- bb) **Permit to Operate:** permit to work as an Authorized Backflow Prevention Assembly Tester or Authorized Cross-Connection Control Specialist.
- cc) **Permittee:** Someone who holds a valid permit to operate under San Francisco Health Code Article 12A granted by the General Manager or his or her designee. Permittees are responsible for maintaining their permits and complying with all City rules and regulations related to cross-connection control.
- dd) **Point of connection:** the customer's water meter, except for dedicated fire services, for which the point of connection is the junction of the water supply lateral and the customer's fire protection system.
- ee) **Pressure Vacuum Breaker (PVB):** an assembly containing an independently operating, internally loaded check valve and an independently operating loaded air inlet valve located on the discharge side of the check valve. The assembly must be equipped with properly located resilient seated test cocks and tightly closing resilient seated shutoff valves attached at each end of the assembly.
- ff) **Property:** parcel, premises, building, or other structure that receives potable water from the public water system.
- gg) **Property owner:** the legal owner of a property with a water service connection.
- hh) **Public Water System (PWS):** the potable water system operated and maintained by the San Francisco Public Utilities Commission.
- ii) **Reduced Pressure principle backflow prevention assembly (RP):** a backflow prevention assembly incorporating not less than two check valves, an automatically operated differential relief valve located between the two check valves, a tightly closing shut-off valve on each side of the check valve assembly, and that is equipped with necessary test cocks for testing.
- jj) **Reduced Pressure principle Detector Assembly (RPDA):** a backflow prevention assembly composed of a line-size approved reduced pressure principle backflow prevention assembly with a specific bypass containing a specific water meter and an approved reduced pressure principle backflow prevention assembly.
- kk) **Reduced Pressure principle Detector Assembly type II (RPDA-II):** a backflow prevention assembly composed of a line-size approved reduced pressure principle backflow prevention assembly with a specific bypass around the second check valve containing a specific water meter and an approved check valve.
- ll) **SFDPH-EHB:** San Francisco Department of Public Health, Environmental Health Branch.
- mm) **SFPUC:** San Francisco Public Utilities Commission.
- nn) **USC FCCCHR:** University of Southern California Foundation for Cross-Connection Control and Hydraulic Research.

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- oo) **Water Quality Division:** Water Quality Division of the San Francisco Public Utilities Commission.
- pp) **Water service connection:** a connection to the public water system.
- qq) **Water user supervisor (site supervisor):** A person designated to be responsible for the avoidance of cross-connections during the installation, operation and maintenance of a property's pipelines and equipment.

**Rule 3.
Backflow Prevention Requirements**

- a) All backflow preventers and associated pipe, fittings, solder and flux must be "lead-free" as defined in the California Health and Safety Code, section 116875. This requirement does not apply to dedicated fire services, the fire service line on combination services, or irrigation and industrial systems.
- b) The types of backflow protection that may be used for containment at permanent connections to the public water system, listed according to increasing level of protection, are double-check valve backflow prevention assembly (DC), reduced pressure principle backflow prevention assembly (RP), and air gap separation (AG). The minimum level of backflow protection by hazard criterion shall be as described in Table 1.
 - i. If more than one of the hazard criteria applies to a property, the criterion requiring the greatest degree of protection shall apply.
 - ii. If an assessment of a property cannot be made to determine the type of hazard present, the San Francisco Public Utilities Commission (SFPUC) shall ensure that an air gap separation is installed.
- c) For isolation of a hazard within a property, the minimum level of backflow protection shall be as set forth in Chapter 6 of the California Plumbing Code, except that an RP is required in the situations listed in Table 1. The requirement for an RP is at the direction of the San Francisco Department of Public Health, Environmental Health Branch (SFDPH-EHB) under its authority set forth in California Health and Safety Code Division 104, Part 12, Chapter 5, Article 2, section 116800.

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Table 1: Hazard Criteria and Required Backflow Protection

(Some requirements are more stringent than those in the California Plumbing Code)

Attention: See footnotes for important information

Hazard Criteria	Required Level of Protection
Part I: Containment	
Sewage and Hazardous or Potentially Hazardous Substances	
Properties where there are wastewater treatment processes, handling and/or pumping equipment (see Part II of this table for isolation requirements)	AG or RP ¹
Properties where hazardous substances are handled in any manner in which the substance may enter the public water system (PWS) (see Part II of this table for isolation requirements)	AG or RP ¹
Properties with a piping system conveying a fluid not from an approved water supply that is interconnected with the PWS (see Part II of this table for isolation requirements)	AG or RP ¹
Piping system conveying a fluid not from an approved water supply that is not interconnected with the PWS	RP
Properties with a recreational vehicle dump station that is interconnected with the PWS (see Part II of this table for isolation requirements)	AG or RP ¹
Auxiliary Water Supplies (Nonpotable)	
Properties where there is an auxiliary supply that is interconnected with the PWS (see Part II of this table for isolation requirements)	AG or RP ¹
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 are injected into the fire system	RPDA or RPDA-II
Properties under the jurisdiction of the San Francisco Port Authority	RPDA or RPDA-II
Marina and Port Facilities Under Jurisdiction of Port Authority	
Standard, irrigation, or combination services	RP
Properties with Multiple Service Connections to the PWS	
Properties with multiple standard service connections, at least one of which requires backflow protection for containment	Varies ²
Irrigation Systems	
Properties with dedicated irrigation meters	RP
Properties with irrigation systems into which fertilizers, herbicides, or pesticides are or can be injected	RP

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Hazard Criteria	Required Level of Protection
Water Storage Facility Not under Control of the PWS	
Water storage facility not under control of the PWS	AG
Repeated History of Cross-Connections	
Properties where there is a repeated history of cross-connections being established or re-established	RP or AG ^{1,3}
Restricted Entry	
Properties where entry is restricted so that inspections for cross-connections cannot be made in accordance with these rules and regulations	RP
Unabated Internal Cross-Connections	
Properties where internal cross-connections are not abated in accordance with these rules and regulations	RP or AG ¹
Buildings Higher than 40 Feet	
Properties where there are buildings with a highest point equal to or greater than 40 feet in height above the point of connection	DC
Temporary Construction Meter, Non-Standard Service	
Connection to existing water service line during construction	RP
Temporary (Non-Fire) Connections to Fire Hydrants	
Connections for temporary uses, such as for construction, street sweeping, or water supply for events	RP or Single swing-check valve ^{1,4}
Temporary Connections to Fire Hydrants for Firefighting	
Fire trucks that are connected to potable hydrants may not also be connected to the Auxiliary Water Supply System	Spring-loaded check valve
Part II: Isolation	
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
Auxiliary Water Supplies (Nonpotable): All auxiliary water except rainwater	AG
Auxiliary Water Supplies (Nonpotable): Rainwater	RP
Carbonators in systems with upstream copper pipe	AG or RP
Industrial water chillers	RP

Notes for Table 1:

¹ To be determined by the Water Quality Division based upon the level of hazard.

² The same level of protection must be provided for all standard service connections; the level of protection must address the highest degree of hazard on the property that cannot be isolated.

³ A water user supervisor might also be required.

⁴ All customer plumbing must be downstream of the meter and valve attached to a hydrant.

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- d) Backflow prevention assembly requirements for permanent installations:
 - i. All backflow prevention assemblies must be testable and have passed laboratory and field evaluation tests performed by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research (USC FCCCHR) or comparable organization approved by the General Manager.
 - ii. Assemblies may not be modified in any way or installed in a manner that differs from the configuration tested and approved by the recognized testing organization.
 - iii. Assemblies, as installed, shall be field tested to ensure they are functioning properly before being placed into service.
- e) Air gaps shall meet the requirements set forth in the California Plumbing Code, Chapter 6, section 603.

**Rule 4.
Installation Requirements for Backflow Preventers**

- a) All backflow preventers that are installed, replaced or relocated shall be under permit from the Department of Building Inspection, Plumbing Inspection Division, unless the facility falls under a different jurisdiction (Port of San Francisco, Office of Statewide Health Planning and Development, or state Fire Marshal).
- b) All backflow preventers for containment shall be installed 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, assemblies must be installed upstream of the seawall (and within 25 feet of the point of connection).
- c) No water connections may be made between the point of connection and a backflow prevention assembly. Similarly, no appurtenances may be installed between the point of connection and a backflow prevention assembly, except that a Y strainer may be attached directly to the number 1 shutoff valve.
- d) Assemblies must be installed in the orientation intended by the manufacturer and approved by the USC FCCCHR or comparable organization approved by the General Manager.
- e) All backflow preventers shall be accessible for field testing and maintenance.
- f) RPs must be a maximum of 36 inches above grade as measured from the bottom of the assembly.
- g) RPs and DCs must have their lowest points at least 12 inches above grade.
- h) RPs and DCs must have side clearances of at least 12 inches. On the side of the assembly that contains the test cocks, a side clearance of at least 24 inches is recommended.

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- i) Assemblies must be installed so that the make and serial number are visible in a readily accessible location. These identifiers must not be painted over or otherwise made illegible.
- j) Assemblies may not be installed below grade in pits or vaults.
- k) If an enclosure is used, the enclosure must be large enough or removable to allow for testing/servicing.
- l) When an RP is installed indoors, a drain funnel must also be installed to prevent flooding.

**Rule 5.
Inspection Requirements for New Water Services**

- a) All new water services that require a backflow prevention assembly or air gap at the connection to the public water system must receive an initial and final inspection by the Water Quality Division. The property owner or designee must call (650) 652-3199 to schedule these inspections. The inspections are separate from those required by other San Francisco agencies.
- b) An initial inspection is required after a backflow prevention assembly or air gap has been installed at the connection to the public water system. A water service line and meter will not be provided until the backflow preventer has passed this inspection.
- c) A final inspection is required within 48 hours of receiving water service. If this inspection is not conducted, water service will be turned off and will not be restored until the final inspection has been passed and necessary fees have been paid.

Rule 6.

Permits to Operate

- a) A valid backflow prevention assembly tester permit to operate is required for anyone testing backflow prevention assemblies in the City and County of San Francisco.
- b) A valid cross-connection control specialist permit to operate is required for anyone who administers a cross-connection control test or performs a site survey to assess cross-connection control requirements in the City.
- c) To apply for a permit to operate as an Authorized Backflow Prevention Assembly Tester, an applicant must:
 - i. Submit a completed application form and application fee.
 - ii. Provide a current certification as a backflow prevention assembly tester from one of the following organizations:

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- American Backflow Prevention Association
 - American Society of Sanitary Engineers
 - American Water Works Association
 - Northern California Backflow Prevention Association
 - Other organization approved by the General Manager
- iii. Provide a certificate of general liability insurance in full force and effect, at his or her expense, for all activities 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 insurance, with limits not less than \$1 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 or his or her designee.
- iv. Complete a written examination administered by the General Manager, or his or her designee, with a passing grade of at least 70 percent.
- d) To apply for a permit to operate as an Authorized Cross-Connection Control Specialist, an applicant must:
- i. Submit a completed application form and application fee.
 - ii. Provide a current certification as a cross-connection control specialist from one of the following organizations:
 - American Backflow Prevention Association
 - American Society of Sanitary Engineers
 - American Water Works Association
 - Northern California Backflow Prevention Association
 - Other organization approved by the General Manager
 - iii. Provide a certificate of general liability insurance in full force and effect, at his or her expense, for all activities 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 insurance, with limits not less than \$1 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 or his or her designee.
- e) Permit issuance: Applicant information is forwarded to the Office of the Treasurer and Tax Collector for payment of the annual license fee. The permit is issued upon payment of the license fee.
- f) Annual renewal: To maintain a permit in good standing, the permittee must:

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- i. Follow all procedures in the SFPUC's Manual for Cross-Connection Control and the Instructions for Authorized Backflow Assembly Testers (testers only). These documents may be periodically updated and specify current policies and procedures for testers and specialists.
 - ii. Maintain all documentation required under these rules and any other state or local law; such documentation must be made available for inspection at the request of the General Manager.
 - iii. Annually pay to the Office of the Treasurer and Tax Collector of the City and County of San Francisco the annual license fee set forth in Section 249.24 of the San Francisco Business and Tax Regulation Code. Upon the failure of the permittee to pay such fees, the permit to operate shall be considered null and void until the permittee pays the fees and any penalties that might be assessed by the General Manager or his or her designee.
 - iv. Provide to the General Manager or his or her designee:
 - Current and updated original certificate of general liability insurance
 - Copy of a renewed certificate of competency (if the previous certificate has expired)
 - v. Authorized Backflow Assembly Testers: Attend the annual tester meeting in person or complete training approved or provided by the General Manager or his or her designee.
- g) Permit transfer: Permits are issued to individual persons and are not transferable. If a permittee ceases working for an employer that held the permittee's certificate of liability insurance, the permittee must submit valid evidence of liability insurance, as described in c(iii) above, to continue working in the City.
- h) Enforcement, suspension and revocation of permits: Any permit issued under these rules may be revoked or suspended by the General Manager, or his or her designee, if it is determined that the permittee has:
- i. Not paid the annual license fee
 - ii. Violated any provision of San Francisco Health and Safety Code Article 12A or regulation issued pursuant to Article 12A
 - iii. Engaged in conduct in connection with activities covered by the permit to operate that violates state or local laws
 - iv. Engaged in a material misrepresentation when applying for a permit
- i) The General Manager, or his or her designee, may not suspend or revoke a permit issued pursuant to San Francisco Health Code Article 12A or take other enforcement action against a permittee until a notice of violation has been issued and the permittee is provided an opportunity to be heard and respond as provided in these Rules and Regulations. Notwithstanding, the General Manager, or his or her designee, may immediately suspend any permit issued under Article 12A pending a noticed hearing on revocation or suspension when, in the opinion of the General Manager or his or her designee, the public health or safety requires such immediate suspension. Any affected permittee shall be given notice of such immediate suspension in writing delivered to the permittee in person or by registered letter.

Section G

- j) Violations and administrative penalties: Any permittee who violates any provision of San Francisco Health Code Article 12A or these Rules and Regulations may be subject to suspension or revocation of the permittee's permit to operate. Citations will be served to the permittee in a manner consistent with Chapter 100 of the San Francisco Administrative Code, which will govern the procedures for imposition, enforcement, and administrative review of administrative citations issued.
- k) Appeals: The final decision of the General Manager, or his or her designee, to grant, deny, suspend, or revoke a permit, as provided in San Francisco Health Code Article 12A, may be appealed to the Board of Appeals in the manner prescribed in San Francisco Business and Tax Regulations Code Article 1.

Rule 7.

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 must register with the General Manager or his or her designee.
- b) Companies must maintain general liability insurance in full force and effect, at company expense, for all activities performed by their testers and specialists. Such insurance must include coverage for bodily injury, personal injury, including death resulting therefrom, and property damage insurance, with limits not less than \$1 million each occurrence combined single limit. The City, its officers, and employees must be named as additional insureds under the policy, and a cross-liability clause must be attached. The insurance must provide 10-day prior written notice of cancellation, non-renewal, or material change to the General Manager or his or her designee.
- c) Companies must provide the General Manager, or his or her designee, with the names of testers and cross-connection control specialists working for them and provide notification when a tester or specialist leaves the company.
- d) Companies must maintain a continuous record of the dates and locations of all activities performed in relation to backflow prevention (e.g., tests, repairs, inspections, surveys, cross-connection tests) for three years. The records must be made available at the request of the General Manager or his or her designee.

Rule 8.

Testing, Inspection and Repair Requirements for Backflow Preventers

- a) All testing, inspections, and repairs shall be at the sole expense of the property owner.
- b) Property owners shall inspect and/or test their backflow preventers at least annually and in any case within 30 days of receiving notice from the Water Quality Division to do so.
- c) Air gap separations shall be visually inspected annually by an Authorized Cross-Connection Control Specialist.

Section G

- d) Backflow prevention assemblies:
 - i. An Authorized Backflow Prevention Assembly Tester shall test all backflow prevention assemblies following installation, repair, or re-location and at least annually thereafter. The General Manager may require more frequent testing if determined to be necessary.
 - ii. All backflow prevention assemblies that fail the field test shall be repaired, overhauled or replaced, and immediately retested before being placed into service. If an assembly cannot be repaired or otherwise made functional on the same day as the initial test, the tester must enter the test data into CCAMS by close of business of the day of the initial test.

**Rule 9.
Backflow Tag Sales**

- a) Backflow tags are available for sale from the Customer Services Bureau of the SFPUC, located on the first floor at 525 Golden Gate Avenue, San Francisco. Tags may be obtained in person or by mail. Payments may be made by cash (in person only), company or cashier's check (no personal checks), and money order. Checks should be made out to SF Water Department.
- b) Tags may be purchased by Authorized Backflow Prevention Assembly Testers, Authorized Cross-Connection Control Specialists, test company supervisors, and Authorized Representatives of testing companies. Companies may designate up to two people to act as Authorized Representatives for the purchase of backflow tags on behalf of the company.
- c) To purchase tags in person, the buyer must provide official identification (e.g., driver's license), name of the company being represented, and payment.
- d) To purchase tags by mail, buyers must go online to sfwater.org/backflow, scroll down to "Backflow Prevention Assembly Testers and Test Companies," and click on "Request to Purchase Backflow Tags." Buyers must fill out the PDF form, print it out, and mail it with payment to Customer Services Bureau, SFPUC, 525 Golden Gate Avenue, 2nd Floor, San Francisco, CA 94102. The bureau will mail the tags by certified mail within five business days of receiving the request.
- e) The cost of backflow tags is set forth in the SFPUC's *Rates Schedules & Fees for Water Power and Sewer Service*.

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

- a) All inspections, testing and repairs shall be at the sole expense of the property owner.
- b) Before being put into service, all systems must pass an initial shutdown test.
- c) After the initial shutdown test, dual-plumbed systems shall be tested for cross-connections as set forth in Table 2 below. At the discretion of the General Manager, a pressure differential test might be accepted in lieu of a shutdown test.

Table 2: Inspection and Testing Requirements for Auxiliary Water Supplies

Type	Initial Inspection and Shutdown Test	Annual Inspection ¹	Subsequent Cross-Connection Test
Municipally supplied recycled water	Yes	Yes	Every four years ¹ (need not be shutdown test)
Blackwater	Yes	No ²	Every four years ¹ (need not be shutdown test)
Other auxiliary supply (graywater, rainwater, groundwater, etc.)	Yes	No ²	No

Notes for Table 2:

¹ The General Manager may reduce testing frequency if the property owner can document to the General Manager's satisfaction that there have been no plumbing changes in the dual-plumbed system.

² Although the Cross-Connection Control Program does not require annual inspections, all operators of auxiliary water systems in the City are subject to monitoring and reporting requirements under Article 12C of the San Francisco Health Code, which is administered by the SFDPH.

- d) All shutdown or other cross-connection tests must be administered by an Authorized Cross-Connection Control Specialist in the presence of a representative of the Water Quality Division and the water user supervisor for the property. Tests must be conducted in accordance with the City's Manual for Cross-Connection Control, available at sfwater.org/backflow. A written report documenting the test must be submitted to the Water Quality Division within five days following completion of the test.
- e) In addition to tests every four years, a cross-connection test is always required in these circumstances:
 - i. When there is material reason to believe that the separation between the potable and non-potable systems has been compromised, for example, based on a visual inspection or following complaints.
 - ii. After remediation of a discovered cross-connection.

Section G

- f) Fees for cross-connection tests are set forth in the SFPUC's Rates Schedules & Fees for Water Power and Sewer Service. Payment must be made to the Customer Services Bureau, located on the first floor at 525 Golden Gate Avenue, San Francisco (in person or by mail). Payments may be made by cash (in person only), company or cashier's check (no personal checks), and money order. Checks should be made out to SF Water Department. Payments by mail should be sent to Customer Services Bureau, SFPUC, 525 Golden Gate Avenue, 2nd Floor, San Francisco, CA 94102. Payment must be received at least 30 days before the desired test date.
- g) Property owners shall inspect and/or test their dual-plumbed systems within 30 days of receiving a notice from the General Manager to do so.
- h) Any changes made to auxiliary water systems must be done under permit from the San Francisco Department of Building Inspection and in conformance with the requirements of San Francisco Health Code Article 12C and the California Plumbing Code. If the degree of hazard changes (e.g., a blackwater treatment system is installed), the required level of protection must conform with Table 1, and the Water Quality Division must be informed at least 30 days before the change is made.
- i) Recordkeeping. Property owners shall maintain cross-connection testing for their properties in accordance with these rules and regulations for a period of three years. The records shall be made available at the request of the General Manager.

**Rule 11.
Emergency Cross-Connection Response Plan for Dual-Plumbed Systems**

- a) All emergency response activities and repairs shall be at the sole expense of the property owner.
- b) The customer and property owner shall immediately notify the Water Quality Division upon discovery of the incident.
- c) The customer and property owner shall submit written notification within 24 hours of the incident and include an explanation of the nature of the cross-connection, date and time discovered, and the contact information of the person reporting the cross-connection.
- d) The customer and property owner shall provide potable drinking water for building occupants, if applicable, until the potable water system is deemed safe to drink.
- e) The customer and property owner shall shut down the auxiliary water piping to the building and drain the auxiliary water riser.
- f) The General Manager shall shut down the potable water supply at the point of connection.
- g) The customer and property owner shall locate and disconnect the cross-connection.
- h) After the cross-connection has been remediated, the customer and property owner shall conduct a visual inspection and cross-connection test, as described in Rule 10.

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- i) The property's internal potable water system shall be disinfected in accordance with the California Plumbing Code, Chapter 16A, section 1620A.
- j) After 24 hours, the customer and property owner shall flush the building's potable water system and conduct a standard bacteriological test.
- k) After approval by the General Manager, the customer and property owner may recharge the property's internal potable water system.

**Rule 12.
Emergency Cross-Connection Response Plan for Standard-Plumbed Systems**

- a) All emergency response activities and repairs on the customer side of the water meter shall be at the sole expense of the property owner.
- b) The customer or property owner shall immediately notify the Water Quality Division upon discovery of a cross-connection incident and describe the nature of the cross-connection, date and time discovered, and the contact information of the person reporting the cross-connection.
- c) The customer or property owner shall provide potable drinking water for building occupants, if applicable, until the potable water system is deemed safe to drink.
- d) The customer or property owner shall locate and disconnect the cross-connection.
- e) The property's internal potable water system shall be disinfected in accordance with the California Plumbing Code, section 609.9.
- f) After 24 hours, the customer or property owner shall flush the building's potable water system and conduct a standard bacteriological test.
- g) After approval by the General Manager, water service will be restored, if necessary.

**Rule 13.
Water User Supervisor**

- a) For properties that have 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, the Water Quality Division may require the property owner to designate a water user supervisor.
- b) The water user supervisor shall be responsible for the avoidance of cross-connections during the installation, operation and maintenance of the water user's pipelines and equipment.
- c) If a cross-connection is discovered, the water user supervisor shall follow the emergency response plan described in Rule 11 or 12, as applicable.

**Rule 14.
Inspections and Notices**

- a) Upon notification by the General Manager, a property owner shall eliminate any unprotected cross-connections within seven calendar days, unless the General Manager authorizes an alternate deadline for remediation.
- b) If a property owner refuses or fails to eliminate a cross-connection within the allotted time, the General Manager may proceed with enforcement activities in accordance with Rule 15 of these rules and regulations.
- c) Right of Entry: The General Manager may inspect any property to determine compliance with the provisions of San Francisco Health Code Article 12A and applicable laws and regulations. The right of entry may be exercised during normal business hours in the absence of advance notice.
- d) High Risk of Hazard: Whenever an existing or potential unprotected cross-connection poses a high risk of hazard to the public water system and requires immediate abatement, as determined by the General Manager, the General Manager may immediately terminate water service without initial or final notification until the cross-connection has been eliminated and necessary payments have been made, including but not limited to fines in accordance with Rule 15 of these rules and regulations and service shut-off and service turn-on fees.

**Rule 15.
Enforcement, Violations and Penalties**

- a) If any rule is violated, the General Manager may issue written notices establishing a deadline for compliance and modify or terminate service.
- b) Modification or termination of water service: The General Manager shall implement one or more of the following alternatives and notify the customer or property owner.
 - i. Install a flow restrictor on all non-fire service lines to the property to minimize the backflow hazards until they have been corrected.
 - ii. Disconnect the noncompliant water service(s) until the cross-connection has been eliminated.
 - iii. If the noncompliant water service is a fire service, disconnect the associated domestic water service until the cross-connection has been eliminated.
 - iv. Any other action deemed necessary by the General Manager to protect the public water system.

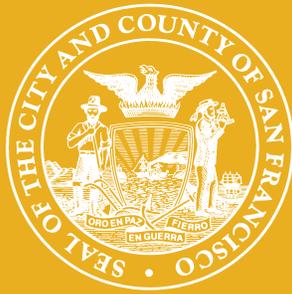
Section G

- c) Any customer or property owner who violates any provision of San Francisco Health Code Article 12A or any rule or regulation adopted pursuant to Article 12A may be subject to an administrative penalty of up to \$1,000 per violation per day. Citations will be served to both the customer and the property owner in a manner consistent with Chapter 100 of the San Francisco Administrative Code.
- d) Fees and penalties related to this rule—including but not limited to posting fees, service shut-off and service turn-on fees, and penalties for violations—will be applied to the customer's water bill.
- 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.
- f) Parties may have the right to petition the Superior Court of San Francisco for judicial review or appropriate relief pursuant to Section 1094.6 of the California Code of Civil Procedures if they disagree with the final decision of the General Manager to impose administrative penalties, as provided in San Francisco Health Code Article 12A.

**Rule 16.
Variances**

Any request for variance shall be made in writing and submitted to the General Manager. The General Manager may grant variances from specific requirements of these rules and regulations for existing buildings or facilities on a limited basis provided that the variances do not pose a threat to the public water system. All variances are subject to additional mitigation that the property owner/customer will be required to implement and maintain.

Notes: _____



RATEPAYER ASSURANCE POLICY

Background

The San Francisco Charter Section 8B.125 requires the SFPUC to exercise prudent financial stewardship of SFPUC assets by establishing “rates, fees and charges at levels sufficient to improve or maintain financial condition and bond ratings at or above levels equivalent to highly rated utilities of each enterprise under its jurisdiction, meet requirements and covenants under all bond resolutions and indentures... and provide sufficient resources for the continued financial health (including appropriate reserves), operation, maintenance and repair of each enterprise, consistent with good utility practice.” To most effectively meet these requirements, the SFPUC will utilize financial policies that foster financial stability, support fiscal discipline, and maintain credit ratings at or above levels equivalent to highly rated utilities. Strong financial policies signal to rating agencies and the capital markets that an entity is well managed and committed to sound financial practices.

Purpose

The Commission recognizes that its revenue comes from ratepayers, and takes seriously its commitment to provide affordable and reliable water, power and sewer services. Ratepayers pay for: 1) what we do, i.e. our essential-service water, power and sewer utilities, and 2) how we do it, through a commitment to sustainability and adherence to the Commission’s Environmental Justice and Community Benefits policies.

The Ratepayer Assurance Policy serves as guidance to the SFPUC General Manager and staff of the Commission's expectations regarding a) prudent use of ratepayer funds, b) establishment of rates and charges, and c) transparency in budgeting and rate-setting processes. SFPUC departments are self-supported enterprises, receiving no tax revenue from San Francisco’s General Fund. The Water, Power, and Sewer Enterprises are funded by service-based rates, fees and charges, as well as non-operating revenues such as interest and rental income. Accountability to ratepayers is a central tenet that guides the use of ratepayer monies and the stewardship of the utility systems and resources entrusted to the SFPUC’s care.

Prudent Use of Ratepayer Funds

This policy is intended to provide ratepayers with the assurance that management recommendations and Commission decisions are made in the ratepayers’ best interest. It promotes accountability and transparency by using established budget and planning efforts to report how management will address the following:

Mission Management

The SFPUC shall comply with all San Francisco Charter requirements, including the development of our budget, as well as our long-term capital, financial and strategic plans. This includes mission-driven budgets for SFPUC Enterprises which are considered, adopted and published in a timely manner. Specifically, the Commission shall:

- Review any proposed changes to the mission statement early in the budget process and any changes to the mission are adopted by the Commission prior to the cost of such changes being budgeted.
- Review an analysis of mission changes along with how the proposed budget ties to the Strategic Plan.

Asset Management

As a utility, a significant portion of the SFPUC budget is allocated for the acquisition, construction, repair, and replacement of critical physical assets. Purchasing contracting and construction are subject to extensive legal and administrative regulation. Asset costs are ultimately driven by the assets acquired and the way in which they are maintained. The Commission shall:

- Plan and fund the acquisition, design, construction, repair, and replacement of assets such that their life cycle cost is minimized.
- Reduce the environmental impact of its assets by using more efficient technologies and seeking out opportunities to practice resource recovery, simultaneously reducing the cost of its activities. Examples include the use of vehicle pools, public transit, and greenhouse gas-free vehicles; developing power generation capacity as a byproduct of other utility functions; capturing and using stormwater runoff and recycled water wherever feasible; and investing in energy efficient and recycled buildings, assets, and materials.
- Review and approve all major asset purchases through the budget process, confirming that they are consistent with City policies and best practices promulgated by the General Manager.
- Ensure that assets (including, but not limited to, vehicles, computers, and other electronic devices) are selected and assigned to individuals in a cost effective manner, and that they are used for business purposes that benefit the ratepayers.
- Support the development of innovative technologies, including the consideration of prudent demonstration projects, and implement proven technologies that achieve utility reliability, performance effectiveness, cost minimization, and continued environmental impact improvements.

Personnel Management

Personnel costs are driven by how the SFPUC operates and organizes its workforce, including the number and level of staff. Compensation and benefit costs are determined by labor agreements, the Civil Service Commission, the City's Retirement Board, and the City's Health Service System. Position classifications and hiring authorizations include a review process that is governed by the Civil Service Commission and the City's Human Resources Department to ensure our hiring is appropriate for the work assigned. The Commission shall:

- Meet new position needs by reassignment of existing positions or substituting new positions for existing ones wherever possible.
- Review all proposed position changes in every budget in order to assure compliance with the agency's mission and Strategic Plan.
- Structure its workforce to ensure that customer service and utility operations are achieved effectively and efficiently, minimizing unplanned overtime, and maintaining the established level of service.
- Consider strategies to promote employee retention and succession planning by evaluating employee satisfaction with job content, compensation, and personnel processes.

Operating Cost Containment

To the extent that operating costs are determined by SFPUC management choices, the Commission shall limit operating cost increases, exclusive of debt services and pay-go capital investment, to not more than the cost of inflation. Any proposed budget that increases operating costs above this level will be supported by findings of necessity.

Social & Environmental Stewardship

The SFPUC has a stated policy of supporting the triple bottom line (TBL) form of performance measurement, evaluating the impact of projects beyond solely financial performance to include environmental as well as social impacts. Management shall report to the Commission on how the proposed budget and rates support TBL principles.

Establishment of Rates and Charges

Within industry standard ratemaking best practices, the SFPUC has significant flexibility to create rate structures that advance different policy goals. The SFPUC commits to designing rates in a manner that prioritizes the needs of ratepayers and aligns with the mission and values of the agency.

Tradeoffs are inherent in the development of rates and financial planning; it is rarely possible to achieve all goals. To ensure that decision-makers have properly assessed the impact of their recommendations, the SFPUC has identified the following principles to consider during the development of all proposed rates and charges:

Revenue Sufficiency

The Commission will aim to establish rates sufficient to cover the full cost of all SFPUC activities. Recovering sufficient revenue to fund the programs identified by the long-term plan is necessary to meet established level of service goals and comply with bond covenants, contract commitments, and adopted SFPUC and City policies.

Customer Equity

The Commission will establish rates based on cost of service in compliance with the San Francisco Charter and California Proposition 218. Cost of service based rates are an industry best practice to fairly allocate the cost of providing utility services between customer classes.

Environmental Sustainability

The Commission will aim to establish rates in a manner that values environmental sustainability and preserves the natural resources entrusted to the SFPUC's care. Rate structures that financially incentivize customers to conserve resources or reduce their demand on the SFPUC's system support this principle.

Affordability

The Commission will consider SFPUC service affordability for all its customers. Prudent operating and capital planning ties annual spending to system demand and intergenerational equity, enabling financial engineering and reducing costly emergency expenditures. Rate design should also consider the burden imposed by SFPUC bills on low-income customers.

Predictability

The Commission will aim to establish rates designed to minimize bill fluctuations, enabling ratepayers to plan ahead for their personal finances. Communicating to ratepayers well in advance of pending rate changes is important to prevent rate shock.

Simplicity

The Commission will aim to establish rates that are easy for ratepayers to understand. Simple rate structures also require fewer implementation and administration costs.

Tradeoffs

These principles sometimes compete with each other. For instance, customer equity may impede simplicity, environmental sustainability, or predictability. Rate structures that equitably distribute the cost of service often require more detail and complexity, which can hinder customers' ease of understanding, discourage measures to promote environmental sustainability, or inhibit the predictability of monthly bills. Some rate methodologies that promote conservation may be more challenged in meeting cost of service objectives, so the SFPUC will consider the principle of environmental sustainability alongside that of revenue sufficiency. Most of the SFPUC's costs (including debt service, operations and maintenance, and repair and replacement of aging infrastructure) do not vary based on consumption. With widespread customer conservation, rates tied solely to volumetric usage will impede revenue sufficiency. The Commission endeavors to thoughtfully consider these inherent tradeoffs, and to transparently present the reasons for its decision-making.

Transparency

The above principles for prudent use of ratepayer funds and the establishment of rates and charges must be supported by a strong commitment to transparency. None of the Commission's work can be effectively carried out without the trust of its ratepayers. This requires open communication and engagement with the Commission, ratepayers, and other key stakeholders about the tradeoffs that are inevitably present in decision-making.

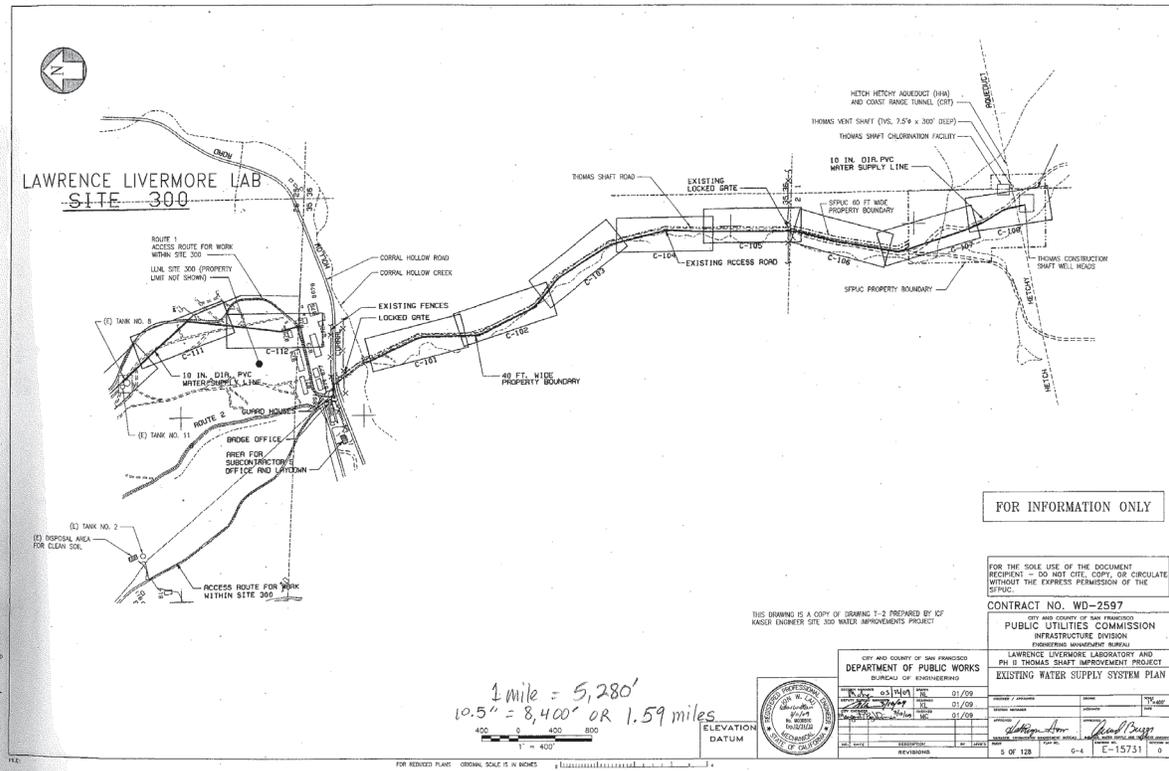
SFPUC management and staff recognize that it is their obligation to accurately collect and present to the Commission the input of a diverse and representative set of stakeholders in the

financial planning, budgeting, and rate-setting processes. This includes the oversight provided by the Citizens' Advisory Committee, the Rate Fairness Board, the Revenue Bond Oversight Committee, the Board of Supervisors, and the Mayor's Office.

Mechanisms to communicate information on key decisions shall include: timely public meetings for budget and rate review; accurate, predictable communication of future rate changes, including average bill impact illustrations; and descriptions of both operating and capital costs to ensure that ratepayers know the component costs of their utility service and related programs. In addition, the SFPUC fosters transparency for ratepayers and the Commission through a range of publications that provide metrics and context regarding asset management, affordability, environmental sustainability, community engagement, cost containment, and levels of service. These include the annual Ten-Year Financial and Capital Plans, as well as independent cost of service studies as required by the city charter. With these metrics and stakeholder input, the Commission can ensure that it makes informed decisions that support the SFPUC's mission and values.

Adopted by Resolution 17-0198 on September 12, 2017

Attachment 5 THOMAS SHAFT CONNECTION – SFPUC DRAWING E-15731



FOR INFORMATION ONLY

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THIS DRAWING IS A COPY OF DRAWING T-2 PREPARED BY ICF KASDI ENGINEER SITE 300 WATER IMPROVEMENTS PROJECT

CONTRACT NO. WD-2597
 CITY AND COUNTY OF SAN FRANCISCO
PUBLIC UTILITIES COMMISSION
 INFRASTRUCTURE DIVISION
 ENGINEERING BUREAU
 LAWRENCE LIVERMORE LABORATORY AND
 PH II THOMAS SHAFT IMPROVEMENT PROJECT
EXISTING WATER SUPPLY SYSTEM PLAN

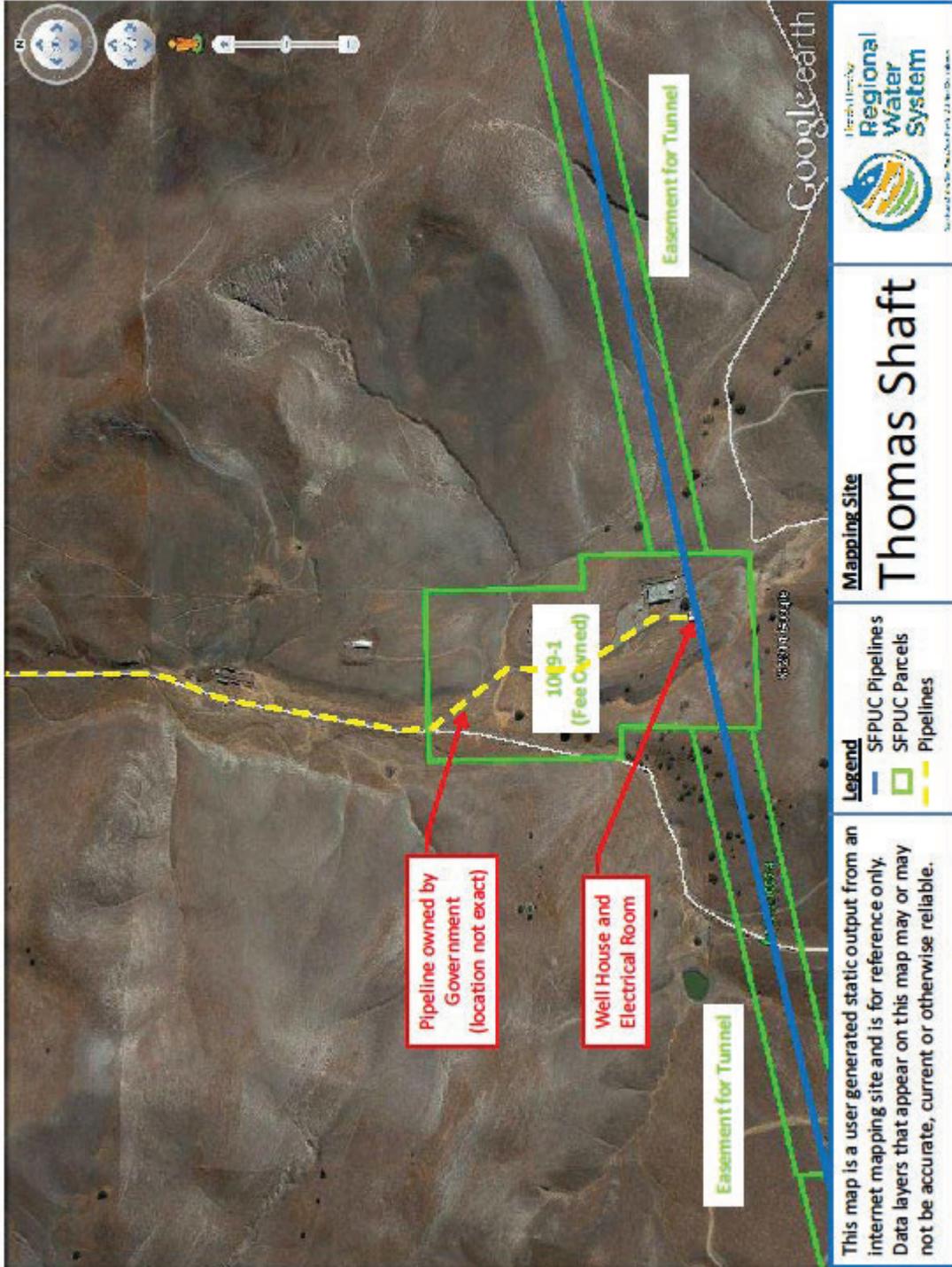


DATE	01/09	BY	[Signature]
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NO.	5 OF 128	DATE	0-4	PROJECT	E-15731	REV.	0
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1 mile = 5,280'
 10.5" = 8,400' OR 1.59 miles

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES



This map is a user generated static output from an internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current or otherwise reliable.

- Legend**
- SFPUC Pipelines
 - SFPUC Parcels
 - - - Pipelines

Mapping Site

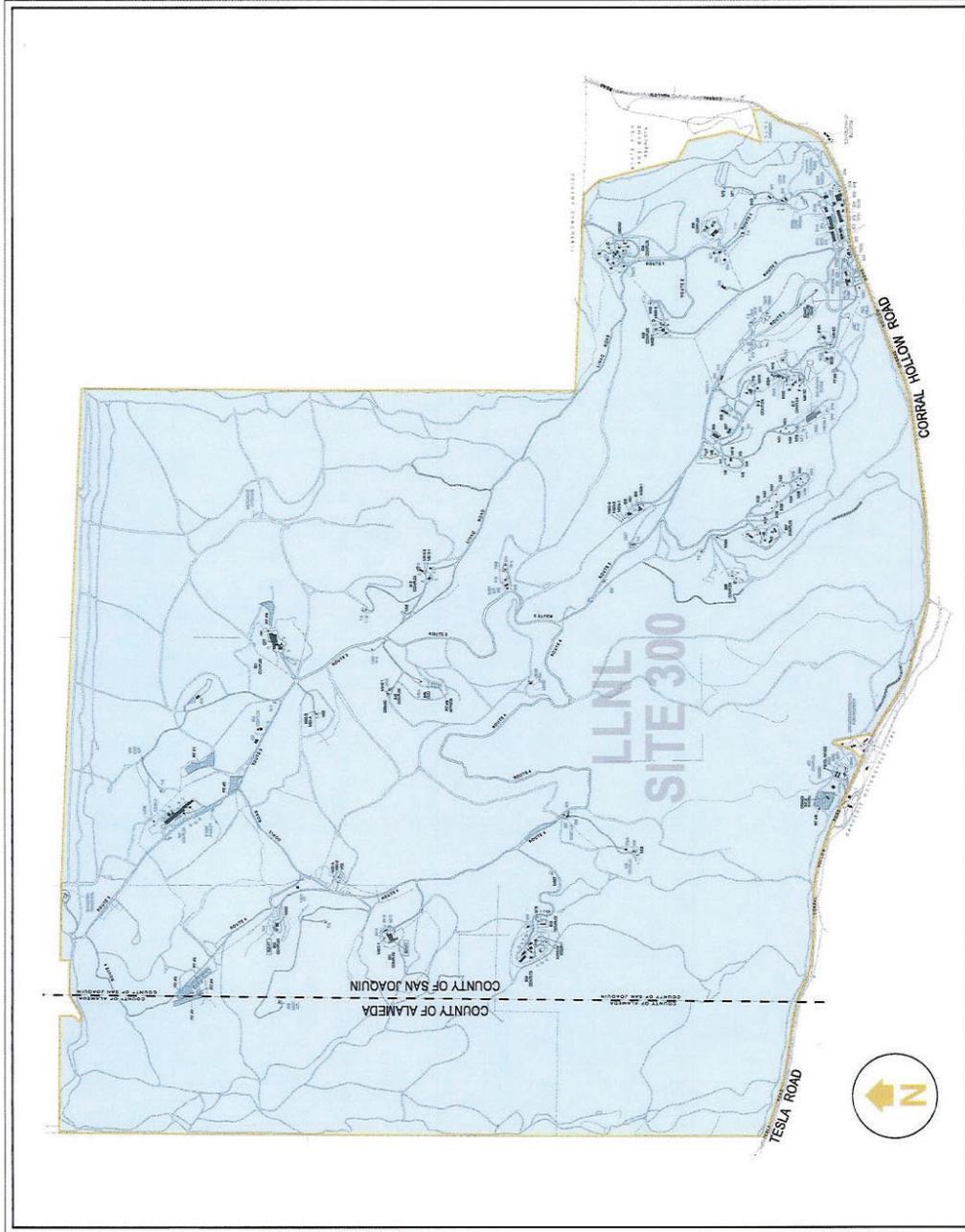
Thomas Shaft



Attachment 6 Site 300 Service Area

Exhibit E to Contract DE-AC03-76SF-16828 Lawrence Livermore National Laboratory-Site 300

2



Attachment 7

Ownership of Facilities and Equipment at the Thomas Shaft, Hetch Hetchy Coast Range Tunnel

Historical Background and General Description

The U.S. Department of Energy (Government) and the San Francisco Public Utilities Commission (SFPUC) have installed facilities and equipment on SFPUC fee owned property at the Thomas Shaft of the Coast Range Tunnel (shown generally in Diagram C on page 6 of this Attachment 8). In 1995, the Government purchased and constructed the first pumping equipment and piping components at the Thomas Shaft for the sole purpose of transporting Hetch Hetchy water from the SFPUC's Regional Water System to Lawrence Livermore National Laboratory's (LLNL) Site 300. Due to the State of California water quality regulatory changes that became effective after 1987, the Thomas Shaft pumping system was not able to deliver potable water to Site 300 without treatment. In 2002, the Government and the SFPUC mutually agreed through Modification 5 to Contract DE-AC03-76SF16828 that the SFPUC would install, at its own cost, the *Thomas Shaft Chlorination Facility* approximately 120 feet northeast of the Thomas Shaft. The *Thomas Shaft Chlorination Facility* was designed and constructed to reuse or replace the original 1995 Thomas Shaft equipment. The Thomas Shaft portion of the system was necessary to pump water from the Coastal Range Tunnel (approximately 354' below grade up to the *Thomas Shaft Chlorination Facility*). Once the water was treated at the *Thomas Shaft Chlorination Facility*, it would be piped back toward the Thomas Shaft into a 10-inch pipe that runs below grade on the Thomas Shaft access road, also owned in fee by the SFPUC, about 1.54 miles to Site 300 (see Attachment 7 for SFPUC Property Drawing). The SFPUC maintains and operates the pumping, treatment, and delivery processes associated with these facilities and equipment. The SFPUC only supplies water to Site 300 when the Hetch Hetchy supply is available and when the Site 300 water distribution system signals to the SFPUC that it requires more water (e.g., the Government signals via telemetry between Site 300 and the Thomas Shaft when Site 300 tank water levels are low and require additional supply).

In 2015, through Contract DE-NA0002471, the Government transferred the ownership of certain Thomas Shaft components that were originally designated as Government property to the SFPUC. As of January 1, 2015, the SFPUC has sole ownership of and responsibility to operate and maintain those components, identified in Section A below, which are upstream of the Point of Delivery at the Thomas Shaft facilities shown on SFPUC Drawing E-15731 in Attachment 7. The SFPUC also owns the enclosures and equipment that the SFPUC installed in 2010 that are identified in Section B below.

The Thomas Shaft components that remained Government property following the 2015 transfer, and additional components installed by the Government since 2015 that remain Government property, are identified in Section C below. These components include: (1) the 10-inch diameter piping downstream of the Point of Delivery to Site 300, (2) a 10-inch backflow preventer installed in 2020, (3) new radio system and temporary communications antenna installed in 2022, and (4) the G1 and G4 control panels. It is the Government's responsibility to operate and maintain these components. The Government and its representatives shall also coordinate with, and obtain prior approval from, SFPUC staff for access to Government-owned equipment and components located within the Thomas Shaft facilities.

A. Original 1995 Government Property Transferred to the SFPUC in 2015:

Attachment 7

1. 266 lineal feet of 8' (H) wire cloth security fencing surrounding Thomas Shaft Deep Well Pump area enclosing Electrical Utility Prefabricated Enclosure, Well Pump Prefabricated Enclosure, and Deep Well Pumps at top of shaft casing.
2. Electrical Utility Prefabricated Enclosure: 10' (W) x 16' (L) x 10' (H) prefabricated enclosure Atkinson Industries Inc. Model 128-004, Shop Order C5639, Manufactured October 1993. The following is contained within the Electrical Utility Building:
 - a. Motor Control Center No. 571A
 - i. Space A1: Automatic Transfer Switch 571A, Westinghouse Series 2100 208V/120V
 - ii. Space B1: Circuit Breaker Welding Receptacle
 - iii. Space B2: Joslyn Surge Pack, Surge Protection Equipment
 - iv. Space B3: Relay Deep Well Pump No. 1
 - v. Space B4: Relays Deep Well Pump No. 1 and No. 2
 - vi. Space C1: Spare Switch
 - vii. Space C5: Capacitor Deep Well Pump No. 2
 - viii. Space D1: Circuit Breaker Deep Well Pump No. 2
 - ix. Space D5: Capacitor Deep Well Pump No. 1
 - x. Space E1: Circuit Breaker Well Pump WP-1
 - xi. Space E5: Circuit Breaker Well Pump WP-2
 - xii. Space F1L: Primary Disconnect Switch Transformer T572
 - xiii. Space F1R: Main Circuit Breaker Lighting and Electrical Panel 572A
 - b. Electric Transformer T572, MGM Transformer Co., CAT No. HT20A3B2, S/N 94-1-85622-1, 30 KVA 480V-208V/120V 3-Phase
 - c. Exterior and Interior Lighting Fixtures
 - d. Wall Mounted Phone Instrument
 - e. Wall Mounted HVAC Heat Pump ACHPS-01 and Thermostat
3. Electrical Meter Cabinet No. 511 [outside of security fencing area, adjacent on north side of fenced area][meters themselves are Pacific Gas & Electric Co. property]
4. Electric Transformer No. T571 500 KVA 12KV/480V [Outside of security fencing area, adjacent on north side of Electrical Meter Cabinet No. 511]
5. Isolation Valve No. 101 [between 10" Diameter x 8" Diameter 90 Degree Elbow and 8" Diameter x 6" Diameter 90 Degree Elbow on SFPUC's 6" Diameter UV Reactor Treated Water Piping] [was installed new in 2010 by the SFPUC using its funds; replaced old valve]
6. 6" Reduced Pressure Backflow Preventer [was installed new by the SFPUC using its funds; replaced old Backflow Preventer]
7. 6" Piping Connecting Well Nos. 1, 2 & 3 to SFPUC Thomas Shaft Chlorination Facility and Appurtenances [Y-Strainer, Butterfly Valves, Gate Valve, Angle Ball Plugs (for disinfection), 6" Surge Control Valve, Flowmeter, Air Valve] [most of this was demolished and replaced in 2010 with new by the SFPUC using its funds – see SFPUC drawing E-15731 in Attachment 7.
8. 12" Diameter Well Casings (3) Nos. 1, 2, & 3 [original, i.e., prior to 2010 SFPUC construction work]
9. 4" Diameter Well Piping for Deep Well Nos. 1 & 3 located within well casings [Nos. 1 and 3 are original, i.e., prior to 2010 SFPUC construction work, and were not removed or replaced by the SFPUC in 2010]

B. Enclosures and Equipment Installed by the SFPUC in 2010 as SFPUC Property:

Attachment 7

1. Well Pump Prefabricated Valve Enclosure: 18' (W) x 20' (L) x 10' (H) building structural Steel w/ concrete foundation to enclose the Point of Delivery and various mechanical components. [installed by the SFPUC in 2010 using its funds]
 - a. Surge Tank T-1 SSA-2000E/200 S/N 179574 and Associated Appurtenances and 4" Diameter Surge Piping [located within the Well Pump Prefabricated Valve Enclosure] [installed new by the SFPUC in 2010 using its funds; no surge tank was used as part of the Government's 1995 constructed system]
2. Deep Well Pumps Nos. 2 & 3 at Well Casings Nos. 2, & 3 respectively [two (2 each) 100 horsepower submersible multistage lift pumps owned by the Government were removed by the SFPUC in 2010 and replaced with new pumps using its funds; the removed pumps were delivered to LLNL in 2010 for reuse elsewhere]
3. 4" Diameter Well Piping for Deep Well No. 2 located within well casing No. 2 [the original No. 2 4" Diameter Well Piping for Deep Well No. 2 was replaced by the SFPUC in 2010 using its funds; the removed components were delivered to LLNL in 2010 for reuse elsewhere]

C. Equipment that Remains Government Property:

1. Within the Electrical Utility Prefabricated Enclosure at Motor Control Center No. 571A:
 - a. Space G1: Pump Controls OPTO 22 Controller
 - b. Space G4: LLNL Telecommunication LLIX System
 - c. Space G4: New radio system connected to the temporary communications antenna (installed by the Government in 2022).
2. Temporary communications antenna (Mount Yagi, 902-960 MHz), mounting pole, and associated conduit leading into Electrical Utility Prefabricated Enclosure that terminates at the radio denoted in 1.c (installed by the Government in 2022) [see Diagram A below].
3. 10-inch diameter backflow preventer (installed by the Government in 2020), including valve V-101 and all pipes, valves, and associated appurtenances downstream of V-101 to Site 300 Valve Box No. 1 [see Diagrams B and D below].

Attachment 7

Diagram A. Temporary Antenna and Radio Installation at Electrical Utility Enclosure

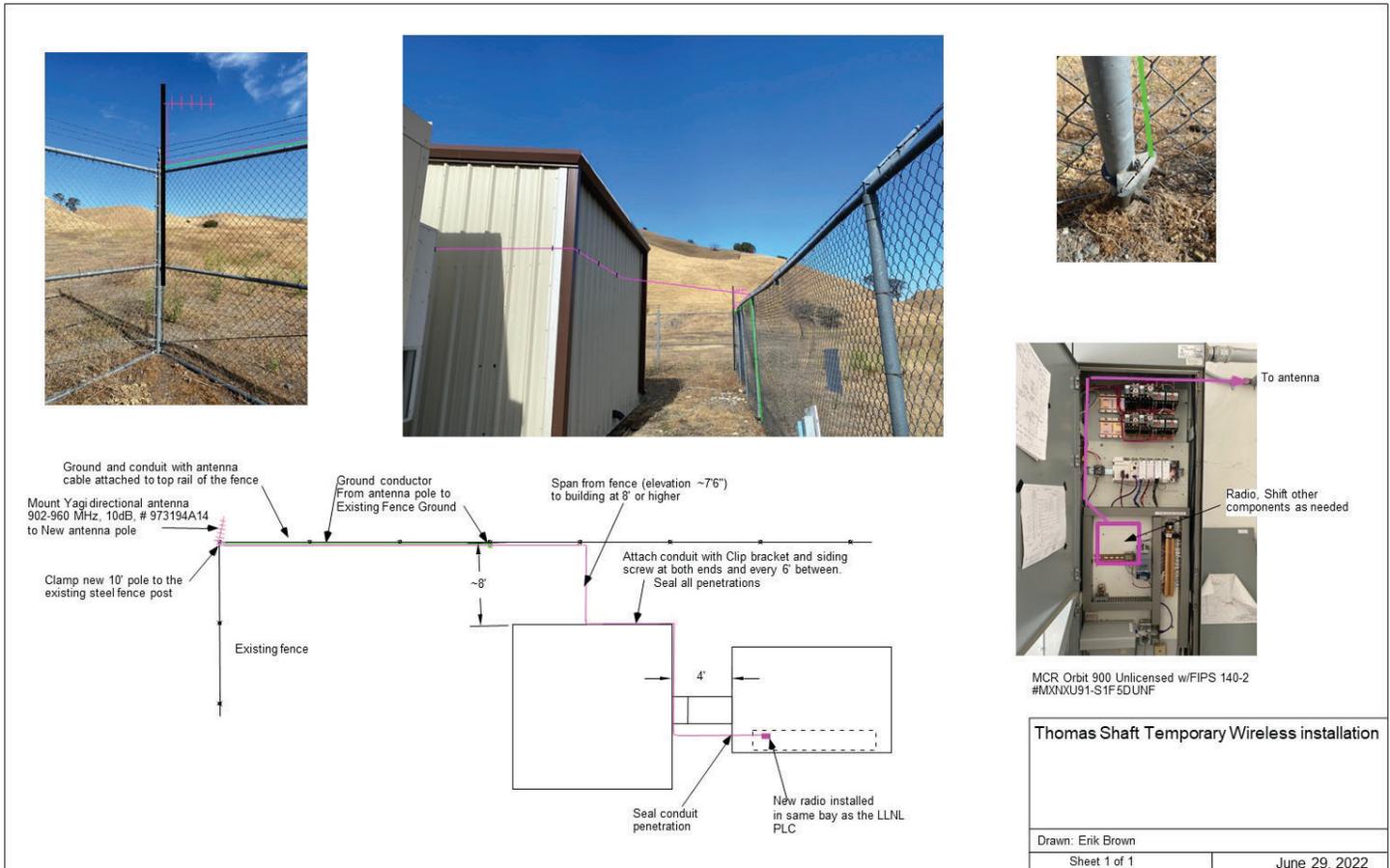


Diagram B. Backflow Device Downstream of Valve V-101



Diagram C. General Illustration of Facilities and Equipment at Thomas Shaft

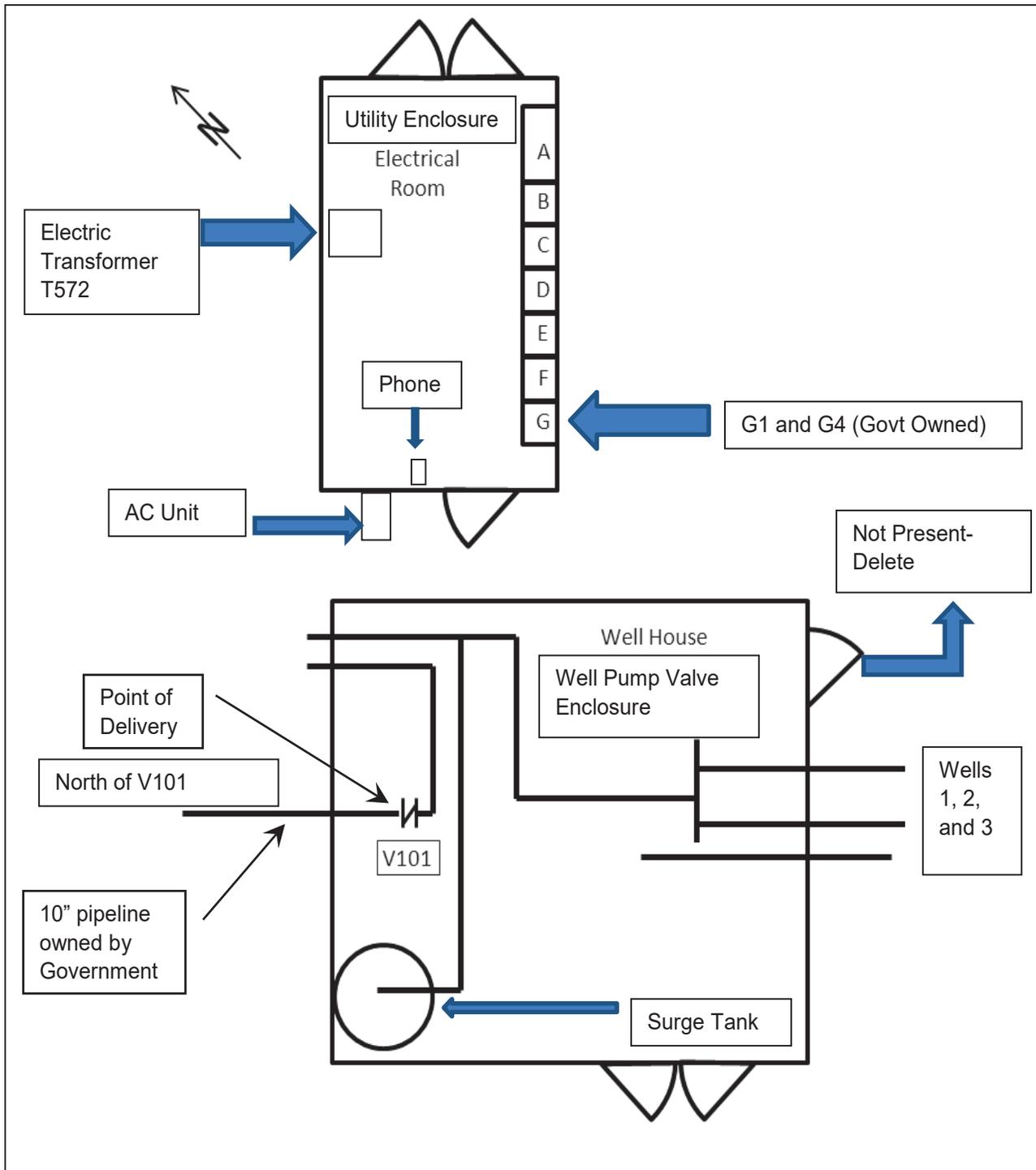


Diagram D. Aerial Map of the SFPUC Thomas Shaft Area

