



# Onsite Water Reuse Grant Program Rules

## Grant Program Overview

The San Francisco Public Utilities Commission (SFPUC) Onsite Water Reuse Grant Program provides grant funding to encourage retail water users to reduce SFPUC water supply usage by collecting, treating, and using alternate water sources including rainwater, stormwater, graywater, foundation drainage, air conditioning condensate, and blackwater for non-potable uses such as toilet flushing, irrigation, and cooling tower makeup. Grant funding is available for three types of projects:

1. Projects that are installing Onsite Water Systems on a voluntary basis (Voluntary Projects);
2. Projects that are installing Onsite Water Systems on a mandatory basis in compliance with the Non-potable Water Ordinance Ordinance that go above and beyond Baseline NPO Compliance (Above and Beyond Projects); and
3. Projects that are installing onsite treatment and reuse of brewery process water.

The SFPUC is seeking proposals for projects that meet one of the following criteria:<sup>1</sup>

1. Projects that replace at least 450,000 gallons of SFPUC water per year are eligible for grant funding up to \$100,000; or
2. Projects that replace at least 1,000,000 gallons of SFPUC water per year are eligible for grant funding up to \$250,000; or
3. Projects that replace at least 3,000,000 gallons of SFPUC water per year are eligible for grant funding up to \$500,000.

Eligible projects that meet the grant guidelines will be considered for funding if they can demonstrate reduction of SFPUC water supplies by collecting, treating, and using alternate water supplies to meet onsite water demands. Types of activities considered for funding include the installation of collection systems for onsite alternate water sources, installation of treatment systems to improve the water quality of onsite alternate water sources for beneficial reuse, and/or storage of the treated water.

The SFPUC anticipates funding multiple projects during this solicitation round. Grant applications are accepted on a rolling basis. Provision of grant funding is based on the eligibility of the proposed project and

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<sup>1</sup> For Above and Beyond Projects, the estimated SFPUC Water Offset must be achieved above and beyond Baseline NPO Compliance to be eligible for grant funding.

availability of funds. Each application will be reviewed and evaluated on a case-by-case basis. Grant funding is available on a first come, first served basis. With the exception of Above and Beyond Projects, grant funding will not be provided to projects that are undertaken to comply with a City and County of San Francisco ordinance, including but not limited to the Non-potable Water Ordinance, codified in the San Francisco Health Code at Article 12C.

The Onsite Water Reuse Grant Program helps support customer efforts to implement sustainable water practices in San Francisco and offset SFPUC water use. The collection, treatment and use of alternate water sources for onsite applications helps diversify our water supply, making us more resilient for the future. In addition to advancing water supply reliability, the Onsite Water Reuse Grant Program supports the SFPUC's Phased Water System Improvement Program Variant (WSIP) goals adopted by Resolution No. 08-200 on October 30, 2008. WSIP included a goal of developing an additional 10 million gallons per day (mgd) of locally available water supplies.

## Definitions

Terms used in this grant application package have the meanings described below:

**Above and Beyond Projects** - projects that are installing Onsite Water Systems on a mandatory basis in compliance with the Non-potable Water Ordinance that go above and beyond Baseline NPO Compliance.

**Alternate Water Source** – a source of non-potable water that includes rainwater, stormwater, graywater, foundation drainage, air conditioning condensate, and blackwater, and/or any other source approved by the San Francisco Department of Public Health (SFPDH).

**Applicant** – property owner or property tenant that is a retail water customer of the SFPUC, and is seeking grant funds from the SFPUC for an alternate water source or brewery process water project, pursuant to the instructions and guidelines set forth in this application package.

**Award** – the decision by the SFPUC to provide grant funds, following the review and evaluation of a completed application. An award is made through a Grant Agreement.

**Baseline NPO Compliance** – the minimum volume of water required to be captured, treated, and used onsite to comply with the NPO. If the project's available supply from rainwater, graywater, and foundation drainage exceeds the demands for toilet and urinal flushing and irrigation, Baseline NPO Compliance is equal to 100% of the demands for toilet and urinal flushing and irrigation. If the project's available supply from rainwater, graywater, and foundation drainage is less than the demands for toilet and urinal flushing and irrigation, Baseline NPO Compliance is equal to 100% of the available supply from graywater, rainwater, and foundation drainage.

**Blackwater** – wastewater containing bodily or other biological wastes, as from toilets, dishwashers, kitchen sinks and utility sinks.

**Brewery Process Water** – water generated onsite at a brewery from sources such as filtration, production, packaging, and tank rinses.

**Brewery Process Water Treatment System** - an onsite water system that treats brewery process water for a variety of end uses, including those that may come into contact with the product, or brewed in the product itself.

**Building-scale Project** – the construction or alteration of any commercial, multi-family, or mixed-use building that includes an onsite water system.

**District-scale Project** – a project entailing the sharing of an onsite water system serving two or more parcels or for use in multiple structures, whether under the jurisdiction of one entity or several.

**Engineering Report** – a report prepared by a qualified engineer licensed in California that provides detailed information on elements including but not limited to alternate water sources that will be collected and treated for reuse, treatment processes used to meet required water quality criteria, and monitoring and reporting plans.

**Foundation Drainage** – nuisance groundwater that is extracted to maintain a building’s or facility’s structural integrity and would otherwise be discharged to the sanitary sewer system. Foundation drainage does not include non-potable groundwater extracted for a beneficial use that is subject to City groundwater well regulations.

**General Manager** – the General Manager of the SFPUC, or any individual designated by the General Manager to act on his or her behalf.

**Grant Agreement (Agreement)** – a written contract between the SFPUC and the recipient of grant funds, which includes the obligations and conditions governing the use of grant funds.

**Grantee** – property owner or property tenant that is a retail water customer of the SFPUC to whom a grant is awarded.

**Graywater** – untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. Graywater includes, but is not limited to, wastewater from bathtubs, showers, bathroom sinks, clothes washing machines, and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers.

**Irrigation** – water application on land to assist in the growing of landscaping or crops or to maintain vegetation on recreation areas, such as parks and golf courses.

**Non-potable Water** – non-potable water collected from alternate water sources, treated, and intended to be used on the applicant’s site or district parcels and is suitable for direct beneficial use. Non-potable water is not of drinking water quality, but may still be used for many other purposes, depending on its quality.

**Non-potable Water Ordinance** – Article 12C of the San Francisco Health Code.

**Onsite Water System** – the system of facilities necessary for providing water for use in a building-scale or district-scale project, including but not limited to all collection, treatment, storage, and distribution facilities.

**Operating Year** – each consecutive 12-month period during the term of the grant agreement. The first Operating Year commences on the day that the onsite water system is placed in operation (“Operating Commencement Date”) and ends on the day before the one-year anniversary of the Operating Commencement Date. A new Operating Year will commence on each successive anniversary of the Operating Commencement Date; however, the final Operating Year will end on the date the grant term expires or terminates, whether or not consisting of 12 full months.

**Rainwater** – precipitation collected from roof surfaces or other manmade, aboveground collection surfaces. Hydrocarbon-based fuels, hazardous materials, or fertilizers are prohibited to be stored or used on such surfaces.

**Recycled Water** – non-potable water that meets California State Water Resources Control Board Division of Drinking Water statewide uniform criteria for disinfected tertiary recycled water. Recycled water is also known as “reclaimed water”.

**Recycled Water Ordinance** – Article 22 of the San Francisco Public Works Code.

**Reservation Letter** – a written notice of the reservation of grant funds.

**Retail Water Customer/User** – any institutional, industrial, residential, or commercial customer who receives a water bill directly from the SFPUC for their own water use, and not for resale.

**SFPUC Water Offset** – water provided by the SFPUC saved through the use of an appropriate alternate water source.

**Stormwater** – precipitation collected from at-grade or below grade surfaces or from any surface where hydrocarbon-based fuels, hazardous materials, or fertilizers are stored or used.

**Treatment System Manager** – the qualified person or entity responsible for the daily management and oversight of the onsite water system.

**Voluntary Projects** - projects that are installing Onsite Water Systems on a voluntary basis.

**Wastewater Heat Recovery** – the extraction of thermal energy from graywater, blackwater, or other source, and subsequent beneficial use of this energy to offset a building’s energy needs. Common components of wastewater heat recovery systems include a wet well/equalization tank, solid-liquid separation, heat exchanger, and heat pump.

# I. Grant Guidelines

## Eligible Applicants

Grant funds are available for building-scale or district-scale projects undertaken by Retail Water Customers of the SFPUC. Proposed projects must meet all of the criteria set forth below to qualify for grant funding. Activities that do not meet one or more of the criteria listed below will be deemed ineligible.

With the exception of Above and Beyond Projects, grant funds are not available for projects undertaken to comply with a City and County of San Francisco ordinance. Additionally, projects that have already received a Start-up Permit from San Francisco Department of Public Health (SFDPH) and projects that have received a certificate of occupancy from San Francisco Department of Building Inspection (SFDBI) before January 1, 2014 are not eligible for grant funding.

## Grant Requirements

### Eligibility Criteria

- The proposed Onsite Water System must be permanent and be operated for a minimum of 10 years, unless the General Manager authorizes a longer term.
- The proposed project must be undertaken by a Retail Water Customer of the SFPUC as part of the construction or alteration of any commercial, multi-family, mixed-use building, or brewery.
- With the exception of Above and Beyond Projects, the Applicant cannot obtain grant funds for the mandatory installation of an onsite non-potable water system to comply with the requirements of the Non-potable Water Ordinance (Article 12C of the San Francisco Health Code).
- Onsite Water System projects must comply with San Francisco's Onsite Water Reuse Program including the SFDPH Director's Rules and Regulations Regarding the Operation of Alternate Water Source Systems. Brewery process water treatment systems must comply with the requirements contained in this document starting on Page 8.
- Project must be in compliance with all applicable local, state, and federal laws, regulations and ordinances, including the California Environmental Quality Act (CEQA) and San Francisco Administrative Code Chapter 31 as applicable.
- Project must be in compliance with state prevailing wage requirements and San Francisco Administrative Code Chapter 21C, as applicable (see Taxes, Insurance, and Prevailing Wage below for more information).
- Project must be constructed within four years of the dated Grant Agreement and must begin to offset SFPUC water use within six months after the conclusion of the Conditional Startup Mode period required under the SFDPH Permit for the Operation of the Alternate Water Source System.
- Grantees must submit annual status reports to the SFPUC (one per Operating Year), documenting that the project consistently meets the eligibility criteria and water savings.

### Projects Must Also Meet One of the Following Eligibility Criteria

- Project is a new development that is voluntarily installing an Onsite Water System.
- Project is an existing development that is voluntarily installing an Onsite Water System.
- Project is a development that is voluntarily connecting to a district-scale water system.
- Project is an Above and Beyond Project achieving SFPUC Water Offset above and beyond Baseline NPO Compliance (see Additional Requirements for Above and Beyond Projects below).

## SFPUC Potable Water Offset Thresholds for Grant Funding Levels

Projects must demonstrate the ability to achieve at least one of the following thresholds for SFPUC Water Offset to be eligible for grant funding:

Estimated SFPUC Water Offset (gallons per year for 10 years)	Grant Funding Available
$\geq 450,000^1$	Up to \$100,000
$\geq 1,000,000^1$	Up to \$250,000
$\geq 3,000,000^1$	Up to \$500,000

<sup>1</sup>For Above and Beyond Projects, the estimated SFPUC Water Offset must be achieved above and beyond Baseline NPO Compliance to be eligible for grant funding.

## Wastewater Heat Recovery Requirement

Applicants must submit with the Grant Application an estimate of the energy offset that could be achieved by the project through the installation of a Wastewater Heat Recovery system. Applicants must also provide a description of the potential configuration of the Wastewater Heat Recovery system, including the following information:

- Whether raw or treated water would be used;
- What type of heat recovery equipment would be used, e.g. heat exchanger, heat pump, etc.; and
- How the heat would be used in the building, e.g. hot water boiler pre-heating, maintaining temperature of hot water storage tank, space heating and/or cooling, etc.

## Additional Requirements for Above and Beyond Projects

- Going above and beyond Baseline NPO Compliance can be accomplished by:
  - Using additional alternate water sources to reduce SFPUC water supply usage in volumes above and beyond Baseline NPO Compliance. For example, a project that cannot meet their full toilet and urinal flushing demands with rainwater, graywater, and foundation drainage could elect to use blackwater, air conditioning condensate, or another combination of alternate water sources to fully meet toilet and urinal flushing demands; or
  - Meeting non-potable demands above and beyond Baseline NPO Compliance, such as for clothes washing and cooling tower makeup.
- Above and Beyond Projects that consist of multiple buildings that pursue a building-scale project approach (as opposed to a district-scale project approach) are not eligible for grant funding.
- Above and Beyond Projects that consist of mixed-use and multi-family residential buildings that are seeking grant funding must install a Wastewater Heat Recovery system.
- Above and Beyond Projects that consist of district-scale projects and commercial buildings that are seeking grant funding are not required to install a Wastewater Heat Recovery system, but must submit with the Grant Application an estimate of the energy offset that could be achieved by the project through the installation of a Wastewater Heat Recovery system.

## Grant Term

The default term for grant agreements will be 10 years. The grant agreements will require the grantee to (1) operate and maintain the project for 10 years, which is reasonably related to the useful life for these systems, and (2) record against the subject property a Declaration of Restrictions notifying subsequent property owners of the obligations to operate and maintain the system. If the General Manager of the SFPUC determines that a longer operation and maintenance obligation is warranted for a particular project, the General Manager of the SFPUC may seek Board of Supervisors approval for a grant agreement term in excess of 10 years pursuant to Charter Section 9.118.

## Grant Process

### Step 1 – Grant Application

- The Applicant must calculate the estimated amount of SFPUC water (in gallons per year) that will be offset by the project using the SFPUC’s Water Use Calculator available at [sfwater.org/np](http://sfwater.org/np).
  - For Above and Beyond Projects, the grant application must include an estimate of the annual total volume of SFPUC Water Offset above and beyond Baseline NPO Compliance.
- The Applicant must submit a complete grant application package, including the SFPUC’s grant application, water budget application, Water Use Calculator results, a list of applicable permits (e.g. building, plumbing, etc.), and other supplemental documentation such as the proposed project work plan, schedule, and budget.
- If seeking grant funding for a district-scale project, the Applicant must provide information on enforceable legal agreements between property owners within the district-scale project.
- If seeking grant funding for a district-scale project, the Applicant must provide documentation that each party is a willing and responsible participant in the district-scale Onsite Water Reuse project and identify each role within the project’s Engineering Report.
- If the Applicant’s project is selected for grant funding, the SFPUC will issue a Reservation Letter confirming the amount of grant funds reserved for the project. A Reservation Letter is a provisional reservation and subject to availability of funds and completion of the following documentation and steps.

### Step 2 – Grant Agreement

- The Grantee must execute a Grant Agreement with the SFPUC, submit a W-9 tax form, provide a valid copy of insurance documentation, and become an approved Bidder and Supplier with the City and County of San Francisco.

### Step 3 – Project Design, Documentation, and Construction

- The Grantee must receive approval of the project’s Engineering Report from SFDPH, certifying completed design of the Onsite Water System in accordance with San Francisco’s Onsite Water Reuse Program including the SFDPH Director’s Rules and Regulations Regarding the Operation of Alternate Water Source Systems.
- The Grantee must reference the SFPUC’s funding and support in all public outreach materials and signage related to the project. The SFPUC will work with Grantee to procure signage if needed.
- If installing a Wastewater Heat Recovery system, the Grantee must submit to the SFPUC a narrative description and schematic of the design and technology installed in conjunction with the Onsite Water System.

### Step 4 – Grant Disbursement

- Grant funds will be provided to the Grantee in three disbursements:
  - Disbursement of 40% of the total grant will be made upon approval of the project’s Engineering Report. **An approval letter from SFDPH is required.**
  - Disbursement of 50% of the total grant will be made upon completion of construction of the Onsite Water System. **A System Construction Verification Letter per the SFDPH Director’s Rules and Regulations Regarding the Operation of Alternate Water Source Systems is required.**
  - Disbursement of the final 10% of grant funds will be made after the Permit for the Operation of the Alternate Water Source System has been issued by SFDPH, as applicable, the project is on track to meet the water savings estimated in their grant application, and the project complies

with all permitting requirements. **A copy of the Permit for the Operation of the Alternate Water Source System from SFDPH and documentation of estimated water savings is required.**

- To receive grant disbursements, Grantee must submit a Request for Partial Reimbursement for eligible expenses up to the amount of grant funds specified in the Reservation Letter.

## Expiration

The Grantee has a total of six months from the date of the Reservation Letter to fulfill project documentation and design requirements, including a signed Grant Agreement and an approved Engineering Report by SFDPH. If a reservation period expires or the project scope changes, the project must reapply under the Onsite Water Reuse Grant Program's next solicitation round. Once a Grant Agreement is executed, the project must be constructed and operational within four years.

The Grantee may request a time extension for project documentation and/or construction if a written justification is provided in writing to the SFPUC.

## Disbursement Requirements

In order to provide the three grant disbursements, the Grantee must submit the following documentation to the SFPUC:

- A completed W-9 IRS tax form from the designated payee.
- Insurance documentation described in the Grant Agreement.
- A City and County of San Francisco Bidder and Supplier Number. For more information on doing business with the City, please see the San Francisco Office of Contract Administration at [www.sfgsa.org](http://www.sfgsa.org).

## Reporting and Monitoring

Grantees must submit annual reports to the SFPUC summarizing the project's monthly SFPUC water use and onsite water system production. In addition, for projects installing Wastewater Heat Recovery systems, the annual report must include the energy offset achieved by the system. Annual reports must be submitted to provide proof that the project will meet the cumulative water savings criteria<sup>2</sup> of 450,000 gallons of SFPUC water per year over 10 years for grant funding up to \$100,000; 1,000,000 gallons of SFPUC water per year over 10 years for grant funding up to \$250,000; or 3,000,000 gallons of SFPUC water per year over 10 years for grant funding up to \$500,000.

Alternate water source projects must also comply with additional reporting and monitoring requirements specified under SFDPH Director's Rules and Regulations Regarding the Operation of Alternate Water Source Systems.

At the end of the project's grant term, the Grantee shall prepare and submit a Project Completion Report including a final description of the installed project, accounting of final system costs, annual SFPUC water savings, and a summary of any operational challenges and benefits.

Additionally, site inspections by SFPUC staff may be conducted for any grant-funded activities, including post-installation verification of water savings.

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<sup>2</sup> For Above and Beyond Projects, the annual report must provide proof that the project will meet cumulative water savings criteria above and beyond Baseline NPO Compliance.



## Grant Funding

### Funding Requirements

- Grant funding may be provided following the 1) evaluation of each grant application and the estimated water savings identified in the water budget documentation, 2) delivery of the project's documentation required under the grant guidelines, and 3) availability of grant funds as certified by the Controller of the City and County of San Francisco.

### Budget Items Eligible for Funding

- Onsite Water System project costs paid, including, but not limited to materials, supplies, salaries and fringe benefits, and payments on construction contracts directly relating to the design, permitting, installation, operation, and maintenance of the Onsite Water System.
- Only accepted expenses incurred for preparation of the water budget documentation are eligible for reimbursement prior to executing the Grant Agreement.
- Unless otherwise agreed to in writing, no other costs are eligible for reimbursement by the SFPUC.

### Budget Items Ineligible for Funding

- Plumbing fixtures such as toilets or urinals and landscape materials are not eligible for grant funding.

### Return of Grant Funds

The purpose of the Onsite Water Reuse Grant Program is to provide grant funding to encourage and support retail water users to reduce SFPUC water supply usage by maximizing onsite alternate water sources to meet water demands. Therefore, in the event that the project is not constructed and operational within four years of the dated Grant Agreement (unless otherwise extended by mutual agreement), and/or if the annual reports show that the project will not achieve the cumulative water savings criteria as specified in its grant application, the SFPUC may demand that the Grantee immediately return any previously disbursed grant funds that have been claimed or expended by the Grantee. The SFPUC reserves the right to evaluate each project's activity on a case-by-case basis.

## Taxes, Insurance, and Prevailing Wage

A grant may be taxable. It is the responsibility of the Grantee to determine whether a tax liability exists. The designated Grantee will receive a 1099-Misc tax form from the City in the February after award of the grant. By issuing a 1099-Misc, the City is fulfilling its legal obligation for tax reporting. In order to issue a 1099-Misc, SFPUC will request relevant tax information from a designated Grantee through a W-9 IRS tax form, which must be completed and returned before a grant disbursement will be made.

The City requires evidence of insurance for all funded activities. Prior to beginning work on an activity, the Grantee must produce a Certificate of General Liability as well as proof of Worker's Compensation Insurance. The Grantee's insurance policy shall name the City and County of San Francisco, the San Francisco Public Utilities Commission, its board members and commissions, and all authorized agents and representatives, and members, directors, officers, trustees, agents and employees as additional insureds.

### Prevailing Wage

- Projects that receive over \$1,000 from a SFPUC grant program and involve hiring contractors for construction, alteration, demolition, installation or repair at sites other than single family homes are considered public works projects and are subject to prevailing wage requirements under California and City and County of San Francisco law.

- Additionally, such projects that receive \$25,000 or more from a SFPUC grant program are required to submit certified payroll reports and fringe benefit statements into the City’s electronic payroll reporting system (LCPtracker).
- For more information about prevailing wage requirements and how to comply, read the San Francisco Office of Labor Standards Enforcement (OLSE) [fact sheet](#) and other materials on [OLSE’s web page](#).

Additionally, the SFPUC may occasionally receive state grant funding. When this occurs, individual Grantees may need to meet the prevailing wage requirements. If the Grantee cannot meet requirements of San Francisco’s Labor Compliance Program, please contact the SFPUC as soon as possible. The SFPUC will inform Applicants at the time of the application if the SFPUC plans to seek or apply state grant funds.

## Environmental Review

All projects must comply with applicable local, state, and federal permit requirements. A grant will not be awarded until a building permit is issued and the activity has completed compliance with the California Environmental Quality Act (CEQA) and San Francisco Administrative Code Chapter 31 (e.g. categorical exemption, negative declaration, mitigated negative declaration or EIR). An SFPUC inspection of installed systems does not constitute a building inspection by SFDBI or SFDPH having jurisdiction to issue permits to operate the system.

## Grant Rules and Process for Brewery Process Water Treatment Systems

All Onsite Water Reuse Grant Program Rules stated above are applicable to brewery process water treatment systems. If a conflict exists, the Grant Rules for Brewery Process Water Treatment Systems shall take precedence.

Breweries must use the following four strategies to ensure protection of public health for brewery process water treatment systems:

1. Source characterization to understand the nature of the source water;
2. Source control to prevent contaminants from entering the source water to the maximum extent possible;
3. Treatment to remove contaminants; and
4. Ongoing monitoring to verify the functioning of the treatment barriers and the quality of the treated water on an ongoing basis.

### Step 1 – Grant Application

- The Applicant must calculate the estimated amount of SFPUC water (in gallons per year) that will be offset by the project.
- The Applicant must submit a complete grant application package, including the SFPUC’s grant application, water budget application, and water savings calculations.
- If the Applicant’s project is selected for grant funding, the SFPUC will issue a Reservation Letter confirming the amount of grant funds reserved for the project. A Reservation Letter is a provisional reservation and subject to availability of funds and completion of the following documentation and steps.

### Step 2 – Grant Agreement

- The Grantee must execute a Grant Agreement with the SFPUC, submit a W-9 tax form, provide a valid copy of insurance documentation, and become an approved Bidder and Supplier with the City and County of San Francisco.

### Step 3 – Engineering Report

- The Grantee shall submit an Engineering Report to SFPUC for review and approval. The Engineering Report must demonstrate the ability of the system to comply with the requirements for source characterization, source control, treatment, and ongoing monitoring as described below.
- The Engineering Report shall be prepared by a qualified engineer licensed in California and experienced in the field of wastewater treatment, and shall use the Engineering Report template provided by SFPUC.

#### Source Characterization and Source Control Requirements

- Grantee must ensure that there are no cross connections between the sanitary wastewater collection system and the process water collection system.
- Grantee must consider and document all potential routes for contamination of the process water with microbial pathogens.
- Grantee must conduct a survey of all the chemicals used on site to determine which ones have the potential to be present in the brewery process water.
- Grantee must implement standard operating procedures (SOPs) to mitigate contamination from chemical and microbial contamination.
- Source characterization assessment must be repeated on an annual basis or after significant changes have been made to the process water collection system or inputs.

#### Treatment and Ongoing Monitoring Requirements

Table 1. Chemical and physical quality requirements for brewery process water treatment systems.

Parameter	Requirement	Monitoring Frequency
Total Organic Carbon (TOC)	The concentration in treated effluent shall not exceed 1 mg/L at any time.	Daily (during startup) <sup>1</sup> Weekly (ongoing)
Turbidity	Turbidity of treated effluent shall not exceed 0.3 NTU at any time.	Daily (during startup) <sup>1</sup> Weekly (ongoing)
Chlorine Residual	The chlorine residual in the distribution system shall be maintained at or above 0.5 mg/L.	Daily
pH	At all times, the treated effluent pH shall be between 6 and 9.	Weekly
Odor	The system shall not emit offensive odors.	n/a
Regulated Chemicals	Monitoring of the full suite of regulated chemical contaminants <sup>2</sup> (i.e., all constituents with maximum contaminant levels) in the treated effluent.	Once at startup Once per batch of beer brewed with treated process water
Targeted chemicals	Monitoring must be conducted in the treated effluent for compounds known to be present at the brewery, e.g., cleaning products, as well as any regulated compounds that approach or exceed the maximum contaminant levels.	Quarterly Once per batch of beer brewed with treated process water

<sup>1</sup> At least 30 days.

<sup>2</sup> See Appendix A.

Table 2. Microbiological requirements for brewery process water treatment systems.

Parameter	Requirement	Monitoring Frequency
Virus	Treatment must achieve 5-log reduction in enteric virus using a combination of filtration and disinfection	Continuously (via surrogate parameter(s))

E. coli	<i>E. coli</i> always < 1 MPN / 100 mL in the treated effluent	Daily (during startup) <sup>1</sup> Weekly (ongoing)
Total coliform	Total coliform always < 1 MPN / 100 mL in treated effluent	Daily (during startup) <sup>1</sup> Weekly (ongoing)

<sup>1</sup> At least 30 days.

#### Step 4 – DBI and DPW Permit(s)

- The Grantee must submit evidence of Department of Building Inspection (DBI) and Department of Public Works (DPW) permit(s), as needed.

#### Step 5 – System Construction

- The Grantee must submit a system construction verification letter provided to SFPUC on company letterhead, signed and stamped by qualified engineer licensed in California stating that the brewery process water treatment system was constructed in accordance with the approved Engineering Report, professionally certified plans, specifications and applicable sections of state and local code.

#### Step 6 – Additional Project Documents

- If the brewery process water treatment system differs in any way from the approved Engineering Report, the Grantee must submit an updated Engineering Report to SFPUC. Any modifications to the system are subject to review and approval by SFPUC.
- The Grantee must submit an Operations and Maintenance Manual to SFPUC for review and approval using the template provided by SFPUC.
- The Grantee must submit an affidavit signed by the designated Treatment System Manager that verifies knowledge, skills, abilities and training to operate the system.
- The Grantee must submit evidence of a contract with a certified laboratory to perform water quality analysis.
- The Grantee must submit evidence of satisfactory performance upon cross-connection wet-test overseen by certified personnel from the SFPUC Water Quality Division or other certified personnel as determined by the SFPUC.

#### Step 7 – Project Conditional Startup

- Grantee must notify SFPUC of conditional startup date. SFPUC will provide Grantee with written notification of end date for conditional startup.
- Grantee must initially operate system in conditional startup mode during which treated process water must be diverted to the sewer. The standard duration of the conditional startup period is 30 days, unless special circumstances warrant a shorter or longer duration, as determined by the SFPUC. If a brewery process water treatment system does not meet the water quality and treatment requirements from Tables 1 and 2 above at any point during the conditional startup period, the duration of conditional startup will be extended by at least 30 days from the date of the violation.
- If the system fails at any point to meet the water quality and treatment requirements from Tables 1 and 2 above, Grantee must notify the SFPUC within 2 hours (phone: 415-551-4734, email: [nonpotable@sfgwater.org](mailto:nonpotable@sfgwater.org)). Notification must include a description of the violation and the initiated or proposed corrective action. SFPUC will provide Grantee with written notification of a new end date for conditional startup.
- Upon completion of conditional startup (i.e. once system has reached end date specified by SFPUC **AND** been operated without water quality violations for at least 30 consecutive days), Grantee must submit a Conditional Startup Report to SFPUC for review and approval documenting all water quality and treatment performance monitoring results, as well as project water savings. Grantee must use the template provided by the SFPUC.

- Grantee will not begin using treated process water for end uses specified in the Engineering Report until receiving SFPUC written approval to do so.

### **Step 8 – Ongoing Operation**

- Grantee must begin to offset SFPUC water use within six months after the conclusion of the conditional startup period.
- For six months after conditional startup, Grantee must submit a monthly report to SFPUC documenting all water quality and treatment performance monitoring results, as well as project water savings. Grantee must use the template provided by the SFPUC.
- After the first six months of operation, Grantee must submit an annual report to SFPUC unless special circumstances such as failure to meet the water quality standards warrant more frequent reporting, as determined by the SFPUC. The annual report must document all water quality and treatment performance monitoring results and project water savings. Grantee must use the template provided by the SFPUC.
- Grantee must keep reports of the water quality monitoring results onsite at all times and shall make the results available to the SFPUC upon request.
- If the system fails at any point to meet the water quality and treatment requirements from Tables 1 and 2 above, the treated water must be diverted to sewer. In the event of a diversion to sewer, Grantee must notify the SFPUC within 2 hours (phone: 415-551-4734, email: [nonpotable@sfpuc.org](mailto:nonpotable@sfpuc.org)). Notification must include a description of the violation. Corrective actions must be taken to eliminate the issue and prevent reoccurrence before treated water can be used again. Grantee must also notify the SFPUC of the initiated or proposed corrective action and the schedule for coming into compliance with the water quality and treatment requirements from Tables 1 and 2 above.
- Grantee must notify the SFPUC prior to any facility expansion, production increase, or process modification that is expected to result in a change in the character of the treated water.

### **Step 9 (Optional) – Pilot Batch of Beer**

- Grantee producing pilot batches of beer using treated process water must ensure that treated process water used as a source water for beer complies with all water quality requirements in Tables 1 and 2 above.
- Grantee must submit Pilot Beer Report to the SFPUC prior to serving beer produced from treated process water using the template provided by the SFPUC.
- Grantee must provide appropriate notification and signage to consumers about any beer produced from treated process water.

### **Signage Requirements for Brewery Process Water Treatment Systems**

- Project must comply with all signage requirements included in the California Plumbing Code.
- The Grantee must reference the SFPUC's funding and support in all public outreach materials and signage related to the project. The SFPUC will work with Grantee to procure signage if needed.

### **Additional Eligibility Criteria for Brewery Process Water Treatment Systems**

- Project must comply with cross-connection control and backflow protection in accordance with Article 12A of the San Francisco Health Code and the California Plumbing Code.

### **Recordkeeping Requirements**

Grantee must maintain system records on premises and available for inspection by the SFPUC, including but not limited to current Operations and Maintenance Manual; water quality monitoring results delivered by the Certified Laboratory and evidence of chain of custody; log of all calibrations, maintenance, and major changes in operation; and a log of all system auto-generated alarms, causes and corrective actions. Records shall be maintained for at least two years.

## **Grant Disbursement**

- Grant funds will be provided to the Grantee in three disbursements:
  - Disbursement of 40% of the total grant will be made upon approval of the project's Engineering Report. **An approval letter from the SFPUC is required.**
  - Disbursement of 50% of the total grant will be made upon completion of system construction. **A System Construction Verification Letter is required.**
  - Disbursement of the final 10% of grant funds will be made upon approval of the project's Conditional Startup Report, in which the Grantee demonstrates that the project is on track to meet the water savings estimated in their grant application. **Documentation of anticipated water savings is required.**

## **Return of Grant Funds**

The purpose of the Onsite Water Reuse Grant Program is to provide grant funding to encourage and support retail water users to reduce SFPUC water supply usage by maximizing onsite alternate water sources to meet water demands. Therefore, in the event that the Grantee fails to meet the Grant Rules for Brewery Process Water Treatment Systems, the SFPUC may demand the immediate return of any previously disbursed grant funds that have been claimed or expended by the Grantee.

## **II. Grant Evaluation**

Projects will be evaluated on the eligibility criteria and documentation requirements identified under *Section I. Grant Guidelines*, including:

- Grant Application - Projects that meet all of the grant application eligibility criteria will be evaluated based on the estimated offset of SFPUC water supply usage.
- Project Documentation - Projects will also be evaluated on whether their estimated SFPUC water savings identified in the grant application is supported by the additional documentation developed and submitted to the SFPUC and/or SFDPH.

## **III. Grant Application**

The Onsite Water Reuse Grant Program will be a two-step solicitation, review and selection process for 1) Grant Applications and 2) Project Documentation. Projects that receive final approval from the SFPUC to proceed with their project will enter into a Grant Agreement for grant disbursement and implementation.

Applications can be sent by electronic mail to [nonpotable@sfwater.org](mailto:nonpotable@sfwater.org) or delivered to:

**San Francisco Public Utilities Commission  
Water Resources Division  
Attn: Onsite Water Reuse Grant Program  
525 Golden Gate Ave, 10<sup>th</sup> Floor  
San Francisco, CA 94102**

For questions about the Onsite Water Reuse Grant Program or if you require assistance in completing a grant application, please send electronic mail messages to the SFPUC grant team at [nonpotable@sfwater.org](mailto:nonpotable@sfwater.org) or contact the SFPUC Water Resources Division at (415) 551-4734.



# Onsite Water Reuse Grant Application

Project Information	
Project Name:	Date:
Estimated Annual Offset of SFPUC Water Supply Usage for 10 Years (check one): <input type="checkbox"/> 450,000 gallon per year <input type="checkbox"/> 1,000,000 gallon per year <input type="checkbox"/> 3,000,000 gallon per year	
Grant Type (check one): <input type="checkbox"/> New Site (Voluntary Install of Onsite System) <input type="checkbox"/> Existing Site (Voluntary Install of Onsite System) <input type="checkbox"/> Voluntary Connection to District-scale System <input type="checkbox"/> Above and Beyond Project <input type="checkbox"/> Brewery Process Water Treatment System	
Building Type (check one): <input type="checkbox"/> Commercial (non-residential) <input type="checkbox"/> Multi-Family Residential <input type="checkbox"/> Mixed-Use	
Construction Type (check one): <input type="checkbox"/> New Construction <input type="checkbox"/> Major Alteration <input type="checkbox"/> Re-Plumbing Only	
Site or Building Permit No. (if filed):	
Project Address (location of treatment system):	
Assessor's Block & Lot No./ Parcel APN:	
Proposed Onsite Alternate Water Sources:	
Proposed End Uses (e.g. toilet flushing, irrigation, etc.):	
Brief Project Description – may provide as separate attachment (for district-scale projects, include a catalogue of all parcels to be served):	

Applicant Information	
Applicant Name:	SFPUC Acct Number:
Contact Person:	
Mailing Address:	Zip Code:
Day/Work Phone:	E-Mail Address:

Project Funding	
Total Grant Funds Requested from SFPUC's Onsite Water Reuse Grant Program:	\$

Is your organization or any other entity other than the SFPUC providing funding for this project? <input type="checkbox"/> YES <input type="checkbox"/> NO If yes, how much?	\$
<b>Total Project Cost:</b>	\$

<b>Estimated Water Use for Above and Beyond Projects Only (in gallons per year)</b>	
What is the annual total water demand for toilet flushing, urinal flushing, and irrigation?	
What is the annual total supply from graywater, rainwater, and foundation drainage (if available)?	
What is the annual total volume of the project's Baseline NPO Compliance? <sup>1</sup>	
What is the annual total volume of SFPUC Water Offset estimated for the project?	
What is the annual total volume of SFPUC Water Offset above and beyond Baseline NPO Compliance?	

<sup>1</sup>See definition for Baseline NPO Compliance.

<b>Estimated Water Use and Savings</b>	
What is the annual total water use (gallons) for this project?	
What is the SFPUC Water Offset (in gallons per year) from the project?	
Will the SFPUC water offset be achieved within six months of receiving a SFDPH Start-Up Permit? If no, please provide brief explanation:	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
For Brewery Process Water Treatment System, will the SFPUC water offset be achieved within six months of the conclusion of the conditional startup period?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Is the project located in a designated recycled water use area per the San Francisco Recycled Water Ordinance?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Does this site have a dedicated recycled water meter to track recycled water use?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Has this project already obtained a plumbing permit from SFDBI?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Has an application been filed to obtain a Permit to Operate from SFDPH?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A

<b>Project Wastewater Heat Recovery Potential</b>	
Description of wastewater heat recovery configuration	
Estimated daily energy offset of heat recovery system (kWh/day) <sup>1</sup>	

<sup>1</sup> Attach documentation showing basis for energy offset estimate.



### Required Supplemental Information

Please attach a detailed description of the proposed activity, including the following:

- Project Description.** Description of the proposed project including the type of onsite water sources available for collection, treatment, and storage and description of the project’s end uses.
- Water Use Calculator.** Attach documentation of the SFPUC Water Use Calculator results estimating the building’s/district’s annual water use and non-potable demands, available onsite alternate water sources, and the estimated SFPUC water offset from the project.
- Work Plan and Project Schedule.** List specific tasks you will undertake to complete the project. You may use additional sheets as necessary. Next to each activity, identify who will be responsible for carrying out the activity. Estimate the date the activity will be completed (month and year). Attach additional information as needed.
- Project Budget.** If you have more line items than the grid below provides for, use another sheet of paper (or add rows if you are using MS Word). Include a budget corresponding with the work plan tasks and list all staff, vendors, and/or contractors assigned by task. Additionally, include budget items that you are paying for as part of this project.
- Prevailing Wage.** Check this box if you acknowledge you understand and will comply with state prevailing wage requirements and San Francisco Administrative Code Chapter 21C as applicable.
- Permits/Permission.** List the permits (i.e. building, plumbing, electrical, SFDPH Start-up Permit, CEQA compliance, etc.) that must be secured (along with the approving entity) for the proposed activity. Attach proof of project approval or permission.

Type of Approval (Permit) Required	Approving Agency / Approval Date

### Hold Harmless and Indemnification Agreement

I am authorized to sign on behalf of the applicant. The information enclosed accurately represents the goals, scope, budget and details of the proposed activity. I agree that any funds received as a result of the application will be used only for purposes set forth herein. I certify that I have read, understand and agree to the terms and conditions of this grant program. I expressly agree that the SFPUC may inspect all qualifying system installations and that the SFPUC does not warrant any system or installation to be free of defects, the quality of the workmanship, or the suitability of the system for the alternate water source. I agree to defend, indemnify and hold harmless the SFPUC, their directors, officers, and employees, against all loss, damage, expense, claims, suits and liability, including attorney’s fees in any way connected with the project described in this application.

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Name (print):** \_\_\_\_\_

**Project Work Plan and Schedule**

<b>Task Number and Description</b>	<b>Responsible Person/Group</b> <i>(Note if work will be performed by in-house staff or through a consultant/contractor)</i>	<b>Estimated Start Date</b>	<b>Estimated Completion Date</b>



## Appendix A: Maximum Contaminant Levels

*Table A1. Maximum contaminant levels for inorganic constituents (Title 22, Chapter 15, Article 4)*

Constituent	MCL (mg/L)
Aluminum	1
Antimony	0.006
Arsenic	0.010
Asbestos	7 MFL <sup>1</sup>
Barium	1
Beryllium	0.004
Cadmium	0.005
Chromium, Total	0.05
Cyanide	0.15
Fluoride	2
Mercury (inorganic)	0.002
Nickel	0.1
Nitrate (as nitrogen, N)	10 as N
Nitrite (as N)	1 as N
Nitrate + Nitrite (as N)	10 as N
Perchlorate	0.006
Selenium	0.05
Thallium	0.002
Copper <sup>2</sup>	1.3
Lead <sup>2</sup>	0.015

<sup>1</sup> MFL = million fibers per liter; for fibers >10 microns long

<sup>2</sup> Values for lead and copper are not actually MCLs; these are referred to as 'action levels' under the Lead and Copper Rule

*Table A2. Maximum contaminant levels for radionuclide (Title 22, Chapter 15, Article 5)*

Constituent	MCL (pCi/L)
Gross alpha particle activity	15
Gross beta particle activity	4 mrem/yr
Radium-226 + Radium-228	5
Strontium-90	8
Tritium	20,000
Uranium	20

*Table A3. Maximum contaminant levels for organic chemicals (Title 22, Chapter 15, Article 5.5)*

Constituent	MCL (mg/L)
<i>Volatile Organic Chemicals (VOCs)</i>	
Benzene	0.001
Carbon tetrachloride	0.0005
1,2-Dichlorobenzene	0.6
1,4-Dichlorobenzene (p-DCB)	0.005
1,1-Dichloroethane (1,1-DCA)	0.005
1,2-Dichloroethane (1,2-DCA)	0.0005

1,1-Dichloroethylene (1,1-DCE)	0.006
cis-1,2-Dichloroethylene	0.006
trans-1,2-Dichloroethylene	0.01
Dichloromethane (Methylene chloride)	0.005
1,2-Dichloropropane	0.005
1,3-Dichloropropane	0.0005
Ethylbenzene	0.3
Methyl tertiary butyl ether (MTBE)	0.013
Monochlorobenzene	0.07
Styrene	0.1
1,1,2,2-Tetrachloroethane	0.001
Tetrachloroethylene (PCE)	0.005
Toluene	0.15
1,2,4-Trichlorobenzene	0.005
1,1,1-Trichloroethane (1,1,1-TCA)	0.2
1,1,2-Trichloroethane (1,1,2-TCA)	0.005
Trichloroethylene (TCE)	0.005
Trichlorofluoromethane (Freon 11)	0.15
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	1.2
Vinyl chloride	0.0005
Xylenes	1.75
<i>Non-Volatile Synthetic Organic Chemicals (SOCs)</i>	
Alachlor	0.002
Atrazine	0.001
Bentazon	0.018
Benzo(a)pyrene	0.0002
Carbofuran	0.018
Chlordane	0.0001
Dalapon	0.2
1,2-Dibromo-3-chloropropane (DBCP)	0.0002
2,4-Dichlorophenoxyacetic acid (2,4-D)	0.07
Di(2-ethylhexyl)adipate	0.4
Di(2-ethylhexyl)phthalate (DEHP)	0.004
Dinoseb	0.007
Diquat	0.02
Endothal	0.1
Endrin	0.002
Ethylene dibromide (EDB)	0.00005
Glyphosate	0.7
Heptachlor	0.00001
Heptachlor epoxide	0.00001
Hexachlorobenzene	0.001
Hexachlorocyclopentadiene	0.05
Lindane	0.0002
Methoxychlor	0.03
Molinate	0.02
Oxamyl	0.05
Pentachlorophenol	0.001

Picloram	0.5
Polychlorinated biphenyls (PCBs)	0.0005
Simazine	0.004
2,4,5-TP (Silvex)	0.05
2,3,7,8-TCDD (dioxin)	3x10-8
Thiobencarb	0.07
Toxaphene	0.003

*Table A4. Maximum contaminant levels for disinfection by-products (Title 22, Chapter 15.5, Article 2).*

Constituent	MCL (mg/L)
Total Trihalomethanes	0.080
Bromodichloromethane	--
Bromoform	--
Chloroform	--
Dibromochloromethane	--
Haloacetic Acids (five) (HAA5)	0.060
Monochloroacetic Acid	--
Dichloroacetic Acid	--
Trichloroacetic Acid	--
Monobromoacetic Acid	--
Dibromoacetic Acid	--
Bromate	0.010
Chlorite	1.0

*Table A5. Secondary maximum contaminant levels (Title 22, Chapter 15, Article 16).*

Constituent	sMCL (mg/L)
Aluminum	0.2
Color	15 units
Copper	1.0
Foaming Agents (MBAS)	0.5
Iron	0.3
Manganese	0.05
Methyl-tert-butyl ether (MTBE)	0.005
Odor—threshold	3 units
Silver	0.1
Thiobencarb	0.001
Turbidity	5
Zinc	5.0

*Table A6. Secondary maximum contaminant levels for constituents with ranges. All units are mg/L unless otherwise noted (Title 22, Chapter 15, Article 16).*

Constituent	Recommended	Upper	Short-term
Total dissolved solids	500	1,000	1,500
Specific conductance (µS/cm)	900	1,600	2,200
Chloride	250	500	600
Sulfate	250	500	600