



**San Francisco Health Code Article 12C  
Permitting of Alternate Water Source Systems  
Application Packet**

**This packet contains the forms and templates necessary to obtain a permit to operate an alternate water source system under Article 12C in San Francisco. The packet contains the following documents:**

- San Francisco Health Code 12C checklist
- SFDPH Application
- Information on Certified Laboratories for SFHC 12C compliance
- Affidavit for Attesting to knowledge skills and abilities for Treatment System Manager
- Training resources for Treatment System Managers
- Health and Safety Labor documents
- Alternate Water Source System Engineering Report Instructions  
*(Note: a fillable word document template is linked within and may be found at [www.sfdph.org](http://www.sfdph.org))*
- Alternate Water system design summary
- Sample Construction Certification Letter
- SFDPH Annual Report template
- Data and Monitoring Report (DMR)



**San Francisco Health Code Article 12C Checklist for Alternate Water Source System Permits**

<b>1. Submit a Water Budget Application to SFPUC</b>
<b>2. Submit a Non-Potable Implementation Plan to SFPUC (district-scale projects only)</b>
<b>3. Submit the following documents to SFDPH-EH pre-construction of the alternate water system:</b>
a. Application to Operate an Alternate Water System
b. Application fee
c. Engineering report for SFDPH-EH review and approval
d. Declaration of Healthy and Safe Working Conditions form
<b>4. Submit an Encroachment Permit Application with SFPW, if applicable</b>
<b>5. Complete the following for plan review and system construction:</b>
a. Submit construction documents with system drawings for SFDBI-PID and SFDPH-EH plan check approval (parallel to the DBI Addenda permitting process)
b. Construct alternate water system
<b>6. Complete the following for construction inspections:</b>
a. Schedule cross-connection testing with the SFPUC Water Quality Division
b. Submit evidence of satisfactory cross-connection protections and wet testing to SFDPH-EH
c. Schedule SFDPH-EH onsite construction inspection(s) of system for job card sign-off
<b>7. Submit the following documents to SFDPH-EH post-construction of the alternate water system:</b>
a. System Construction Verification letter signed and stamped by a PE
b. Operations and Maintenance Manual and startup plan
c. Treatment System Manager Affidavit
d. Evidence of a contract with a certified laboratory
e. Copy of Business Registration
<b>8. SFDPH-EH will issue an operating permit upon completion of all items 1-7.</b>
<b>9. Operate in Conditional Startup Mode in accordance with all Rules, with approval by SFDPH-EH:</b>
a. Treatment System Manager to submit monthly Data and Monitoring Reports
b. Operate the system under the conditions of the Conditional Startup Mode
<b>10. Operate in Final Use Mode in accordance with all Rules, with approval by SFDPH-EH:</b>
a. Pay annual tax collector renewal license fee
b. Submit routine Data and Monitoring Reports and Annual Reports
c. Notify SFDPH-EH of system changes, malfunctions, operator changes, etc.



City and County of San Francisco  
DEPARTMENT OF PUBLIC HEALTH  
ENVIRONMENTAL HEALTH BRANCH  
Alternate Water Source Permitting Program

## Application for Permit to Operate an Alternate Water Source System

Date: \_\_\_\_\_

Fee paid: \_\_\_\_\_ Receipt #: \_\_\_\_\_

Type of Transaction: ☐ New Permit ☐ Account Update ☐ Transfer ☐ Consultation ☐ Permit Modification Permit #: \_\_\_\_\_

System Location: \_\_\_\_\_ Block/lot

Alternate Water Source: ☐ Rainwater ☐ Stormwater ☐ Foundation Drainage ☐ Graywater ☐ Black Water ☐ Other \_\_\_\_\_

End Use: ☐ Subsurface Irrigation ☐ Spray irrigation ☐ Toilet flushing ☐ Cooling Tower ☐ Other \_\_\_\_\_

Is this a District-scale system? ☐ Yes ☐ No (if yes, complete District-Scale Addendum)

Owner/Operator/Permittee

Name: \_\_\_\_\_ Last First

Business Name/DBA: \_\_\_\_\_

Address: \_\_\_\_\_ Street Address City State Zip Code

Business Registration Certificate #:

Property Owner

Name: \_\_\_\_\_ Last First

Business Name/DBA: \_\_\_\_\_

Address: \_\_\_\_\_ Street Address City State Zip Code

Primary Contact

Name: \_\_\_\_\_ Title: \_\_\_\_\_ Last First

Phone #: \_\_\_\_\_ Email: \_\_\_\_\_

Print Name \_\_\_\_\_

Signature \_\_\_\_\_

Please identify the [appropriate fee](#) and send a check to:

SFDPH Environmental Health Branch  
ATTN: Alternate Water Source System Permit Program  
49 South Van Ness Ave, Ste 600  
San Francisco CA 94103

Please note on the check "SFHC 12C Permit Application Fee HCHPBNONPWGF"  
Forms and other submittals may be sent by email to:  
[dph.nonpotable@sfdph.org](mailto:dph.nonpotable@sfdph.org)

phone 415-252-3800



## Certified laboratories for water quality testing for compliance with Article 12C of the San Francisco Health Code

Alternate Water Source Systems permitted under Article 12C are required to comply with all testing and reporting requirements in the Rules and Regulations located at:

[http://www.sfdph.org/dph/files/EHSdocs/ehsWaterdocs/NonPotable/SFHC\\_12C\\_Rules.pdf](http://www.sfdph.org/dph/files/EHSdocs/ehsWaterdocs/NonPotable/SFHC_12C_Rules.pdf)

San Francisco Department of Public Health Environmental Health Branch does not recommend specific labs; however, applicants must select an environmental testing laboratory that is certified by the California Environmental Laboratory Accreditation Program (ELAP) or the National Environmental Accreditation Program (NELAP). Prior to using a laboratory, the applicant must verify that the laboratory methods used to perform each test for which results are obtained are certified.

### **RESOURCES:**

You may search for labs accredited under the National Environmental Laboratory Accreditation Program (NELAP) by using the search function at: <http://lams.nelac-institute.org/search>

Laboratories in California certified by the state Environmental Laboratory Accreditation Program (ELAP) may be searched at the State Water Resources Control Board website:  
[http://www.waterboards.ca.gov/drinking\\_water/certlic/labs/index.shtml](http://www.waterboards.ca.gov/drinking_water/certlic/labs/index.shtml)

Using a search engine for the quoted phrase "environmental laboratory accreditation program branch" or "certificate of environmental laboratory accreditation" may also provide relevant results.



**Affidavit Attesting to Knowledge Skills Abilities and Training for Alternate Water Source System  
Treatment System Manager under SFHC Article 12C**

**Date of Application:** \_\_\_\_\_ **Name of person filling out this form** \_\_\_\_\_

**Business Address:** \_\_\_\_\_ **Zip Code:** \_\_\_\_\_

**Email Address:** \_\_\_\_\_ **Phone** \_\_\_\_\_

**System type (Check all that apply):**

**Alternate Water Source:** ☐ Rainwater ☐ Stormwater ☐ Graywater ☐ Foundation Drainage ☐ Blackwater ☐ Other \_\_\_\_\_

**End Use:** ☐ Subsurface Irrigation ☐ Spray irrigation ☐ Toilet Flushing ☐ Cooling Applications ☐ Other \_\_\_\_\_

**The signature below attests to the following (please fill in blanks and mark the check box for all that apply):**

1. ☐ I possess the following relevant certifications and/or degrees:  
Note: treatment system managers for blackwater and graywater systems must provide evidence of a Grade II Wastewater Operator Certification or higher.
  
2. ☐ I received in-person training and orientation to the alternate water source system installed at the address above. Describe below the nature of the training and orientation (include dates and names of individuals providing the training and orientation):
  
3. ☐ I have reviewed the Operations and Maintenance Manual for the alternate water source system installed at the address above.
  
4. ☐ I am aware that the alternate water source system installed at the address above must comply with the Rules and Regulations of Article 12C of the San Francisco Health Code, and all other applicable local, state and federal regulations.

**Signature(s)**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name and Affiliation/Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name and Affiliation/Title

\_\_\_\_\_  
Date

**For Health Department Office Use Only**



Permit # \_\_\_\_\_



## Training and Education Resources for Treatment System Managers of Alternate Water Source Systems in San Francisco for compliance with Article 12C of the San Francisco Health Code

Alternate Water Source Systems permitted under Article 12C are required to comply with all requirements in the Rules and Regulations located at:  
[http://www.sfdph.org/dph/files/EHSdocs/ehsWaterdocs/NonPotable/SFHC\\_12C\\_Rules.pdf](http://www.sfdph.org/dph/files/EHSdocs/ehsWaterdocs/NonPotable/SFHC_12C_Rules.pdf)

Depending on the design and components, operating an alternate water source treatment system may require basic or specialized knowledge about water chemistry, plumbing, mechanical and electrical systems and public health.

All Treatment System Managers are required to sign and date an affidavit attesting to their qualifications and abilities to operate the system for which they are responsible. The Rules and Regulations governing Article 12C are explicit about what qualifications are required to operate a blackwater or graywater treatment system, whereas Treatment System Managers for other types of Alternate Water Source Systems must note the relevant training, certifications, education and/or experience that qualifies them to safely operate a compliant on-site alternate water source treatment system.

The California State Water Resources Board offers a certification for Water Treatment Operators that contains material relevant to managing an onsite alternate water system:  
[http://www.waterboards.ca.gov/drinking\\_water/certlic/occupations/DWopcert.shtml](http://www.waterboards.ca.gov/drinking_water/certlic/occupations/DWopcert.shtml)

Other training and education resources are also available. San Francisco Department of Public Health Environmental Health Branch does not recommend specific training or education resources, however we are aware of the following entities that may offer relevant training and education for Alternate Water Source System Treatment System Managers to consider:

Architectural Record Continuing Education Center	Build It Green
American Society of Civil Engineers	Greywater Action
American Society of Plumbing Engineers	Irrigation Association
American Institutes of Architects	National Onsite Wastewater Recycling Academy (NOWRA)
American Public Works Association	United States Green Building Council
American Rainwater Catchment Systems Association	Texas A&M University TEEX

SFDPH will update this list upon learning of additional providers of relevant educational and training opportunities for Treatment System Managers.



City and County of San Francisco  
**DEPARTMENT OF PUBLIC HEALTH**  
**ENVIRONMENTAL HEALTH**

**Declaration of Healthy and Safe Working Conditions**  
**Declaración de Condiciones de Trabajo Sanas Y Seguras**  
**健康及安全工作條件聲明**  
**Deklarasyon ng Mabuti at Ligtas na Kondisyon sa Trabaho**

The Department of Public Health is responsible for ensuring healthy and safe conditions for those working and living in San Francisco. Establishments permitted by the Department must remain compliant with all laws.

*El Departamento de Salud es responsable de asegurar condiciones saludables y seguras para las personas que trabajan y viven en San Francisco. Establecimientos permitidos por el Departamento deben cumplir con todas las leyes.*

衛生署是負責確保於三藩市工作及居住的人士有一健康和安全的環境。從衛生署取得許可營運的設施/場所必須保持遵守所有法律。

Ang Kagawaran ng Pampublikong Kalusugan ay may pananagutan para sa pagtiyak ng mabuti at ligtas na mga kondisyon para sa mga nagtatrabaho at naninirahan sa San Francisco. Ang mga establisyemento na pinahihintulutan ng Kagawaran ay dapat manatiling sumusunod sa lahat ng mga batas.

Owner/Operator:	_____
DBA/Name of Business:	_____
Business Address:	_____ San Francisco, CA 941 _____

**翻譯及你的簽署聲明在本頁後面。**

*¡Ojo! La traducción y firma de su declaración se encuentra en la parte posterior de esta página.*

**Ang pagsasalin at paglagda ng iyong deklarasyon ay nasa likod ng pahinang ito.**

- |   |  |
|---|--|
| 1. I understand that this business must comply with all local, state, and federal labor laws in order to obtain and maintain a valid Permit To Operate from the Department. I affirm that as an operator of the above business, I am aware of and agree to comply with the following laws when applicable to my business: |  |
| • San Francisco Labor Codes   | <input type="radio"/> Yes <input type="radio"/> No |
| • California Labor Code Division 4—Have and maintain Workers Compensation Insurance or be self-insured)   | <input type="radio"/> Yes <input type="radio"/> No |
| • California Labor Code Division 2—Employment Regulation and Supervision  | <input type="radio"/> Yes <input type="radio"/> No |
| • California Labor Code Division 5—Occupational Health and Safety   | <input type="radio"/> Yes <input type="radio"/> No |
| • All other federal, state, and local labor codes   | <input type="radio"/> Yes <input type="radio"/> No |
| 2. I will request my provider of Workers Compensation Insurance to designate as a “Certificate Holder” the SF Environmental Health Branch at 49 South Van Ness Ave, #600, San Francisco, CA 94103.  |  |
|   | <input type="radio"/> Yes <input type="radio"/> No |

I am the owner or authorized agent of the owner of this business. I declare under penalty of perjury that the information on this Declaration of Healthy and Safe Working Conditions is true and correct.

Print Name	Signature	Date
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**I acknowledge that failure to comply with all applicable federal, state, and local labor laws may result in suspension or revocation of my Permit To Operate issued by the San Francisco Department of Public Health or a referral to the applicable federal, state, or local agency for enforcement.**

Print Name	Signature	Date
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1. 為了獲得與保持公共衛生署發出的有效營運許可証，我明白此設施/場所必須遵守全部本地、州、和聯邦政府的勞工法例。我申明作為上述設施/場所的營運商，我了解並同意遵守以下的法例：		
• 三藩市勞工法	<input type="radio"/> 會	<input type="radio"/> 不會
• 加州勞工法第4部分 - 具備維護工人賠償保險或自我保險	<input type="radio"/> 會	<input type="radio"/> 不會
• 加州勞工法第2部分 - 就業監管與監督	<input type="radio"/> 會	<input type="radio"/> 不會
• 加州勞工法第5部分 - 職業健康及安全	<input type="radio"/> 會	<input type="radio"/> 不會
• 所有其它的聯邦、州、和本地勞工法	<input type="radio"/> 會	<input type="radio"/> 不會
2. 我將會要求我的工人賠償保險提供者指定位於49 South Van Ness Ave, #600, San Francisco, CA 94103 的三藩市環境衛生部 (SF Environmental Health Branch) 為“證書持有者”。		

本人是本企業的擁有者或其授權代理人。在會觸及偽證處罰情況下，本人聲明本健康及安全工作條件聲明中的資訊均是真實與正確。

以正楷英文清楚寫上姓名	簽名	日期
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我確知如不遵守所有實施的聯邦、州、及本地勞工法例會導致三藩市公共衛生署簽發給我的營運許可証被中止或撤銷或我會被轉介到相關的聯邦、州、或本地執法機構。

清楚寫上姓名	簽名	日期
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1. Yo entiendo que este negocio debe cumplir con todas las leyes laborales locales, estatales y federales con el fin de obtener y mantener un Permiso Para Operar válido del Departamento de Salud Pública. Yo afirmo que como operador del negocio mencionado arriba, estoy consciente de y acepto cumplir con las siguientes leyes, cuando si aplicable a mi negocio:		
• Ordenanzas laborales de San Francisco	<input type="radio"/> Sí	<input type="radio"/> No
• División 4 del Código Laboral de California -Tener y mantener Seguro de Compensación de Trabajadores o tener su propio seguro)	<input type="radio"/> Sí	<input type="radio"/> No
• División 2 del Código Laboral de California - Regulación y Supervisión del Empleo	<input type="radio"/> Sí	<input type="radio"/> No
• División 5 del Código Laboral de California - Salud y Seguridad Ocupacional	<input type="radio"/> Sí	<input type="radio"/> No
• Todos los demás códigos laborales federales, estatales y locales	<input type="radio"/> Sí	<input type="radio"/> No
2. Solicitaré a mi proveedor de Seguro de Compensación del Trabajador que designe como "Titular de Certificado" la Subdivisión de Salud Ambiental de SF en el 49 South Van Ness Ave, #600, San Francisco, CA 94103		

Soy el propietario o un representante autorizado del propietario de este negocio. Declaro bajo pena de perjurio que la información en esta Declaración de Condiciones Trabajo Saludables y Seguras es verdadera y correcta.

Escribir Nombre	Firma	Fecha
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**Yo reconozco que incumplimiento de todas las leyes laborales federales, estatales y locales puede resultar en la suspensión o revocación de mi Permiso Para Operar emitido por el Departamento de Salud Pública de San Francisco o ser referido a la agencia federal, estatal, o local aplicable para hacer cumplir la ley.**

Escribir Nombre	Firma	Fecha
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1. Nauunawaan ko na itong negosyo ay dapat sumunod sa lahat ng lokal, estado, at pederal na batas sa paggawa upang makakuha ng at mapanatili ang isang may-bisang permiso na mangasiwa mula sa Kagawaran. Pinagtibay ko na bilang isang tagapangasiwa ng negosyong ito, nababatid at sinasang-ayunan ko ang mga sumusunod na batas kung naaangkop sa aking negosyo		
• San Francisco Labor Codes	<input type="radio"/> Oo	<input type="radio"/> Hindi
• California Labor Code Division 4—Magkaroon at magpanatili ng Workers Compensation Insurance o self-insurance.	<input type="radio"/> Oo	<input type="radio"/> Hindi
• California Labor Code Division 2—Regulasyon ng trabaho at pangangasiwa	<input type="radio"/> Oo	<input type="radio"/> Hindi
• California Labor Code Division 5—Kalusugan at kaligtasan sa trabaho	<input type="radio"/> Oo	<input type="radio"/> Hindi
• Lahat ng iba pang mga pederal, estado at lokal na batas sa paggawa	<input type="radio"/> Oo	<input type="radio"/> Hindi
2. Ako ay hihiling sa aking tagalaan ng Workers Compensation Insurance upang maitalaga bilang isang "Certificate Holder" ang SF Environmental Health Branch sa 49 South Van Ness Ave, #600, San Francisco, CA 94103		

Ako ang may-ari o ang awtorisadong ahente ng may-ari ng negosyong ito. Idinedeklara ko sa ilalim ng parusa sa panunumpa nang walang katotohanan na totoo at tama ang impormasyon sa Deklarasyon ng Mabuti at Ligtas na Kondisyon sa Trabaho na ito.

Pangalan	Lagda	Petsa
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**Tinatanggap ko na ang hindi pagsunod sa lahat ng mga pederal, estado, at lokal na batas sa paggawa ay maaaring magdulot ng suspensyon o pagbawi ng aking permiso na mangasiwa na ibinigay ng Kagawaran ng Pamublikong Kalusugan ng San Francisco, o isang pagsangguni sa angkop na pederal, estado, o lokal na ahensiya para sa pagpapatupad.**

Pangalan	Lagda	Petsa
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## Labor Law Checklist For San Francisco Business Owners

AS A SMALL BUSINESS OWNER, YOU ARE RESPONSIBLE FOR COMPLYING WITH FEDERAL, STATE, AND LOCAL LABOR LAWS.

THIS CHECKLIST IS FOR YOUR USE AND DOES NOT NEED TO BE SUBMITTED. IT WILL HELP YOU COMPLY WITH THE MOST IMPORTANT SAN FRANCISCO AND CALIFORNIA LABOR LAWS. IT IS NOT A COMPLETE LIST, AND IT IS NOT INTENDED AS LEGAL ADVICE. CONTACT THE LABOR LAW AGENCIES LISTED AT THE END OF THIS CHECKLIST FOR DETAILED INFORMATION.

### WAGES

- ☐ 1. Pay all workers the San Francisco Minimum Wage, which adjusts annually. Maintain time and payroll records.
- ☐ 2. Pay overtime pay of 1.5 times for hours over 8 per day or 40 per week.
- ☐ 3. Pay all wages within legal timeframe when employees terminate their employment.
- ☐ 4. Display posters about wages, unemployment, and pay day.

### REST BREAKS

- ☐ 5. Provide 10 minutes of paid break for every 4 hours worked.
- ☐ 6. Provide 30 minutes of uninterrupted unpaid break for every 5 hours worked.

### HEALTH BENEFITS

- ☐ 7. Provide 1 hour of paid sick leave for every 30 hours worked.
- ☐ 8. Contribute towards health care if you have more than 20 employees.
- ☐ 9. Provide up to 12 weeks of unpaid medical leave if you have more than 50 employees.
- ☐ 10. Purchase workers compensation insurance for all employees.
- ☐ 11. Deduct disability insurance.
- ☐ 12. Display posters about sick pay and workers compensation benefits.

### YOUNG WORKERS

- ☐ 13. Ask for work permits if under 18.
- ☐ 14. Schedule them to work not too many hours or too early or late in the day.
- ☐ 15. Assign teens low-risk job tasks.

### SAFETY AND HEALTH PROTECTION

- ☐ 16. Prepare and implement an Injury and Illness Prevention Program.
- ☐ 17. Identify and correct unsafe and hazardous conditions.
- ☐ 18. Establish safe working procedures.
- ☐ 19. Provide and maintain all safety tools and equipment that employees need.
- ☐ 20. Make available to employees a Material Safety Data Sheets for each chemical used.
- ☐ 21. Provide training on hazards, safe operating procedures, and the use of safety equipment. Use visual aids (signs, labels, posters) to reinforce training.
- ☐ 22. Keep 3 feet clearance (no storage) in front of electrical panels. Replace damaged electrical cords. Replace missing covers of electrical boxes.
- ☐ 23. Inspect first aid kits regularly, replenish materials as needed.
- ☐ 24. Keep aisles and exit route clear of obstructions. Keep floors clean and dry or supply mats. Clean up spills immediately.
- ☐ 25. Report serious injury, illness, or death to Cal-OSHA immediately.
- ☐ 26. Keep records of injuries and illnesses as well as insurance claims related to work place injuries. If using a Log 300, records workplace injuries and illnesses on the log.
- ☐ 27. Provide medical exams if required by law and provide employees access to their medical records and results of workplace chemical exposure records.
- ☐ 28. Post Cal-OSHA Safety & Health Protection on the Job poster.

## OTHER GENERAL RESPONSIBILITIES

- ☐ 29. Provide equal employment opportunities regardless of race, color, religion, sex, or national origin, disabilities, marital status, or age.
- ☐ 30. Prohibit sexual harassment or other types of harassment towards employees who have refused to do unsafe work or have made a complaint to a labor law enforcement agency.
- ☐ 31. Allow workers to organize and form a union.

## WHERE TO GET MORE INFORMATION

Item #	Agency
1	SF-OSLE
2	CA-DLSE
3	CA- DLSE
4	SF-OSLE
5	CA- DLSE
6	CA- DLSE
7	SF-OSLE
8	SF-OSLE
9	FEH
10	WC
11	EDD
12	WC, SF-OSLE
13	CA- DLSE
14	CA- DLSE
15	CA- DLSE
16	Cal-OSHA
17	Cal-OSHA
18	Cal-OSHA
19	Cal-OSHA
20	Cal-OSHA
21	Cal-OSHA
22	Cal-OSHA
23	Cal-OSHA
24	Cal-OSHA
25	Cal-OSHA
26	Cal-OSHA
27	CA-OSHA
28	Cal-OSHA
29	FEH
30	FEH
31	NLRB

### Agency List

- ➔ **(CA-DLSE)** Department of Industrial Relations  
Division of Labor Standards Enforcement  
455 Golden Gate Ave., 10<sup>th</sup> fl.  
San Francisco, CA 94102  
(415) 703-5300 [www.dir.ca.gov/dlse](http://www.dir.ca.gov/dlse)
- (Cal-OSHA)** Department of Industrial Relations  
California Occupational Safety and Health Administration  
121 Spear Street, Room 430  
San Francisco, CA 94105  
(415) 972-8670 [www.dir.ca.gov/dosh](http://www.dir.ca.gov/dosh)
- ➔ **(EDD)** Employment Development Department  
745 Franklin Street, #300  
San Francisco, CA 94102  
(800) 480-3287 [www.edd.ca.gov](http://www.edd.ca.gov)
- (FEH)** Department of Fair Employment and Housing  
2218 Kausen Dr., #100  
Elk Grove, CA 95758  
(800) 884-1684 [www.dfeh.ca.gov](http://www.dfeh.ca.gov)
- (NLRB)** National Labor Relations Board  
901 Market Street, #400  
San Francisco, CA 94103  
(415) 356-5130 [www.nlr.gov](http://www.nlr.gov)
- ➔ **(SF-OSLE)** Office of Labor Standards Enforcement  
1 Dr. Carlton B. Goodlett Place, Room 430  
San Francisco, CA 94102  
(415) 554-6271 [www.sfgov.org/olse](http://www.sfgov.org/olse)
- (WC)** Department of Industrial Relations  
Division of Workers' Compensation  
455 Golden Gate Ave., 2nd fl.  
San Francisco, CA 94102  
(415) 703-5011 [www.dir.ca.gov/dwc](http://www.dir.ca.gov/dwc)



## Non-Potable Engineering Report Template (September 2018 Revision)

### **Instructions**

This template is intended to aid Applicants seeking a permit under San Francisco Health Code Article 12C in writing an Alternate Water Source System Engineering Report.

### **Please delete these instructions and definitions pages prior to submittal.**

Submittal of this Engineering Report is a requirement under applicable San Francisco Codes; final or conditional approval of the report will be obtained prior to seeking a plumbing permit from the Department of Building Inspection.

Project Applicants should complete all sections of the Engineering Report, including all applicable Tables.

Explanatory instructions are provided in *[this format]* throughout the template. These instructions should be deleted by the Applicant prior to submission of the report. Upon completion of the template, the table numbers can be updated by right clicking on any table number and selecting 'Update Field'.

Please note that approval of this report does not supersede compliance with relevant aspects of the plumbing code.

### **Definitions<sup>1</sup>**

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

**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.

**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 beneficial use that is subject to City groundwater well regulations.

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<sup>1</sup> For a complete list of definitions, refer to SFDPH Article 12C Rules and Regulations

**Log Reduction:** The removal of a pathogen or surrogate in a unit process expressed in log units. A 1-log reduction equates to 90-percent removal, 2-log reduction to 99-percent removal, 3-log reduction to 99.9-percent removal, and so on.

**Log Reduction Credit:** The log reduction value (LRV) credited by SFDPH-EH to a treatment technology based on the technology's ability to remove or inactivate pathogens and proposed surrogate parameter for continuous monitoring.

**Log Reduction Target (LRT):** The log reduction target for the specified pathogen group (i.e., viruses, bacteria, or protozoa) to achieve the agreed level of risk to individuals (e.g.,  $10^{-4}$  infections per year).

**LRT Compliance Monitor:** monitor that is required to demonstrate ongoing performance of a unit process receiving pathogen reduction credit in accordance with an accepted pathogen crediting framework.

**Project Applicant:** The Person(s) or entity(s) applying for initial authorization to install an Alternate Water Source System. The Project Applicant is the Responsible Party as defined in Section 12C.2 of Health Code Article 12C. The Project Applicant is responsible for applying for the permit, assuring that the Alternate Water Source System is installed consistent with the approved Engineering Report, the Operations and Maintenance Manual, these Rules and Regulations, and applicable state and local laws. The Project Applicant becomes the Permittee upon issuance of the first Permit to operate.

**Rainwater:** Precipitation collected from roof surfaces or other manmade, above-ground collection surfaces. Hydrocarbon-based fuels, hazardous materials, or fertilizers are prohibited from being stored or used on such surfaces.

**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.

**Water Quality Monitor:** monitor that is not required to demonstrate LRT compliance, but are necessary for demonstration of compliance with water quality goals.

## Alternate Water Source System Engineering Report

---

**<Insert Responsible Party>**  
**<Insert Project Name>**  
**<Insert Project Address>**

Prepared by:  
<Insert Engineer Name>  
<Insert Company Name>  
<Insert Company Address>



Submitted to: San Francisco Department of Public Health  
Date: <Insert Date>

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*[Table of Contents should be updated by right clicking on the table and selecting “update fields”]*

# 1. General

## 1.1. Facility Information

**Table 1. Facility information summary.**

Project Applicant	RESPONSIBLE PARTY NAME
Address	STREET NO. STREET NAME SAN FRANCISCO CA ZIP
Development Type	<input type="checkbox"/> Commercial <input type="checkbox"/> Residential <input type="checkbox"/> Mixed <input type="checkbox"/> New <input type="checkbox"/> Existing <input type="checkbox"/> Other:
Total Square Footage	Commercial:       square feet Residential:       square feet Mixed:           square feet Total:           square feet
Number of Floors	floors
Residential Units	units
Residents	residents
Non-Resident Employees	employees
Occupancy and Staffing	Hours building will be occupied Hours building staff will be present on-site Days of week building will be occupied
Alternate Water Sources	<input type="checkbox"/> Rainwater <input type="checkbox"/> Foundation Drainage <input type="checkbox"/> Stormwater <input type="checkbox"/> Graywater <input type="checkbox"/> Blackwater <input type="checkbox"/> Other:
Total Average Daily Inflow	gallons
Non-Potable Water End Uses (indoor)	<input type="checkbox"/> Toilet and Urinal Flushing for       toilets,       urinals <input type="checkbox"/> Priming Drain Traps <input type="checkbox"/> Clothes Washing <input type="checkbox"/> Other:
Non-Potable Water End Uses (outdoor)	<input type="checkbox"/> Subsurface Irrigation <input type="checkbox"/> Drip or Other Surface Non-Spray Irrigation <input type="checkbox"/> Spray Irrigation <input type="checkbox"/> Decorative Fountains and Impoundments <input type="checkbox"/> Cooling Applications <input type="checkbox"/> Dust Control/Street Cleaning <input type="checkbox"/> Other:
Average Daily Distribution	gallons

## 1.2. Project Milestones and Timeline

Estimated Date of Temporary Certificate of Occupancy (TCO):

Insert TCO Date Here

**Table 2. Alternate Water Source System estimated implementation timeline.**

Tasks for Implementing Alternate Water Source System <sup>1</sup>	Start	Finish
Design Phase		
Construction Phase		
Development of Operations & Maintenance Manual		
Start-Up and Commissioning		

<sup>1</sup> This table is intended to provide estimated dates; projects will not be held to the dates in this table.

## 1.3. Vicinity Map (insert as Appendix A.1)

Provide a vicinity map of the location of the development including neighboring properties.

## 1.4. Facility Map (insert as Appendix A.2)

Provide a facility map of the location of the Alternate Water Source System within the development.

## 1.5. Plan/Layout of the Alternative Water Source System (insert as Appendix A.3)

Provide a general arrangement drawing (plan view) of the Alternate Water Source System:

- Unit treatment processes (location and dimensions)
- Tanks (location and dimensions)
- Pumps (location and dimensions of pad or skid)
- Tie-point connections (inlet, outlet, drains, overflows, etc.)
- Locations of egress (i.e., entry and exit doors, etc.)



## 2. Basis of Design for Alternate Water Source System

### 2.1. Outdoor Source Water Flow Rates and Water Quality

*[Fill out the following tables if outdoor sources, i.e. rainwater and stormwater, are being used. The total annual estimated supply for rainwater and stormwater should match the numbers that were provided in the water budget, water calculator, and stormwater control plan.]*

*Water quality values are intended as design guidelines. Project Applicant can change default values; if they are changed, please mark with a footnote and explain data source/rationale. Project Applicant should delete rows corresponding to source waters that are not included in the proposed project.]*

**Table 3A Summary of Alternative Water Source inflows for outdoor sources.**

Type of Source Water	Total annual estimated supply (gal/yr)
Rainwater	
Stormwater	
Total	

**Table 3B Alternate Water Source outdoor source raw water quality summary.**

Type of Source Water	Turbidity (NTU)	TSS (mg/l)	pH	Total coliform (CFU/100ml)	BOD (mg/l)
Rainwater	10 - 30	20 - 50	5 - 9	$10^2 - 10^3$	<15
Stormwater	--	100 - 500	6 - 9	$10^2 - 10^5$	<40

### 2.2. Indoor Source Water Flow Rates and Water Quality

*[Provide estimates of the inflows of indoor source waters, if being used. Project Applicant should delete rows corresponding to source waters that are not included in the proposed project.]*

**Table 3C Summary of Alternate Water Source inflows for indoor sources.**

	Average Daily Supply <sup>1</sup> (gal)	Daily supply (if applicable) <sup>2</sup> (gal)						
		Mon	Tue	Wed	Thu	Fri	Sat	Sun
Foundation Drainage								
Graywater								
Blackwater								
Other:								
Total								

<sup>1</sup> This value should match the numbers that were provided in water budget and water calculator.

<sup>2</sup> For buildings with differences in occupancy on weekdays and weekends (i.e. commercial), please estimate breakdown of flows by day of the week.

*[Complete the table below if foundation drainage or other indoor source waters are being used. Project Applicant can change default values; if they are changed, please mark with a footnote and explain data source/rationale. Project Applicant should delete rows corresponding to source waters that are not included in the proposed project.]*

**Table 3D. Alternate Water Source raw water quality for indoor sources.**

Type of Source Water	Total Coliform (CFU/100ml)	BOD (mg/l)	TSS (mg/l)	Turbidity (NTU)	pH	Ammonia (mg/l as N)
Graywater <sup>1</sup>	10 <sup>4</sup> – 10 <sup>7</sup>	100 – 300	100 – 300	20 - 200	6 – 9	3 – 10
Blackwater	10 <sup>8</sup> – 10 <sup>10</sup>	700 – 1,000	300 – 600	--	6 – 9	50 – 150
Foundation Drainage <sup>2</sup>						
Other:						

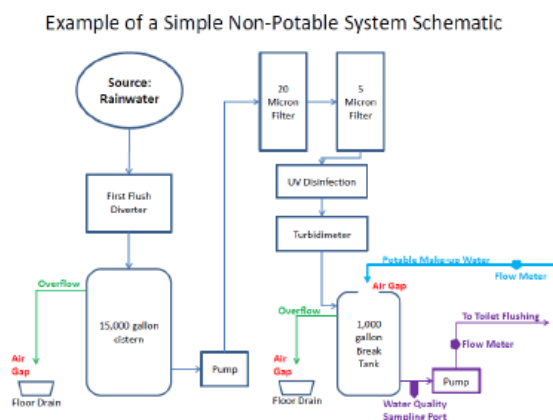
<sup>1</sup> These values are assuming that laundry is not a significant component of graywater; values should be modified if there is significant laundry water contribution.

<sup>2</sup> Data should be obtained from monitoring program, if foundation drainage is being used.

### 3. Treatment Train Design Criteria

#### 3.1. Treatment Train Process Flow Diagram (PFD)

[PFD should be a simplified block diagram including all tanks, treatment processes<sup>2</sup>, LRT compliance monitors<sup>3</sup>, water quality monitors<sup>4</sup>, waste streams, diversions, and potable makeup supply location] See example schematic below:



[Please also complete the table below for all system components included in the PFD. Cut sheets for components described in this table should be provided in Appendix B.]

**Table 4. Summary of system components.**

System Component	Function	Capacity/Size	LRT compliance process or monitor? (Y/N)

#### 3.2. Pathogen Log Reduction Credit

**Table 5. Log reduction credits for Critical Control Point unit processes in treatment train.**

Unit Process	Proposed Virus Credit	Proposed Protozoa Credit	Proposed Bacteria Credit	Crediting Framework <sup>1</sup>
<b>TOTAL</b>				
<b>REQUIRED<sup>2</sup></b>				

<sup>1</sup> Please list approved crediting framework. If proposing a new crediting framework, list 'other' and attach explanatory text.

<sup>2</sup> Required log reduction credits are specified in the Rules and Regulations

<sup>2</sup> Treatment processes should include any pre-treatment (e.g. pre-screens) and post-treatment (e.g. stabilization)

<sup>3</sup> LRT compliance monitors are those that are required to demonstrate ongoing performance of a unit process receiving pathogen reduction credit, e.g. UVT for UV disinfection, free chlorine residual for chlorine disinfection, pressure decay test for membrane filtration.

<sup>4</sup> Water quality monitors are those that are not required to demonstrate LRT compliance, but are necessary for demonstration of compliance with water quality goals, e.g. turbidity.

### 3.3. Treatment Train Flow Summary

[Complete the following flow summary table. Replace 'unit process 1', etc. with name of each unit process included in treatment train. If a process or tank is not receiving continuous flow (e.g. the first equalization tank), the hrs/day receiving flow should be less than 24. If there is not a constant demand for water at the end uses, e.g. toilet flushing in a commercial building, the hrs/day producing flow from the treated water storage tank should be less than 24. If unit processes do not receive a constant flow rate, a min/avg/max should be provided and the hrs/day receiving and producing flow should likely be less than 24.

This table should include all tanks and unit processes. The purpose of the table is to evaluate whether sufficient storage is being provided to handle variable influent flows, and whether flows in and out of tanks and unit processes are compatible.]

**Table 6. Unit process flow summary.**

	Influent Flow		Effluent Flow	
	Hrs/day receiving flow	Influent flow rate <sup>1</sup> (gpm)	Hrs/day producing flow	Effluent flow rate <sup>1</sup> (gpm)
Equalization/storage tank				
Unit process 1				
Unit process 2				
...				
Treated water storage tank				

<sup>1</sup> If influent or effluent flows are not constant, please provide min/avg/max flow rates.

### 3.4. Unit Process Design Criteria

[Include only tables corresponding to unit processes in proposed treatment train; **delete unused tables**. You may update the Table letters by right clicking and choosing "update field". If using a process not included in any tables, please modify an existing table and include key design criteria. If relevant design criteria are not listed, please add them to tables. For chemical disinfection processes, please provide simple diagram of contactor configuration.]

**Table 7A. Membrane bioreactor design criteria.**

Membrane Bioreactor		
Parameter	Units	Value
System manufacturer	--	
Effluent flow rate	gpm	
Nitrifying?	--	
Volume	gal	
pH	pH units	
Temperature	°C	
Hydraulic retention time (HRT)	hr	
Solids retention time (SRT)	days	

Mixed liquor suspended solids (MLSS)	mg/L	
Dissolved oxygen	mg/L	
Transmembrane pressure	kPa	
Flux	gal/ft <sup>2</sup> /d	
Effluent turbidity	NTU	
Effluent ammonia	mg/L	
Effluent BOD	mg/L	
Basis for crediting (if applicable) <sup>1</sup>	<i>[Describe the crediting framework or technology-specific validation approach for pathogen crediting]</i>	

<sup>1</sup> Include any necessary documentation in Appendix C

**Table 7B. Biological treatment design criteria.**

Biological Treatment		
Parameter	Units	Value
Treatment type	--	
System manufacturer	--	
Effluent flow rate	gpm	
Temperature	°C	
Influent BOD	mg/L	
Volume	gal	
Hydraulic residence time	hr	
Solids retention time	days	
Dissolved oxygen	mg/L	
Mixed liquor suspended solids	mg/L	
Effluent ammonia	mg/L	
Effluent BOD	mg/L	
Basis for crediting (if applicable) <sup>1</sup>	<i>[Describe the crediting framework or technology-specific validation approach for pathogen crediting]</i>	

<sup>1</sup> Include any necessary documentation in Appendix C

**Table 7C. Granular media filtration design criteria.**

Granular Media Filter		
Parameter	Units	Value
Type of filtration	--	
System manufacturer	--	
Effluent flow rate	gpm	
Area	sf	
Loading rate	gpm/sf	
Media type(s)	--	
Media size(s)	mm	
Media depth(s)	ft	

Backwash rate	gpm/sf	
Air scour rate	scfm	
Effluent turbidity	NTU	
Basis for crediting (if applicable) <sup>1</sup>	<i>[Describe the crediting framework or technology-specific validation approach for pathogen crediting]</i>	

<sup>1</sup> Include any necessary documentation in Appendix C

**Table 7D. Membrane filtration design criteria.**

Membrane Filter		
Parameter	Units	Value
Manufacturer	--	
Net product flow	gpm	
Nominal pore size	µm	
Total membrane area	sf	
Chemical cleaning frequency		
Flux	gal/ft <sup>2</sup> /day	
Pressure drop		
Pressure decay test		
Effluent turbidity	NTU	
Basis for crediting (if applicable) <sup>1</sup>	<i>[Describe the crediting framework or technology-specific validation approach for pathogen crediting]</i>	

<sup>1</sup> Include any necessary documentation in Appendix C

**Table 7E. Reverse osmosis design criteria.**

Reverse Osmosis		
Parameter	Units	Value
Manufacturer	--	
Net product flow	gpm	
Number of elements		
Area per element	sf	
Flux	gfd	
Recovery	%	
Chemical cleaning frequency		
Basis for crediting (if applicable) <sup>1</sup>	<i>[Describe the crediting framework or technology-specific validation approach for pathogen crediting]</i>	

<sup>1</sup> Include any necessary documentation in Appendix C

**Table 7F. Filtration design criteria.**

Other Filter		
Parameter	Units	Value
Type of filtration	--	
System manufacturer	--	
Effluent flow rate	gpm	

Total area	sf	
Loading rate	gpm/sf	
Nominal pore size	µm	
Effluent turbidity	NTU	
Basis for crediting (if applicable) <sup>1</sup>	<i>[Describe the crediting framework or technology-specific validation approach for pathogen crediting]</i>	

<sup>1</sup> Include any necessary documentation in Appendix C

**Table 7G. UV design criteria.**

UV Disinfection		
Parameter	Units	Value
Number of reactors	--	
System manufacturer and model	--	
Effluent flow rate	gpm	
UV Dose	mJ/cm <sup>2</sup>	
Influent UVT (expected)	%	
Minimum validated UVT (if applicable)	%	
UV Intensity	mW/cm <sup>2</sup>	
Validation Protocol (if applicable)		
Basis for crediting (if applicable) <sup>1</sup>	<i>[Describe the crediting framework or technology-specific validation approach for pathogen crediting]</i>	

<sup>1</sup> Include any necessary documentation in Appendix C

*[Include description and diagram of chlorine contact configuration]*

**Table 7H. Chlorine disinfection design criteria.**

Chlorine Disinfection		
Parameter	Units	Value
System manufacturer (if applicable)	--	
Chlorine type		
Effluent flow rate	gpm	
Contact volume	gallons	
Hydraulic residence time	Min	
Baffling factor	--	
CT	mg-min/L	
Chlorine residual	mg/L	
Influent ammonia	mg/L	
Basis for crediting (if applicable) <sup>1</sup>	<i>[Describe the crediting framework or technology-specific validation approach for pathogen crediting]</i>	

<sup>1</sup> Include any necessary documentation in Appendix C

*[Include description and diagram of ozone contact configuration]*

**Table 7I. Ozone disinfection design criteria.**

Ozone Disinfection		
Parameter	Units	Value
Effluent flow rate	Gpm	
Contact volume	Gallons	
Hydraulic residence time	Min	
Baffling factor	--	
CT	mg-min/L	
Ozone residual(s)	mg/L	
System manufacturer	--	
Oxygen source	--	
Ozone generation method	--	
Basis for crediting (if applicable) <sup>1</sup>	[Describe the crediting framework or technology-specific validation approach for pathogen crediting]	

<sup>1</sup> Include any necessary documentation in Appendix C

[Include description and diagram of disinfection contact configuration]

**Table 7J. Disinfection design criteria.**

Other Disinfectant [specify]		
Parameter	Units	Value
Effluent flow rate	Gpm	
Contact volume	Gallons	
Hydraulic residence time	Min	
Baffling factor	--	
CT	mg-min/L	
Disinfectant residual(s)	mg/L	
System manufacturer	--	
Basis for crediting (if applicable) <sup>1</sup>	[Describe the crediting framework or technology-specific validation approach for pathogen crediting]	

<sup>1</sup> Include any necessary documentation in Appendix C

### 3.5. Secondary Disinfection

[The Rules and Regulations specify a requirement for chlorine residual at the **point of entry** to the distribution system (0.5 – 2.5 mg/L). Systems should **also** maintain a residual throughout the distribution system, such that the farthest use location has a residual. Please describe strategy for maintaining secondary disinfectant residual in distribution system. Respond to the bullets below. Note that for rainwater systems, this section may not be applicable, as chlorine is not required for these systems.]

- Secondary disinfectant residual: free chlorine, chloramine, other?
- Minimum residual concentration target at farthest use location in the building (e.g. top-floor toilet)?
- How will this residual be ensured and verified?



### 3.6. Chemical Use & Handling

*[Fill out the table below for all chemicals used in the Alternate Water Source System]*

**Table 8. Summary of chemical handing.**

Name and CAS Number	Storage and Handling Facilities	Point of Application	Dosages	Method and Degree of Mixing

### 3.7. Solids Handling

*[Provide description of how the treatment residuals will be handled, if applicable]*

## 4. Monitoring, Alarms, and Reporting

This section is intended to provide an overview of the system monitoring and alarms. Note that in the event of any event that is likely to result in environmental harm or increased public risk, the notification procedure outlined in Article 12C, Section 7e, must be followed.

### 4.1. System control strategy

*[Complete the following table.]*

**Table 9. Summary of system control strategy.**

Type of automated control	<input type="checkbox"/> PLC <input type="checkbox"/> SCADA <input type="checkbox"/> Other:
Remote monitoring?	<input type="checkbox"/> YES <input type="checkbox"/> NO

### 4.2. Online monitoring

*[Complete the following table with all LRT compliance and water quality online monitors, as well as flow meters. The order in which monitors are listed should correspond to the order in which they appear in the PFD and. Values shown in the table are examples and should be replaced with system-specific information. If a membrane filter pressure decay test is being used, that should be included here.]*

**Table 10. Summary of online LRT compliance and water quality monitoring.**

Location	Parameter	LRT compliance monitor? (Y/N)	Water Quality Requirements (if applicable)	Manufacturer and Model
MF Effluent	Turbidity	Y	95% <0.2 NTU Always <0.5 NTU	
Storage tank	Chlorine	N	24-hr avg 0.5 – 2.5 mg/L	

### 4.3. Grab sampling

*[Complete the following table with all grab sample types (e.g. total coliform, BOD, TSS, etc.). Values shown in the table are examples and should be replaced with system-specific information.]*

**Table 11. Summary of grab sample monitoring.**

Parameter	Location	Frequency	Water Quality Requirement	Reporting Parameter
Total coliform	Treated water storage tank	Daily	< 2.2 MPN/100 mL	Daily value

#### 4.4. Alarms and Diversions

*[Complete the following table with all alarm-triggering conditions, such as turbidity, UVT, chlorine residual etc. Where applicable, specify both 'alert level' and 'critical level' alarm criteria. Values shown in the table are examples and should be replaced with system-specific information.]*

**Table 12. Summary of alarm conditions and corrective actions.**

Parameter	Location	Alarm Criteria		Corrective Actions
		Alert Level <sup>1</sup>	Critical Level <sup>2</sup>	
Turbidity	MF Effluent	0.4 NTU	0.5 NTU	Immediate shutdown and diversion

<sup>1</sup> Alert level alarm criteria are intended to provide operators with an indication that process performance is changing but has not yet reached a critical level.

<sup>2</sup> Critical level alarm criteria indicate that process performance is no longer sufficient to achieve compliance with LRT and/or water quality requirements.

## 5. Supplemental Water Supply & Cross Connection Control

*[Complete all fields in the following tables]*

**Table 13. Makeup water supply description.**

Description	
Quantity available	
Anticipated circumstances when make-up water will be used	
Anticipated average daily volume of make-up water (gal)	

**Table 14. Cross connection and backflow prevention measures summary.**

Responsible party for cross-connection control and control of access to plumbing	
Alternate water source plumbing design and proximity to potable water plumbing	
Backflow prevention devices and assemblies	
Does project have approved air gap?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Does project have approved backflow devices in other system locations as appropriate?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Will cross connection shutdown test be scheduled prior to system startup?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Will cross connection test (shutdown, pressure differential, dye, or other accepted method) be scheduled every four years?	<input type="checkbox"/> YES <input type="checkbox"/> NO

## 6. Public Exposure and Impact

**Table 15. Summary of public exposure.**

Public Exposure	
Description of use area potential public contact	
Strategies to minimize public exposure	
Food Facilities	
Will the development include food facilities with service to the public?	<input type="checkbox"/> YES <input type="checkbox"/> NO
If yes (above): list features located within food facilities which will receive non-potable water	
If yes (above): list precautions which will be in place to prevent contact with non-potable water	

## **7. Appendix A: Drawings**

A.1: Vicinity Map

A.2: Facility Map

A.3: Plan/Layout of Alternative Water Source System

## **8. Appendix B: Component Cut Sheets**

[Include only components described in Section 4.1 Components Summary Table]

## **9. Appendix C: Log Reduction Evidence**





Sample Approval Letter and Design Summary Template for Checklist 3c

***The below is an example. For each Alternate Water Source System, SFPDH will send an approval letter and summary. It is the applicant's responsibility to correct any errors or misunderstandings shown in this summary***

To: Project Applicant and Engineer of Record

CC: SFPUC – Water Quality Division  
SFDBI - Plumbing Inspection Division

Date: DATE

Re: Chapter 12C

We have reviewed the Engineering Report for PROJECT ADDRESS to assess compliance with the requirements of Article 12C of the San Francisco Health Code. The engineering report describes an alternate water source system with the following features:

- 1) Alternate Water Source: rainwater, stormwater, graywater etc
- 2) End Use: e.g. toilet flushing and irrigation
- 3) Brief system description: e.g. First flush to 10,000 gallon concrete cistern, to 5 micron filter skid followed by chlorination
- 4) Makeup Water Supply e.g. SFPUC Potable line
- 5) Location of air gap(s) e.g. at potable line into secondary break tank
- 6) Location of other approved backflow prevention devices e.g. at service meter
- 7) Storage tank size(s) and material(s) e.g. 10,000 gallon concrete
- 8) Approved pipe material(s) specified e.g. Yes
- 9) Purple pipes? Yes
- 10) Pipes labeled with water type and direction of flow? Yes

Information contained in the approved engineering report is assumed to be accurate and true. DPH review does not include verification of engineering principles; the responsible party, including but not limited to, the report authors and the Professional Engineer(s) who signed and stamped the approved report are responsible for any design errors or miscalculations that result in failure of the system to operate properly and to comply with the provisions of Article 12C, its Rules and Regulations, and any other applicable rule or law.

Per Section 4.d. of the Rules and Regulations, if the Alternate Water Source System as constructed differs in any way from the approved Engineering Report, an amendment or updated Engineering Report must be submitted to SFPDH-EH for review and approval with the Construction Certification Letter. The Construction Certification Letter must acknowledge any changes and be signed and stamped by the Professional Engineer. The Professional Engineer certifies that the Alternate Water Source System was constructed in accordance with the Engineering Report as approved and/or amended, is consistent with professionally certified plans, and is compliant with all applicable sections of state and local code.

**ON COMPANY LETTERHEAD**

**DATE**

Environmental Health Branch  
Population Health Division  
San Francisco Department of Public Health  
49 South Van Ness Avenue, Suite 600  
San Francisco CA 94103

Attention: Alternate Water Source System Permitting Program (SFHC 12C)

Re: **PROJECT NAME AND ADDRESS** System Construction Verification

This letter confirms that the Alternate Water Source system serving the [insert and describe the intended end uses (e.g. irrigation, toilet flushing, cooling, etc.)] uses at [ADDRESS or NAME OF BUILDING OR PROJECT] has been constructed in accordance with the approved Engineering Report, professionally certified plans, specifications and applicable sections of state and local codes.

Very truly yours,

**P.E. SIGN AND STAMP**



## Data and Monitoring Report (DMR)

Permit #: \_\_\_\_\_

Reporting Period (MM/YYYY): \_\_\_\_\_

System Address and Phone/Email: \_\_\_\_\_

Treatment System Manager: \_\_\_\_\_

Laboratory: \_\_\_\_\_

Laboratory Phone/Email: \_\_\_\_\_

**Data:** *Attach a Microsoft Excel file containing applicable water quality and operations data as specified in the system's Engineering Report and the Rules and Regulations for Alternate Water Systems.*

### Operation:

- ☐Y ☐N 1. Were there any alarms, equipment breakdowns, overflows, bypassing or abnormal water quality monitoring results in this reporting period?
- ☐Y ☐N 2. Are any changes planned in the next month that will or has result in a change in the character of the source or treated water?
- ☐Y ☐N 3. Were any calibrations or routine maintenance completed?
- ☐Y ☐N 4. Were any plumbing changes made in the facility (e.g. new fixtures, repairs, pipe replacements)
- ☐Y ☐N 5. Are any changes planned in the next month that will or has result in a change in the character of the source or treated water?

**If yes to any of the above, attach documentation or logs describing the event and or circumstances.**

For non-operation and/or if end uses were supplied solely by  
municipal makeup water during the reporting period, check here:

**NO USE**

**TREATMENT SYSTEM MANAGER MUST SIGN:**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Print Name: \_\_\_\_\_

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.



ALTERNATE WATER SOURCE PROGRAM

49 South Van Ness Avenue, Suite 600 San Francisco, CA 94103

Phone 415-252-3800, Fax 415-252-3875



### **Alternate Water Source System Annual Report Template**

All alternate water source systems permitted by the San Francisco Department of Public Health are required to submit an annual report by January 15<sup>th</sup> each year.

SFDPH will provide a template with an outline of the elements and tables that must be included in the Annual Report.