Grant No: _____ Date: _____

Grantee: _____

Grant Amount: _____

GRANT AGREEMENT

(School Water Improvement Grants)

This Grant Agreement (this "Agreement") is entered into by and between the Massachusetts Clean Water Trust (together with its successors and assigns, the "Trust"), an instrumentality of The Commonwealth of Massachusetts (the "Commonwealth") and the grantee listed above, a political subdivision or public instrumentality (together with its successors and assigns, the "Grantee").

WHEREAS, in accordance with the Enabling Act and Section 94 of Chapter 142 of the Acts of 2019, the Trust is administering a School Water Improvement Grants program ("SWIG") to assist early education facilities, childcare centers and public schools with deleading projects by providing funds for the procurement and installation of point-of-use filtered bottle filling stations ("POU Filling Stations"), as further described herein;

WHEREAS, the Grantee submitted an application to receive a grant under SWIG (the "Application") and was awarded an amount as set forth in Schedule A hereto pursuant to an Award Letter dated _____ (the "Award Letter");

WHEREAS, the Trust is willing to extend financial assistance in the form of a grant (the "Grant") to the Grantee on the terms and conditions stated herein; and

WHEREAS, the Grantee is willing to accept the Grant and its obligations hereunder to complete the Project on the terms stated herein.

NOW, THEREFORE, in consideration of the premises and the mutual covenants herein contained, the parties agree and bind themselves as follows:

ARTICLE I - REPRESENTATIONS OF THE GRANTEE

Recognizing that the Trust is relying hereon, the Grantee represents, as of the date of this Agreement, as follows:

(a) *Organization; Power, Etc.* The Grantee is a Local Governmental Unit or other Eligible Borrower (each as defined in the Enabling Act) with full legal right and authority to authorize, execute, and deliver this Agreement, to receive the Grant, to undertake and implement the Project and to carry out and consummate all transactions contemplated by the foregoing;

(b) *Authority.* The Grantee has duly and validly authorized the execution and delivery of this Agreement, and all approvals, consents, and other governmental or corporate proceedings necessary for the execution and delivery of the foregoing or required to make this Agreement the legally binding obligation of the Grantee that it purports to be, in accordance with its terms, have been obtained or made.

(c) *No Litigation*. No action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court, public board or body, other than as disclosed to the Trust, is pending or, to the knowledge of the Authorized Officers of the Grantee (as identified on Schedule A) executing this Agreement, threatened (1) seeking to restrain or enjoin the execution and delivery of this Agreement, or the undertaking of the Project or (2) contesting or affecting the validity of this Agreement; and neither the corporate existence of the Grantee nor the title to office of any Authorized Officer of the Grantee executing this Agreement, is being contested.

(d) *No Conflicts.* The authorization, execution and delivery of this Agreement, and performance thereof, will not constitute a breach of, or a default under, any law, ordinance, resolution, agreement, indenture or other instrument to which the Grantee is a party or by which it or any of its properties is bound.

(e) *Binding Agreement.* This Agreement is, or when executed and delivered will be, the legal, valid, and binding obligation of the Grantee, enforceable in accordance with its terms, subject only to limitations on enforceability imposed in equity or by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally.

(f) *Information Submitted.* All information, reports, and other documents and data submitted to the Trust in connection with this Agreement (including without limitation, the Application) were, at the time the same were furnished, and are, as of the date hereof, complete and correct in all material respects.

(g) *Ratification*. By executing this Agreement, the Grantee affirms and ratifies all statements, representations and written documents that it has submitted to the Trust in connection with this Agreement (including, without limitation, the Application).

ARTICLE II - THE GRANT

II.1 Grant Amount and Expiration Date

(a) *Grant Amount*. The Trust agrees to make and the Grantee agrees to accept, on the terms and conditions stated in this Agreement, a Grant, in the maximum amount specified on Schedule B hereto.

(b) *Expiration Date*. The Grantee shall comply with all obligations detailed in Article II by no later than 365 days after the execution of this Agreement (the "Expiration Date"); provided that the Trust, in its sole discretion, may approve extensions of the Expiration Date.

II.2 Project

(a) *Grant Purpose.* The Grant has been made solely to finance the procurement and installation of POU Filling Stations, as further described on Schedule B (the "Project"). The Grantee is awarded $3,000 per eligible fixture as set forth on Schedule A and shall be required to procure and install POU Filling Stations in the minimum number per school as set forth in Schedule A; provided that the Grantee may be permitted to allot the Grant funds as necessary to meet such requirement.

(b) *Project Schedule*. The Grant will be disbursed in full by the Trust upon satisfaction of the conditions set forth in Article II hereof.

(c) *Technical Requirements*. The Grantee shall comply with the technical requirements set forth in Exhibit A hereto with respect to the Project. Grantee is required to procure fixtures necessary for the Project through FAC100: Building Maintenance Repair and Operations Project Materials and Supplies statewide contract and advised for the installation to use the TRD01: Tradesperson Installation, Repair, and Maintenance Services statewide contract.

(d) *Close Out Provisions*. Upon completion of the Project and no later than the Expiration Date, the Grantee shall submit to the Trustee the close out certification attached hereto as Exhibit B.

II.3 Grant Award Package

In connection with the execution and delivery of this Agreement, each of the following conditions shall be satisfied (all documents, certificates and other evidence of such conditions are to be satisfactory to the Trust in its discretion).

(a) *Executed Grant Agreement.* The Trust shall receive a duly executed original of this Agreement.

(b) *Completed Grant Questionnaire*. The Trust shall receive a duly executed Grant Questionnaire. The Grant Questionnaire shall be supplied by the Trust with this Agreement to collect necessary financial information for the purpose of grant disbursement.

(c) *Expiration of Offer*. The Grant, and the obligation of the Trust to disburse the Grant, or any portion thereof, shall expire ninety (90) days from the date of the executed Award Letter. No portion of the Grant will be disbursed by the Trust after this Expiration of Offer. The Trust, in its sole discretion, may approve extensions of the Expiration of the Offer.

ARTICLE III - AFFIRMATIVE COVENANTS

III.1 Use of Disbursements and Application of Grantee Contributions

The Grantee shall expend the Grant funds only for eligible costs of the Project as described in Article II. The Trust shall have no obligation to disburse or expend any amounts for the Project in excess of the Grant.

III.2 Additional Project Funding

The Grantee shall ensure that adequate funding is in place to complete the Project and will obtain loans or funds or receive binding commitments for supplemental funding in an amount needed to ensure completion of the Project.

ARTICLE IV - TERMINATION AND REMEDIES

IV.1 Termination of the Grant by the Trust

(a) *Termination of the Grant by the Trust.* The Trust, in its sole discretion, may terminate this Agreement:

(i) if the Grantee has breached any provision of this Agreement or has failed to strictly comply with any applicable state or federal regulation applicable to the Project and/or the Grant; or

(ii) if the Grantee has failed to strictly comply with the requirements for installation detailed herein as Exhibit C; and/or failed to comply with the requirements for operation and maintenance detailed herein as Exhibit D; or

(iii) if the Grantee has failed to complete post-installation testing and sampling and/or consumer notifications as detailed in Exhibit C; or

(iv) if any representation or warranty made by the Grantee in the Application, any request for disbursement, this Agreement, any certification, or other supporting documentation thereunder shall prove to have been incorrect in any material respect at the time made.

(b) *Notice of Termination.* The Trust shall provide the Grantee with written notice of termination of the Grant, setting forth the reason(s) for termination. The termination of the Grant and this Agreement shall be effective as of the date such notice of termination is sent by the Trust.

(c) *Effect of Termination*. Upon termination of this Agreement, the Grantee shall reimburse the Trust for all disbursements of the Grant on a schedule to be negotiated in good faith between the Trust and the Grantee, but in no event more than three (3) years from the date of such termination.

ARTICLE V - MISCELLANEOUS

V.1 Notices

All notices, requests and other communications provided for herein including, without limitation, any modifications of, or waivers, requests or consents under, this Agreement shall be given or made in writing and delivered to the intended recipient at the "Address for Notices" specified in Schedule A; or, as to any party, at such other address as shall be designated by such party in a notice to each other party. Receipt of all such communications shall be deemed to have occurred when personally delivered or, in the case of a mailed notice, upon receipt, in each case given or addressed as provided for herein.

V.2 No Waiver

No failure or forbearance on the part of the Trust to exercise, and no delay in exercising, any right hereunder shall operate as a waiver thereof nor shall any single or partial exercise by the Trust of any right

hereunder preclude any other or further exercise thereof or the exercise of any other right. Conditions, covenants, duties and obligations contained in this Agreement may be waived only by written agreement between the parties.

V.3 Governing Law

This Agreement shall be construed under, and governed by, the laws of the Commonwealth. The Grantee agrees to bring any federal or state legal proceedings arising under this Agreement in which the Trust is a party in a court of competent jurisdiction within the Commonwealth. This section shall not be construed to limit any other legal rights of the parties.

V.4 Successors and Assigns

This Agreement shall be binding upon and inure to the benefit of the Grantee and the Trust and their respective successors and assigns, except that the Grantee may not assign or transfer its rights or obligations hereunder without the prior written consent of the Trust.

V.5 Complete Agreement; Waivers and Amendments

All conditions, covenants, duties and obligations contained in the Agreement may be amended only through a written amendment signed by the Grantee and the Trust unless otherwise specified in this Agreement. The parties understand and agree that this Agreement supersedes all other verbal and written agreements and negotiations by the parties regarding the matters contained herein.

V.6 Headings

The headings and sub-headings contained in the titling of this Agreement are intended to be used for convenience only and do not constitute part of this Agreement.

V.7 Severability

If any term, provision or condition, or any part thereof, of this Agreement shall for any reason be found or held invalid or unenforceable by any governmental agency or court of competent jurisdiction, such invalidity or unenforceability shall not affect the remainder of such term, provision or condition nor any other term, provision or condition, and this Agreement shall survive and be construed as if such invalid or unenforceable term, provision or condition had not been contained therein.

V.8 Schedules, Exhibits and Attachments; Counterparts

Each Schedule and Exhibit and each other attachment hereto and referred to herein is an integral part of this Agreement. Moreover, this Agreement may be executed in several counterparts, each of which shall be deemed to be an original. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000 and related state law) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

V.9 No Third Party Beneficiary

This Agreement is exclusively between the Trust and the Grantee, and does not nor is intended to create any privity of contract with any other party not a party hereto, nor to imply a contract in law or fact. The Trust is not obligated to disburse grant funds on any contract, or otherwise, between the Grantee and any other party, nor intends to assume, at any time, direct obligations for payment for work, goods, or other performance under such contracts. The obligation to pay any amounts due under such contracts is solely the responsibility of the Grantee. Nothing herein, express or implied, is intended to, or shall confer upon, any other person any right, benefit, or remedy of any nature whatsoever under or by reason of this Agreement between the Trust and the Grantee.

V.10 <u>Term</u>

This Agreement shall remain in effect until one of the following events has occurred:

(a) The Grantee and the Trust replace this Agreement with another written agreement;

(b) All of the Grantee's obligations under this Agreement have been discharged, including, without limitation, any obligation to reimburse the Trust for disbursements of the Grant; or

(c) This Agreement has been terminated pursuant to the provisions of Article IV - hereof.

[Remainder of page intentionally left blank; signature page follows.]

IN WITNESS WHEREOF, the parties hereto have caused this Grant Agreement to be duly executed as of the day and year first above written.

MASSACHUSETTS CLEAN WATER TRUST

By: _____
Executive Director

By: _____

Authorized Officers

SCHEDULE A

1. Grant No.: _____
2. Grantee: _____
3. Grant Amount: _____
4. Grant Agreement Date:_____
5. Expiration Date: _____
6. Number of total awarded fixtures per district: _____
7. Total eligible fixtures per facility within district: as set forth on Schedule B.
8. Authorized Officers:
    a. of the Trust: Susan Perez, Executive Director
    b. of the Grantee: _____ ,
9. Addresses for Notices:
    a. To the Trust:
        Massachusetts Clean Water Trust
        One Center Plaza
        Boston, Massachusetts 02108
    b. To the Grantee:
        _____

SCHEDULE B

District Award Allocation by School

School/Facility Name	Number of Fixtures	Award Amount ($)

EXHIBIT A

Technical Requirements

- **Bottle Filling Stations, Filter Additions and Retrofit Units**, must be
  - constructed of a durable anti-microbial, anti-corrosion material or stainless steel;
  - certified to National Sanitation Foundation International (NSF) and American National Standards Institute (ANSI) standards for the number of contaminants that leach from the products into the drinking water (NSF/ANSI 61) and a maximum lead content by weight (NSF/ANSI 372);
  - contain a visible LED indicator for filter maintenance;
  - meet Americans with Disabilities Act (ADA) guidelines for reach range and wheelchair access

- **Filters and Replacement Filters**, must be
  - certified to NSF International /ANSI standards 42 and 53 for the removal of lead and other contaminants with documented evidence that the filters reduce lead below 1 ppb and
  - have at least a 3,000-gallon capacity.

- **Additional Recommendations from MassDEP**:
  - Particulate Filters. Utilizing a particulate filter in addition to the onboard filter could extend the useful life of fixtures and filters while decreasing the risk of filters being compromised by particulates.
  - Vandal-Resistant. For locations with heavy traffic or high-fixture-usage, consider the more durable construction found in vandal-resistant fixtures.
  - Filter Shut Off. MassDEP recommends the use of fixtures that will shut-off when the filter has reached the end of its service life.

EXHIBIT B

Close Out Certificate

1. Grant No.: _____
2. Grantee: _____
3. Grant Amount: _____
4. Grant Agreement Date: _____
5. Expiration Date: _____

The undersigned certifies that the data entered in the attached Grant Closeout Form is true and correct as of the date hereof. The Grantee further certifies that data confirming the installation of fixtures and post-installation water quality testing, for each allocated fixture, has been uploaded to the Massachusetts Department of Environmental Protection's Lead Contamination Control Act (LCCA) Program Management Tool.

The undersigned further certifies that the Grantee, and each school within its district, will comply with Operation and Maintenance (O&M) guidance as it applies to the POU Filling Stations. Such guidance is attached to the Agreement as Exhibit D.

_____

By: _____

Authorized Officer

EXHIBIT C

Best Management Practices for the Removal of Lead and Copper in School Drinking Water

Installation of Point-of-Use Devices at Schools or Early Education and Care Facilities that Are Not Registered Public Water Systems[1]

Introduction

This guidance is intended for schools and early education and care facilities (EECFs) that are not registered public water systems (PWS) and are interested in providing treatment for removal/reduction of lead and copper in drinking water. Many schools and EECFs have taken mitigation measures to address elevated lead and copper in drinking water. **Common and effective mitigation practices include replacement of fixtures and plumbing and daily pipe flushing programs.** In some cases, schools and EECFs may choose to consider installing additional treatment. One form of treatment is a Point-of-Use (POU) device. For the purposes of this guide a POU device is any treatment unit installed on a single water fixture, such as a bubbler, end of tap or water fountain, that physically removes contaminants to achieve a desired water quality. POU devices can be an effective option to reduce lead and copper.

Choosing the appropriate POU device, and performing regular maintenance of the device, is extremely important. POU devices that are not properly maintained will eventually fail to remove contaminants and may release more of the targeted contaminants back into the drinking water. Replacing POU device filters as recommended by the manufacturer to ensure performance against the specified contaminant(s) and routinely testing the water in order to confirm that the devices are working properly are important considerations when deciding whether or not to install any POU devices.

This document includes a list of recommended Best Management Practices (BMPs) that schools and EECFs should implement when installing and maintaining POU devices. Schools are also encouraged to follow the U.S. Environmental Protection Agency's (EPA's) "3Ts - Training, Testing, and Taking Action - for Reducing Lead in Drinking Water in Schools." For a link to the EPA document see the Resource section at the end of this document.

Drinking water, plumbing and water treatment devices are complex issues. It may be necessary to consult with plumbing and building maintenance professionals to explain the information included in this document. For a list of local entities that may provide technical assistance, see the 'Questions and Assistance' section below.

[1] This BMP may be used with water fountains, water coolers, water chillers, and bottle-less water dispensers, sinks/faucets, and other fixtures used for drinking water or to prepare food or beverages or medical purposes. This POU treatment device best management practice (BMP) is intended for all schools. However, if a school is a MassDEP registered PWS it is subject to Massachusetts Drinking Water Regulations 310 CMR 22.00 and the school must notify MassDEP prior to installation. MassDEP Drinking Water Program may be contacted at (617) 292-5770, program.director-dwp@mass.gov. For a list of registered PWSs see https://www.mass.gov/doc/ma-public-water-suppliers. Point-of-Entry (POE) devices are not covered by this BMP. All schools that are themselves a MassDEP registered PWS, or serve water to 25 or more people, 60 or more days a year, that install a POE treatment device, are subject to Massachusetts Drinking Water Regulations 310 CMR 22.00 and must seek MassDEP's approval prior to installation of a POE treatment device.

Best Management Practices

Please remember that immediately after receiving sampling results that exceeds the applicable level, the fixture should be removed from service while determining follow-up steps. For more information on lead and copper follow-up steps, see to the "*Follow–up Steps*" document at http://www.mass.gov/guides/follow- up-steps-for-schools-and-eecf-with-lead-and-copper-sampling-results-above-the-action.

1. **Use POU devices and filter replacements that are certified to NSF International /ANSI standards** for the removal of lead and copper. Current organizations certifying to these standards include NSF International, Water Quality Association (WQA), Underwriters Laboratory (UL), and the International Association of Plumbers and Mechanical Officials (IAPMO). Be prepared to research and follow manufacturer's specifications. For a list of NSF International /ANSI certified devices see the "Resources" section at the end of this document.

2. **Install POU devices with a built-in mechanical filter replacement indicator** (i.e., a red light warning). The indicator should be visible to maintenance staff. MassDEP recommends the use of POU devices that automatically **shut off the flow of water** when the filter is exhausted.

3. **Develop a written lead and copper sampling plan** for all fixtures used for drinking, cooking and in offices where nurses and other medical staff provide services. If a school or EECF intends to add POU devices to an already developed and implemented program, the school should update the program to include POU devices installation, operations and maintenance practices. Routine sampling should also incorporate the device manufacturer's specifications. For information on how to create a sampling plan see https://youtu.be/0sjah9gQsj8 and https://www.mass.gov/doc/plumbing-profile-guide.

    - In addition to lead and copper testing, to ensure that the installation or repair of a POU device is sanitary, *E.coli* bacteria testing is also recommended. If a school receives its water from a MassDEP registered public water supplier, the bacterial water quality across the entire public water system is demonstrated by the public water supplier during routine bacteria testing. E.coli testing, after installation and repair of a POU device, is intended solely to confirm that that the installation or repair is sanitary. For more information on *E.coli* testing please see the document "*Tips on O&M for POU Devices"* (See the Resource section).

    - Additional information about sampling for, and reducing, lead in drinking water at schools see EPA's toolkit: "3Ts for Reducing Lead in Drinking Water in Schools." (See the Resource section).

4. **Develop an Operation and Maintenance Plan** for all POU devices. This plan should clarify operation and maintenance procedures for POU devices. In addition to information provided by the device manufacturer, please see the document "*Tips on O&M for POU Devices".*

5. **School and EECF personnel responsible for sampling and operation and maintenance of POU devices should be adequately trained** to collect samples, monitor operations, record or evaluate operational data or signals, inspect, clean and maintain equipment, respond to emergencies, etc. To ensure adequately trained personnel manage these drinking water treatment devices MassDEP recommends that the operation and maintenance of POU devices be overseen by someone with some training in drinking water system operations. For information on basic drinking water training please see the document *"Tips on O&M for POU Devices".*

6. **Licensed Plumber:** Installation of POU devices should be done by a licensed plumber in accordance with the Massachusetts Board of State Examiners of Plumbers and Gas Fitters - 248 CMR 1.00 -11.00. Contact your local plumbing inspector for more information. For information on plumbing regulations see http://www.mass.gov/ocabr/licensee/dpl-boards/pl/regulations/rules-and-regs/248-cmr-300.html

7. **Before installing a POU device**, MassDEP strongly recommends that the facility informs its local Public Water Supplier (PWS) of the planned installation, provide the PWS with a copy of the plan and inform the PWS when the installation is complete. In accordance with Massachusetts Drinking Water Regulations 310 CMR 22.22 (3) (c), PWS are responsible for "inspecting and surveying all industrial, commercial and institutional premises served by the public water system to determine if cross connections exist and that all cross connections are properly protected by an appropriate device or eliminated". A school is considered an institutional premise. If after the installation of the treatment units the PWS determines that there are significant changes in the plumbing that make it necessary to inspect or survey the facility to determine current adequate cross connection control, the PWS may conduct an inspection or survey to determine if additional protection is required. A cross connection is a permanent or temporary piping between your potable water line and an unapproved source of water or piece of equipment which can allow your drinking water to be contaminated if a backflow[2] condition occurs. For more information on cross connection control contact your local Public Water Supplier and see page 6 of the EPA document "*Are you providing safe drinking water in your school*" available at https://www3.epa.gov/region1/eco/drinkwater/pdfs/Drinking-Water-Booklet.pdf[3]. Schools and EECFs are urged to maintain copies of any PWS cross connection control inspections. To locate your local PWS see link in 'Questions and Assistance' section below.

8. **After installing POU devices,** the school or EECF should conduct initial water quality sampling before serving water from these fixtures. Initial sampling should include testing of the devices for lead and copper to verify the effectiveness of the devices.

    - If initial testing indicates no lead results above the MassDEP recommended laboratory detection limit of 0.001 mg/L (1 ppb) and no copper above 1.3 mg/L, the devices can be placed in use and a routine sampling plan implemented. MassDEP recommends routine sampling based on the device manufacturer's specifications, if provided. If manufacturer specifications are not provided, then follow the sample collection guidance outlined in MassDEP "*Tips on O&M for POU Devices*".

[2] Backflow into a public water system can pollute or contaminate the water in that system (i.e., backflow into a public water system can make the water in that system unusable or unsafe to drink), and each water supplier has a responsibility to provide water that is usable and safe to drink under all foreseeable circumstances. Furthermore, consumers generally have absolute faith that water delivered to them through a public water system is always safe to drink. For these reasons, each water supplier must take reasonable precautions to protect its public water system against backflow. Water suppliers usually have the authority or capability to repeatedly inspect every consumer's premises for cross-connections and backflow protection. Alternatively, each water supplier should ensure that a proper backflow preventer is installed and maintained at the water service connection to each system or premises that poses a significant hazard to the public water system. In accordance with 310 CMR (3) (c) public water systems are responsible for "inspecting and surveying all industrial, commercial, and institutional premises served by the public water system to determine if cross connections exist and that all cross connections are properly protected by an appropriate device or eliminated". A school is considered an institutional premise. After installation of water treatment devices at schools a PWS may determine that the changes are significant and further inspection is warranted.

[3] Whenever a plumbing fixture is connected to the drinking water supply, a potential cross connection exists. Most of the time these cross connections are controlled by the installation of a backflow prevention device. These backflow prevention devices may be internal to equipment or are usually installed by a plumber when the building is constructed and many of them need to be tested and maintained annually.

- Additional testing should coincide with routine replacement or repairs of the POU device filter(s).

9. **Use a Massachusetts certified laboratory**, certified to test potable water for the parameters of concern, for all samples. For a list of Massachusetts certified laboratories see http://public.dep.state.ma.us/Labcert/Labcert.aspx MassDEP strongly recommends that the school or EECF ask their laboratory to report all lead and copper results to MassDEP via MassDEP's electronic reporting system, eDEP. For more information on eDEP see "*Water Quality Monitoring Reports: Frequently Asked Questions*" at https://www.mass.gov/info-details/water-quality-monitoring-reports-frequently-asked-questions.

10. **Take action if a sample from a POU device has lead concentrations above the MassDEP recommended laboratory detection limit of 0.001 mg/L or exceeds the Action Level copper**. If a sample is over the copper Action Level or over your school's lead shut down level (e.g.15 ppb), immediately shut off the fixture until the problem has been resolved and test results show that the water from the fixture is below the copper Action Level or contains no measurable lead concentrations. For results that exceeds the applicable level, MassDEP strongly recommends that the school or EECF follow the MassDEP recommended steps described at https://www.mass.gov/guides/follow-up-steps-for-schools-and-eecf-with-lead-and-copper-sampling-results-above-the-action.These steps include notifying parents/guardians, staff and students of all sampling results **and** reporting all corrective actions to MassDEP using the MassDEP School and EECF **LCCA Program Management Tool.** Note that information reported to MassDEP via e-DEP and/or via the **LCCA Program Management Tool** will be made public at: https://eeaonline.eea.state.ma.us/portal#!/search/leadandcopper.

11. **Share water quality information at least annually with all students, teachers and parents/guardians**. In addition to notifying parents/guardians, staff and students when a sample result exceeds the applicable level, MassDEP also recommends that the school or EECF prepare and share information on their program annually or on some regular frequency. The information should include test results for all water quality monitoring during the year and corrective actions taken or planned.

12. **Dispose of all waste (water or materials) in accordance with state and local requirements**. For example, reverse osmosis water treatment produces waste water that must be disposed of in accordance with state and local requirements. Contact your city or town for information on how to dispose of replacement filters.

13. **All Schools and EECFs that have already installed POU devices at their facility should take the following actions:**

    - Revise their lead and copper sampling and remediation programs to incorporate all items noted in this guide.
    - Notify their local PWS of installed POU devices as soon as possible (if they have not already done so).
    - Notify MassDEP Drinking Water program (if they have not already done so) by doing the following:
        i. Updating the MassDEP School and EECF **LCCA Program Management Tool** or by completing the MassDEP **"LCCA Lead and Copper in Schools Maintenance Checklist"** located at https://www.mass.gov/doc/lead-and-copper-in-schools-maintenance-checklist. If you need assistance with the **Maintenance Checklist** or **LCCA Program Management Tool** contact the Drinking Water Program at program.director-dwp@mass.gov.

Additional Resources

- **MassDEP**
  Website: https://www.mass.gov/lead-in-drinking-water
  Contact: program.director-dwp@mass.gov or 617-292-5770.

  - **"Tips on O&M for POU Devices"**
    https://www.mass.gov/dov/tips-on-operation-maintenance-for-point-of-use-devices

  - **MassDEP School and EECF LCCA Program Management Tool**
    MassDEP created the **LCCA Program Management Tool** to help schools maintain their lead and copper drinking water information and have it ready for reporting Lead Contamination Control Act (LCCA) activity. MassDEP recommends using the Lead and Copper Reporting Tool to maintain lead and copper test results, corrective actions taken, and any related program documents. The LCCA Program Management Tool is located at:
    https://script.google.com/a/macros/madwpdep.org/s/AKfycbxP99K-Cd5B3ioE7nswn0peOEndcGrXwVk6zJcS5iHxzGO55B1k/exec

  - **MassDEP "LCCA Lead and Copper in Schools Maintenance Checklist"**
    Schools and EECFs may also update the MassDEP "LCCA Lead and Copper in Schools Maintenance Checklist" located at https://www.mass.gov/doc/lead-and-copper-in-schools-maintenance-checklist.

- **USEPA**
  Website: https://www.epa.gov/dwreginfo/lead-drinking-water-schools-and-child-care-facilities

  - **3T's Guidance**
    https://www.epa.gov/sites/production/files/2018-09/documents/final_revised_3ts_manual_508.pdf

  - **A Consumer Tool for Identifying Point of Use (POU) Drinking Water Filters Certified to Reduce Lead**: https://www.epa.gov/water-research/consumer-tool-identifying-pou-drinking-water-filters-certified-reduce-lead

- **Massachusetts Department of Public Health**
  - **FAQs on lead and copper in drinking water at schools and EECFs**
    http://www.mass.gov/eohhs/docs/dph/environmental/lead/lead-drinking-water-faq.pdf

- **National Sanitation Foundation (NSF) International**
  - **NSF/ANSI 53 – Lead**
    http://www.nsf.org/consumer-resources/what-is-nsf-certification/faucets-plumbing-certification/lead-schools?panel=water-school-lead

    http://info.nsf.org/Certified/DWTU/Listings.asp?ProductFunction=053%7CLead+Reduction&ProductType=&submit2=SEARCH

- **NSF/ANSI 53 – Copper**
  http://info.nsf.org/Certified/DWTU/Listings.asp?ProductFunction=053%7CCopper+Reduction&ProductType=&submit2=SEARCH

- **NSF/ANSI58 - Reverse Osmosis drinking water treatment systems**
  http://www.nsf.org/certified-products-systems

Questions and Assistance

MassDEP Drinking Water Program: For assistance with all lead and copper evaluation and reduction, please contact MassDEP Drinking Water Program: 617-292-5770, program.director-dwp@mass.gov

Local entities may be able to provide technical assistance to local schools and EECF, such as public water suppliers, plumbing inspectors and Board of Health/local health officials. For a list of public water suppliers see https://www.mass.gov/doc/ma-public-water-suppliers.

EXHIBIT D

Tips on O&M for POU Devices

Operation and Maintenance (O&M) guidance for Point of Use (POU) devices used for the removal of lead and copper in drinking water at schools and Early Education and Care Facilities (EECF) that are not public water systems (PWS)

Use this document in conjunction with MassDEP's **Best Management Practices for the Removal of Lead and Copper in Drinking Water: Installation of Point-of-Use Devices at Schools or Early Education and Care Facilities that are not Registered Public Water Systems** located at https://www.mass.gov/media/1744356

How POU Devices Reduce Lead in Water

Water dispensers or POU devices with filters attached to a faucet or to the piping under the counter, allows water to flow through either an adsorption media, or a filter, which captures contaminants such as lead or copper and other similar sized ions. In the case of filters, the contaminants are trapped on the filter and subsequently removed. In the case of adsorption media, the contaminants are attached to the grains of the media. In either case contaminants are retained by the POU device, thus reducing the contaminants in the finished drinking water.

Training

For information on basic drinking water operations training courses, you may contact the following organizations:

Massachusetts Department of Environmental Protection, Drinking Water Program
617-292-5770, program.director-dwp@state.ma.us

Mass Water Works Association
http://masswaterworks.org

Mass Rural Water Association
http://massrwa.org/

New England Water Works Association
http://newwa.org/

American Water Works Association
https://www.awwa.org/conferences-education/distance-learning/elearning.aspx

Sacramento State Office of Water Programs
https://www.owp.csus.edu/courses/drinking-water.php

National Environmental Services Center
http://www.nesc.wvu.edu/subpages/operator_certification.cfm

Installation

All parties installing, repairing or maintaining these devices should wash their hands and use clean sanitary tools and practices.

Devices should be located where they are protected from tampering and vandalism.

Flushing: Prior to installation of the POU device, the water line needs to be flushed (for at least 10 minutes) in order to remove sediment from the pipe, which could clog the device filter.

Certified Devices: Use only POU treatment devices and filter replacements that are certified to NSF International /ANSI standards for the removal of lead and copper. Current organizations certifying to these standards include NSF International, Water Quality Association (WQA), Underwriters Laboratory (UL), and the International Association of Plumbers and Mechanical Officials (IAPMO). Always verify with the organization that the device has been tested and certified for the removal of lead and/or copper. For more information see the Information /Assistance section below.

Follow State and Local Requirements: Installation of POU devices must be done by a licensed plumber in accordance with the Massachusetts Board of State Examiners of Plumbers and Gas Fitters - 248 CMR 1.00 - 11.00.

Install on Cold Water Lines Only: Install POU devices on the cold water supply lines of the facility's plumbing. Do not attach devices to hot water supply line to the filter.

Shut off Valve: Install a water shutoff valve on the incoming cold water supply line to aid in future servicing of POU device filter.

Check for Leaks: After installing new POU devices, open the water supply valve and check for leaks. Flush the system sufficiently (approximately three minutes) to effectively remove residue before putting the outlet back into use.

Cross Connections and Local Public Water Supplier: Inform your local PWS when the installation of a POU device is complete. They may wish to conduct a cross connection control survey.

Tag: Install a maintenance tag (see graphic below) on the POU device to record date, action taken and name of the employee that performed the work.

Sampling and Sampling Schedule

Lead and Copper

After POU Device Installation: Flush the cold water line to remove any debris from installation. Allow the outlet to stagnate overnight, for between 6 and 18 hours. The following morning, take a first draw sample followed by another sample collected after flushing the outlet for 30 seconds. The outlet must be free from Lead and copper results must be below the action level before the POU device can be placed into service. This initial sampling will verify the effectiveness of the POU device to remove lead and copper.

Routine Lead and Copper Sampling Schedule: Many monitoring scenarios are possible. For example, a school or EECF may want to consider monitoring every POU device during the first year of operation and then modify

the monitoring frequency based on device performance and amount of use. If sample results from each outlet indicate all POU devices are functioning properly, a reduced monitoring frequency could be implemented.

MassDEP recommends that all outlets used for drinking water, cooking, and medical care offices (including those with a POU device) be sampled and tested every three years and when there are changes to the fixture or plumbing, e.g., repair and filter replacement. In order to implement this routine sampling program, one-third of all outlets (including those with POU devices) would be sampled each year for lead and copper on a rotating basis.

Sampling Procedures: Proper lead and copper sampling procedures can be found at http://www.mass.gov/media/1104781. Only qualified laboratory testing can reliably confirm the amount of lead or copper in the drinking water. Home test kits may not provide an accurate measurement of water quality. MassDEP recommends using a Massachusetts certified laboratory. The laboratory should be certified to test for lead and copper for potable water. For a list of Massachusetts certified laboratories see http://public.dep.state.ma.us/Labcert/Labcert.aspx.

Bacteria

Maintaining bacterial quality from source to tap is a cornerstone of potable drinking water practice. To ensure that installation and repair practices are sanitary, an *E.coli* bacteria sample is recommended after installing or repairing a POU device. When a sample for *E.coli* is collected the outlet should be free from *E.coli* before the POU device is placed into service.

E. coli is a type of fecal coliform bacteria commonly found in the intestines of animals and humans. E. coli is short for Escherichia coli. The presence of E. coli in water may indicate inadequate sanitation practices during installation and repair. If a school receives its water from a MassDEP registered public water supplier, the bacterial water quality across the entire public water system is demonstrated by the public water supplier during routine bacteria testing. Recommended E.coli testing, after installation and repair of a POU device, is intended solely to ensure that that the installation or repair is sanitary.

See https://www.epa.gov/sites/production/files/documents/samplingprocedures.pdf page 7 for information on *E.coli* sample collection. MassDEP recommends using a Massachusetts certified laboratory. The laboratory should be certified to test for *E.coli* bacteria for potable water. For a list of Massachusetts certified laboratories see http://public.dep.state.ma.us/Labcert/Labcert.aspx.

What to do if MassDEP Issues a Public Health Order or Notice to the Supplying PWS

The POU devices should be taken out of service and an alternate supply of water provided. When the Order or Notice is lifted or removed by MassDEP the filters should be replaced, the devices flushed and *E.coli* samples collected. The outlets must be free from *E.coli* before the POU devices are placed into service.

Cleaning and Maintenance

Cleaning: All POU treatment devices and the area around them should be maintained in a clean and sanitary manner at all times. All parties maintaining and cleaning these devices should wash their hands and use clean sanitary tools and practices.

Maintenance and Records: All POU treatment devices should be maintained in accordance with manufacturer's specifications. A record of maintenance should be kept on an Equipment Maintenance Log (see graphic below). The log information should include the following: service performed, date, time, and name of the employee who performed the work. The maintenance log should be kept on file and should include the following Information:

- Manufacturer
- Model
- Serial Number
- Date of installation
- Name of installer
- Replacement Filter type

PDF copies of completed maintenance logs may be kept online in the MassDEP School and EECF **LCCA Program Management Tool** located at: https://script.google.com/a/macros/madwpdep.org/s/AKfycbxP99K-Cd5B3ioE7nswn0peOEndcGrXwVk6zJcS5iHxzGO55B1k/exec**. For assistance with the LCCA Program Management Tool** please contact program.director-dwp@stste.ma.us. All information reported to MassDEP via the **LCCA Program Management Tool** will be made public on MassDEP's website.

Cleaning and maintenance schedules may also be posted on premises.

Waste Disposal

Dispose of all waste (water or materials) in accordance with state and local requirements. For example, reverse osmosis water treatment devices require a backwash that produces a waste brine that must be disposed of in accordance with state and local requirements.

How to Properly Use POU Devices Certified to NSF International /ANSI standards for the removal of lead and copper

Water filters included with the POU devices need to be changed regularly in order to reduce lead and other contaminants in drinking water for which they are certified. Follow the manufacturer's instructions that come with your POU device and replace filter cartridges and other items as recommended using NSF certified filters.

Many POU devices have meters or indicators that signal when the filter needs to be replaced. Review the manufacturer's specifications for details on filter change frequency and filter capacity.

Consider setting a reminder on your calendar when manufacturer recommends changing the POU device filter.

Collect samples after each filter change and analyze them to verify the effectiveness of the POU device to remove lead. Follow proper sampling procedures. Only qualified laboratory testing can reliably confirm the amount of lead in drinking water. Home test kits may not provide an accurate measurement of water quality.

Why POU Device Filters must be Changed

Many POU devices use filters are comprised of carbon, charcoal, or a blend of filter media to help reduce impurities. These systems generally reduce contaminants in one of two ways:

- Some contaminants are filtered mechanically, meaning the particles are large enough to be trapped in the pores of the filter. Eventually, the pores of the filter become so clogged with debris that water is unable to move through the filter effectively.
- Other contaminants adhere or adsorb to the surface of the filter media. Over time, the surface area of the filter media becomes filled and no more contaminants can be adsorbed.

While the former is easy to spot (the flow rate of the water being produced by the system slows dramatically), it's not as easy to tell when the surface area of the filter media has become full and needs to be changed.

How Often Should POU Device Filters be Changed

The recommended filter change cycle for a POU device varies from one product to the next. Filtration systems usually have established "service cycles," however extra precaution should be taken when tap water contains high levels of contaminants.

- NSF/ANSI 53 certification requires manufacturers to state the filter capacity, which is the volume of water that can pass through a filter before it must be changed.
- To ensure the filter continues to reduce contaminants, replace it when it has reached the manufacturer's recommended filter capacity. The filter capacity will be listed in the specifications on your product's owner's manual or on the product packaging. Many products also have indicators for when the filter must be changed.

Choosing the Right POU Device Replacement Filter

Filters are not universal.

- While a non-certified filter may look similar in size and even appear to fit inside the housing of a POU device, even the smallest size difference could allow contaminated water to go around the filter rather than through it.
- Non-certified filters may not be of the same quality as the manufacturer's recommended replacement. This could result in the water not being filtered effectively or even the introduction of chemicals into the water from materials that were never verified to be acceptable for drinking water.

To ensure your POU device is performing effectively, use the proper replacement filter and change your filter at the recommended interval.

Please Keep in Mind

Minerals are present in all natural waters (sometimes referred to as total dissolved solids or TDS) and do not indicate the presence or absence of lead. The presence of TDS (minerals) in filtered water is <u>not</u> an indicator that POU device is no longer reducing lead.

Information about NSF Certified Product Listings

Products listed by NSF International Certified Drinking Water Products for Lead Reduction:

- are certified for lead reduction in drinking water;
- may be certified for the reduction of other contaminants/impurities in addition to lead;
- are tested at 20°C/68°F but have not been tested for contaminant reduction at elevated temperatures, such as shower or bath water temperatures;
- MUST be maintained through regular replacement of cartridges or filters according to the instructions provided by the filter manufacturer; and
- Certified POU devices have been tested to be effective up to 150 parts per billion (ppb) lead. Filter performance has not been evaluated for performance above 150 ppb and should not be relied on when lead levels in tap water exceeds 150 ppb.

Resources

U.S. EPA Safe Drinking Water Hotline
Website: www.epa.gov/your-drinking-water/safe-drinking-water-hotline
Phone: 1 800.426.4791

MassDEP
For more information on POU see: http://www.mass.gov/eea/agencies/massdep/water/drinking/home-treatment-devices-point-of-entry-point-of-use-tre.html
Email: Program.director-dwp@state.ma.us

NSF International
Website: www.nsf.org/info/leadfiltrationguide
Email: info@nsf.org
Phone: 1 800.673.8010

Water Quality Association
Website: https://www.wqa.org/
Phone: 1 630.505.0160

Equipment Maintenance Log

Name of Equipment		Manufacturer's contact details:	
Label:		Date of purchase:	10/15/2016
Serial number:		Person responsible for equipment:	
Manufacturer:		Date put into service:	10/23/2016

Date:	Maintenance Description	Maintenance performed by:	Date of validation before put into service:	Validation performed by:	Next maintenance planned on (date):	Remarks:

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