

# POINT OF ENTRY (POE) PILOT PROJECT MAINTENANCE MANUAL



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Brought to you by  
Imperial County Public Health Department  
Environmental Health Division

&

California State Water Resources  
Control Board

This Supplemental Environmental Project is being undertaken as part of the  
settlement of Water Board enforcement action.

*Spanish Version on Back*  
*Versión en español en la parte posterior*

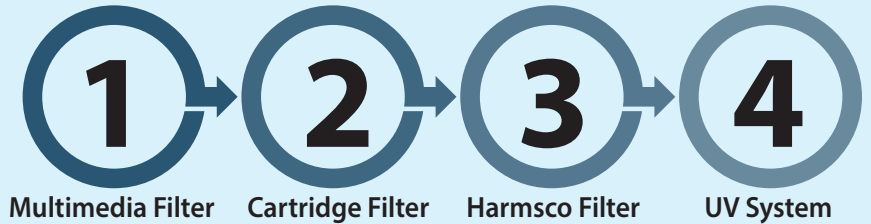


# THE IMPORTANCE OF MAINTAINING YOUR POE WATER SYSTEM

In order to keep your POE water system operating to its potential, there are a few things you, as the owner of the POE, need to consider. First, the condition of the water in your cistern is key to the operation of your filters, and in turn, the operation of the UV light. By providing cleaner water to the POE, the more efficient the system runs and the longer the filters will last. More importantly, knowing how to maintain the filters and UV light will provide a long-lasting POE system. Therefore, we are pleased to provide this manual on what components need replacing, when they need replacing, the approximate cost of each and a list of resources you can use in the maintenance and operation of your POE.



# POINT OF ENTRY (POE) OVERVIEW

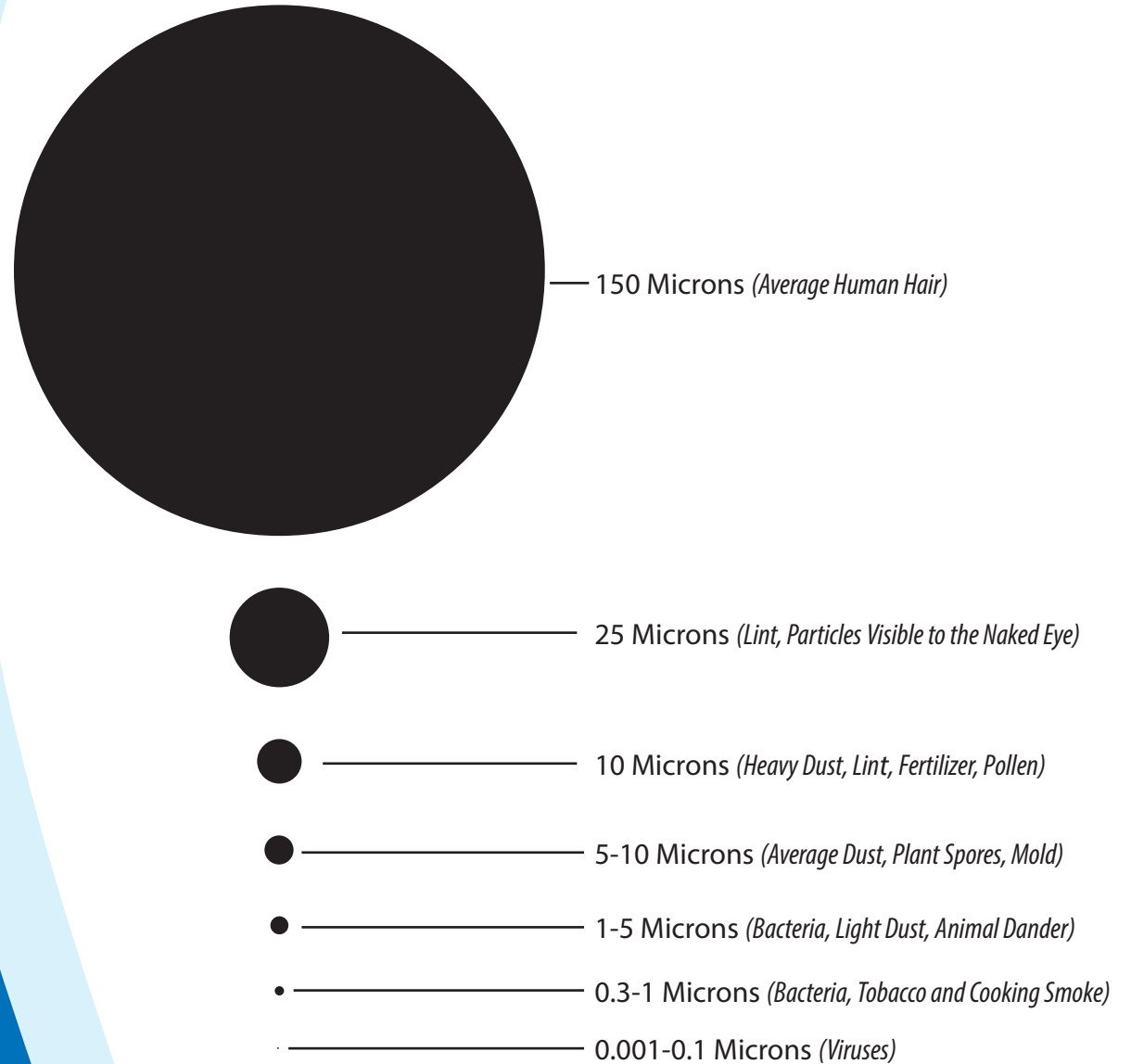


Each POE includes a 4-step process for filtration and disinfection. While your POE system may look slightly different from the one pictured, it includes all the same filters and ultraviolet (UV) disinfection system. The 4-step process begins with the first and largest filter identified as the Multimedia Filter (1). Next, water will travel through the Cartridge Filter (2), then the Harmsco Filter (3), and lastly water will be disinfected by the UV light (4). Each step of the filtration process plays an important role on the effectiveness of your POE. Every filter removes different sizes of particles and finally the UV light kills bacteria remaining that the filters are unable to remove.



# FILTERS

The purpose of each filter is to remove particles of varied sizes from your water. Each filter can remove particles that are different sizes. The micron size will determine what particles the filter can remove from the water going through it. For reference, here is an example of micron sizes.





# MULTIMEDIA FILTER

- **What Does it do?**

- It reduces the level of suspended solids (e.g., silt, clay, grit algae) commonly found in the canal water. It can filter particles as small as 20 micrometers (mm).

- **Why is it important?**

- It is the first line of defense when treating the water. It removes most of the larger particles in the water and allows the smaller filters to work more efficient.

- **How and When do I replace it?**

- The media (small rocks) inside can last several years, likely 20+ years, due to its ability to rinse and keep clean. If it needs replacing, the media can be removed by vacuuming it out. The top valve carries a 5-year warranty.



# CARTRIDGE FILTER

- **What Does it do?**

- It further reduces the level of suspended solids in the canal water. Can filter particles as small as 10 mm.

- **Why is it important?**

- It removes smaller particles that the multimedia filter could not remove and protects the smaller Harmsco filter.

- **How and When do I replace it?**

- First open the nearest hose bib and make sure that the pressure gauge is set to 0 before opening the housing. Next open the blue housing by twisting it and remove the cartridge. Replace with a new one every 6-12 months and discard the old cartridge.





# HARMSCO FILTER

- **What Does it do?**

- It is the most efficient filter of the three. It can remove particles down to 1 mm.

- **Why is it important?**

- It removes the smallest of particles, including bacteria and anything else the other filters did not remove. It also provides clean water so that the UV light can work more efficiently to kill bacteria and viruses left in the filtered water.

- **How and When do I replace it?**

- First open the nearest hose bib and make sure that the pressure gauge is set to 0 before opening the housing. Next, open all the butterfly nuts, remove the lid, and remove and replace the cartridge filter. Replace with a new one every 12 months and discard the old cartridge.

# UV LIGHTS

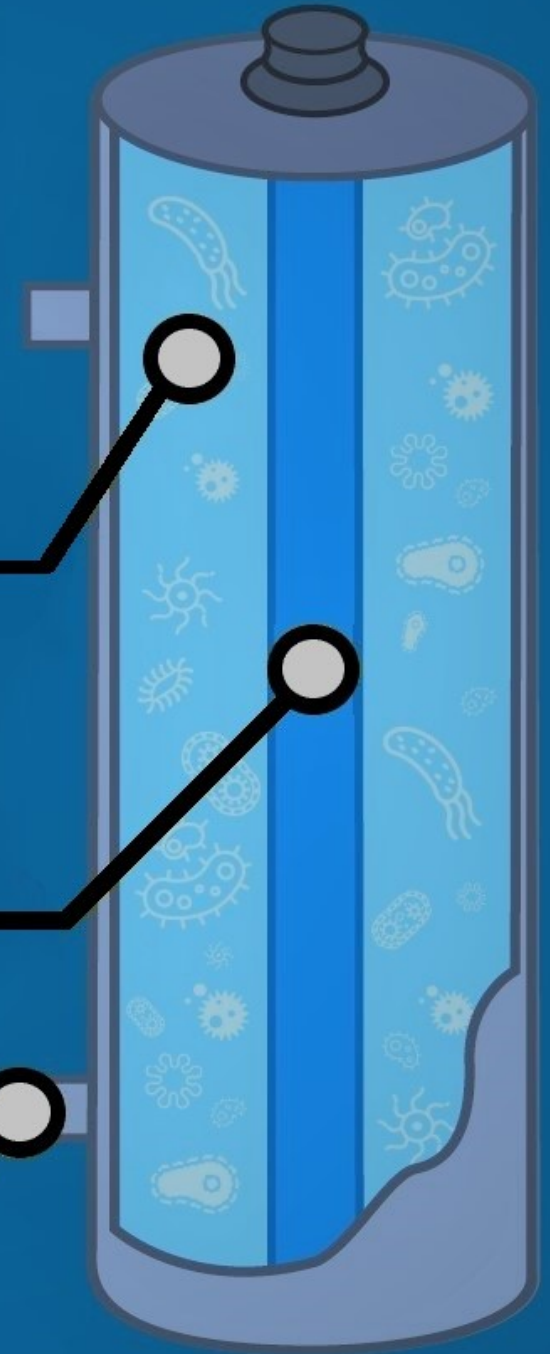
The last step in the POE process involves Ultraviolet (UV) light disinfection. The UV Light is a special light that kills bacteria and viruses as they pass through the chamber. The UV light does not remove particles from water, but it disinfects filtered water prior to entering the home.

## HOW DOES UV WORK?

**1. Contaminated water moves through a UV Chamber.**

**2. The UV light kills bacteria as the water passes outside the light.**

**3. Safer water is ready for household use.**





# ULTRAVIOLET LIGHT SYSTEM (UV LIGHT)

- **What Does it do?**

- It is the final step in the POE process. It disinfects the water with a bright light as water passes through it.

- **Why is it important?**


- It kills bacteria and viruses that travel past the filters.

- **How and When do I replace it?**

- It should be replaced every 365 days. The indicator box above the UV light shows how many days are left in its cycle. Once 365 days have passed, an alarm will ring indicating that it is time to replace the light. Only the bulb inside needs replacement.

*Note: Do not unplug the UV Light except during lamp replacement or in the event of a water pressure loss. The UV lamp may be damaged during operation without water flow through the reaction chamber.*





# ESTIMATED MAINTENANCE COSTS

## Annual Cost for Parts

Cartridge Filter: \$25 – \$30

Harmsco Filter: \$330 – \$360

UV Lamp: \$125 – \$135

Total Annual Cost: \$480 - \$525

**or**

## Monthly Cost for Parts

Cartridge Filter: \$2.00 – \$2.50

Harmsco Filter: \$27.50 – \$30.00

UV Lamp: \$10.50 – \$11.25

Total Monthly Cost: \$40.00 - \$43.75

# RESOURCES

## **For Filters and UV Light Replacements and Parts:**

### **Multimedia Filter HC3 1MMF (Part No. - 100236083):**

-So.Cal Water Solutions- (760) 353-9003  
(5-year valve warranty)

### **Cartridge (20" Big Blue 10 Micron):**

-Amazon.com  
-So.Cal Water Solutions- (760) 353-9003  
-Home Depot  
-Lowe's  
-LaBrucherie Irrigation- (760) 336-3000

### **Harmsco (Part No. - HC/40-LT2):**

-So.Cal Water Solutions- (760) 353-9003  
-Harmsco - (800) 327-3248

### **UV Light (Part No. - S200RL-H0):**

-So.Cal Water Solutions- (760) 353-9003  
-LaBrucherie Irrigation- (760) 336-3000

## **Cistern & Pump Maintenance**

-Solin DB Water Solutions- (760) 626-4371  
-M&M Pump- (760) 356-2442

## **Laboratories for Water Testing**

Imperial County Public Health Department Laboratory  
935 Broadway Ave.  
El Centro, CA 92243  
(442) 265-1427

Babcock Laboratories  
1550 Pepper Dr. Suite D  
El Centro, CA 92243  
(951) 653-3351

## **Imperial County Public Health Department**

-Environmental Health Division- (442) 265-1888