KAI PONO SOLUTIONS

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www.kaiponosolutions.com

June 10th 2024

Mr. Leo Cosentini

California State Water Resources Control Board
Division of Water Quality
P.O. Box 100 Sacramento, CA, 95812-100

Re: Trash Treatment Control Device Application for Kai Pono Solutions Curb & Gutter Basins

Dear Mr. Cosentini,

Below is Kai Pono Solutions application to receive certification for our Standard Basic System Full Capture System. We have organized our application to meet the requirements in the Trash Treatment Control Device Application.

Per the application guidelines the following document is broken into 8 sections and an appendix:

1. Cover Letter
2. Table of Contents
3. Physical Description
4. Installation Guide
5. Operations and Maintenance Information
6. Vector Control Accessibility
7. Reliability Information
8. Field and Laboratory Testing Information and Analysis

Thank you for reviewing and the opportunity to apply for this certification. Please contact us should you have any other questions.

Navy McKee
CEO & Founder, Kai Pono Solutions

KAI PONO SOLUTIONS

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1. Cover Letter

1A. General Description

The Kai Pono Solutions Standard Basic System (System) is a gravity fed stormwater filtration system primarily designed for capturing trash by its 5 mm vertical filters but it is also designed to capture sediment through its Matala horizontal filters. The system is self- contained and installed at the street level in locations where a typical curb inlet and storm vault are not present, rather than many other full capture systems that are installed within a storm vault connected to a curb inlet. The System is a unit comprised of 3 basins that are 15" wide, 9' long, and 13" deep. Two units can be connected in series, for a length of 18' to capture more trash and sediment. The System filters out trash and sediment from stormwater in a sequence before discharging to the downstream storm drain inlet.

1B. The applicant's contact information and location.

Chief Executive Officer, Navy McKee
270 N El Camino Real Suite F346, Encinitas CA 92879
808-896-9392
navy@kaiponosolutions.com

1C. The applicant's webpage address where the System can be found on the applicant's website;

https://www.kaiponosolutions.com/solution

1D. The location of the System manufacturing site;

Kai Pono Solutions is currently manufactured in Osborne, Kansas.

1E. A brief summary of any field or laboratory testing results that demonstrates the System functions as described within the application;
The System has been pilot tested. The results show that the System captures all trash 5mm or greater as well as an average of 99% of Total Suspended Solids (TSS). (Appendix E)

1F. A brief summary of the System limitations, and operational, sizing, and maintenance considerations;

System Limitations: The System is only able to trap trash from stormwater influent that enters the drainage system from an upstream surface source through overhead grates supplied by the purchaser. The hydraulic capacity of the System is 1.14 ft3/second. The System includes a 6" outlet pipe connected to the downstream stormwater inlet. The maximum flow to the outlet pipe is governed by the slope of the drainage system and degree of blinding of the screens in the end basin. Flows greater than the flows that enter the outlet pipe will bypass the System at its surface and flow downstream. The greater the system's 5mm screens are blinded in the end basin, the less flow will flow into the outlet pipe. It should be noted that the System's five other vertical screens must be completely blinded before blinding of the sixth vertical screen and horizontal screen in the end basin will begin reducing flow to the outlet pipe.

Operational Considerations: Installation of the System must be performed by the purchaser (or by a third party contracted by the purchaser) including surface traffic grates and piping as required by local municipality specs. The main system components, such as the basins and filter housings, are to be provided by Kai Pono Solutions. It is mandatory that the installation be performed to not allow any gaps from beneath the System that would allow mosquitos to escape. In order for water that enters the cavity below the System to drain, the installation must include a 1"-2" in diameter outlet pipe (seen extruding from the cavity underneath the System - see Figures 3-1 and 6-2).

Sizing Considerations: The System is to be installed flush with the street surface in recessed concrete. For this reason, the recessed concrete sizing dimensions for a single unit system are roughly 12'-1/2"W X 12'-1/2"D X 9'-1"L. A double unit system's concrete sizing dimensions are roughly 12'-1/2"W X 12'-1/2"D X 18'-1"L.

The peak flow rate for either a single or double unit is 1.14 ft3/second. In accordance with the California Trash Provisions, full capture systems must be able to trap trash for peak flows generated from a 1 year, 1 hour storm from the adjacent drainage area. If the peak flows generated by the 1 year, 1 hour storm is greater than 1.14 ft3/second, the System will not be able to perform as a trash capture device. The Purchaser is responsible for performing the hydraulic calculations to determine the 1 year, 1 hour peak flow rate generated from the adjacent drainage area.

Maintenance Considerations: Maintenance is required to ensure the hydraulic capacity of the system. This will vary depending upon trash loading which will eventually blind the screens in the end basin. Purchasers must be aware that once the Systems vertical screens and final horizontal screen in the end basin become blinded and/or the surface grates become blinded by trash, all flows will flow down-stream at the surface instead of the into the outlet pipe. Because some smaller trash can enter the bottom of the system through the surface grates and via a gap in each basin, occasional maintenance of the subdrainage filter may be necessary to ensure the System completely drains. The Municipal Permits issued by the State or Regional Water Boards provide specific maintenance requirements that the purchaser should review when determining adequate maintenance intervals. More thorough maintenance information is provided in Section 5. These Municipal Permits will not specifically address the maintenance of the subdrainage filters so the purchaser must determine a proper maintenance interval for the subdrainage filters. Maintenance performed on the System prior to blinding of the vertical screen and horizontal screen in the end basin will maximize flows to the outlet pipe.

1G. A description or list of locations, if any, where the System has been installed for the purposes of trapping trash. Include the name and contact information of as many as three municipalities purchasing the System;

5415 Makena Alanui Road, HI, 96753 (Private development). See Figure 6-4 through 6-6

1H. If the System is designed to operate outside of a typical stormwater catch basin and is able to trap trash from high flows, indicate a preference to be listed as a high flow capacity System on the State Water Board's website; and
Since the hydraulic capacity is 1.14 ft3/second, The System is not a high flow capacity system.

Certification Clause

1I. The application shall be signed by the owner or authorized representative (not the technical or sales representative) and include the following certification:

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 that manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Navy McKee
CEO & Founder, Kai Pono Solutions

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3. Physical Description

3A. Trash Capture: Describe how the System traps trash particles 5-millimeters or greater. Unless the System is designed to self-clean the screen or filter area, screens and filters sizes must be between 4.5 to 5 millimeters. Expandable filters must be sized between 4.5 to 5 millimeters at peak hydraulic capacity at 50 percent screen blinding;

The System includes three main mechanisms which trap particles 5mm or greater. As storm water flows through the system:

- Each of the three basins within the System have 5mm vertical wire mesh that trap trash from flowing horizontally; and
- A horizontal filter at the bottom of each basin within the system that prevents trash from discharging into the bottom of each basin.
- A horizontal 5mm screen at the top of the final basin to filter trash entering through the final grate
- Smaller pieces of trash that enter the bottom of the System through the surface grates and via a gap in each basin is trapped in that basin by the adjoining 5mm vertical screen.

3B. Peak Flows/Trash Capture Volumes: Explain how the System is sized for varying peakflow rates and trash capture volumes;

The Kai Pono Solutions Standard Basic System is sized such that it will function as intended for all flow rates up to 1.14 cubic feet per second. The hydraulic capacity is unaffected until after the first and second basin's 5mm screen become blinded (and the first vertical 5mm screen in the end basin becomes blinded). The hydraulic capacity will begin to decline once the end basin's second vertical 5mm screen begins to slowly blind.

3C. Hydraulic Capacity: 1) For all standard sizes, provide a table of the hydraulic capacity for the conditions of no screen blinding and zero trash capture in the System and at several intervals of screen blinding (including 50 percent), or trash capture volume. 2) Provide the methods or equations used to determine hydraulic capacity. If equations are used, provide one example; and 3) If the System has alternative configurations that impact the hydraulic capacity, include a table of the hydraulic capacity for each System configuration.

The System has a hydraulic capacity of at least 1.14 ft3/s with no screen blinding and zero trash capture. This value was calculated using the same theory which is used to find flow through an orifice (see Calculation 3-1). The drag coefficient was calculated by our team, this calculation can be found in Appendix F. At 50% blinding the hydraulic capacity of the system is assumed to be halved to 0.57 ft3/s. While trash capture volume can be doubled with the installation of two units in sequence, the hydraulic capacity remains unaffected. It should be noted that hydraulic capacity of the System was calculated without including any water filtering through the horizontal filters.

Parameter	Symbol	Value	Units	(Alt Value)	(Alt Units)	Equation	Notes
Hydraulic Capacity	Q	1.14101	ft^3/s			$Q = A_f \cdot C \cdot \sqrt{g \cdot h}$	
Percent Open Area	$A_{\%}$	0.66	-				Provided by vendor
Total Area	A	0.32965	ft^2	47.47	in^2		Bounding area of wire mesh
Flow Area	A_f	0.21757	ft^2			$A_f = A_{\%} \cdot A$	Open area in wire mesh
Drag coefficient	C	1.307	-				Based on calculation, see Appendix F
Acceleration due to gravity	g	32.2	ft^2/s				
Water height above screen	h	0.25	ft	3	in		Thickness of grates

Calculation 3-1: System Hydraulic Capacity

3D. Comparison Table: For all standard sizes, provide a table that includes the peak flow rates, and recommended maximum trash capture volume;

SYSTEM CONFIGURATION	PEAK FLOW RATE (FT^3/S)	RECOMMENDED MAX. TRASH CAPTURE VOLUME (FT^3)
Standard 3 Basin System	No Blinding 1.14 50% Blinding 0.57	4.5
Each Additional Basin	No Blinding 1.14 50% Blinding 0.57	1.5

3E. Design Drawings: Provide design drawings for all standard System sizes and, if any, alternative configurations.

Below is an image of a typical system followed by an image of a single basin. A System typically consists of 3 basins, though an additional System with three basins can be connected together. Figure 3-1 represents the entire assembled and constructed system in place. Figure 3-2 and Figure 3-3 represent the first basin in the series, Figure 3-4 and Figure 3-5 represent the middle or 2nd basin in the series, and Figure 3-6 and Figure 3-7 represent the 3rd or last basin in the series.

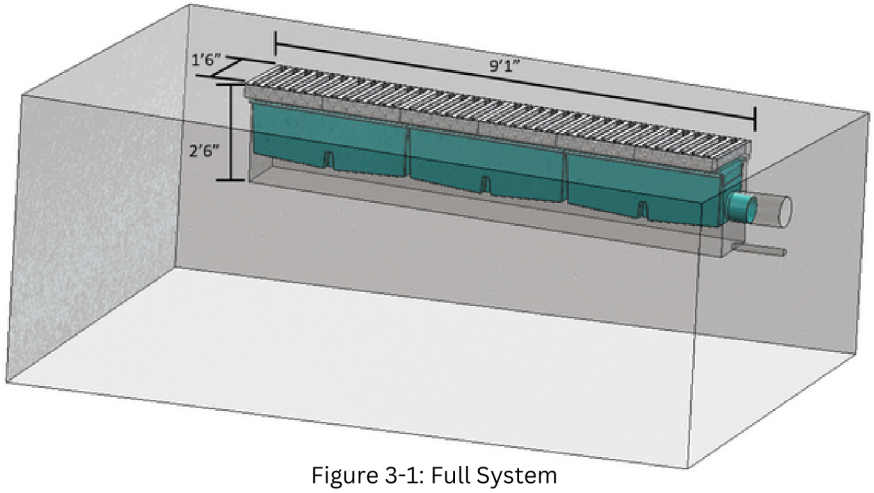


Figure 3-1: Full System

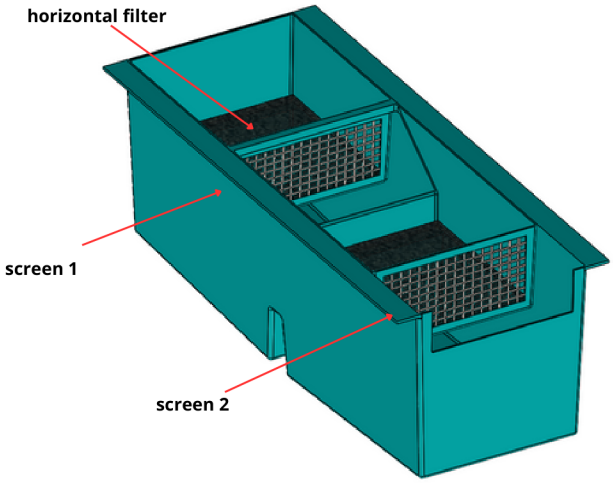


Figure 3-2: First Basin
*Note: same bounding dimensions as in Figure 3-4

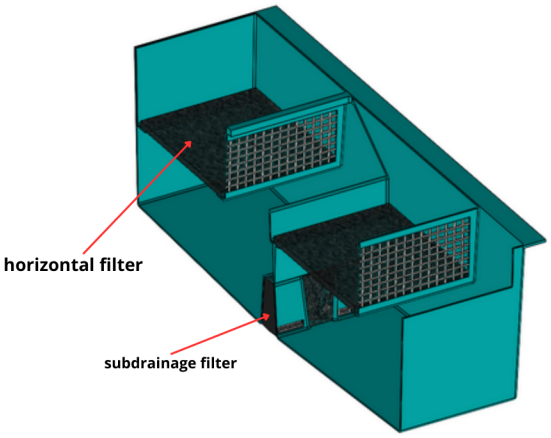


Figure 3-3: First Basin Section View

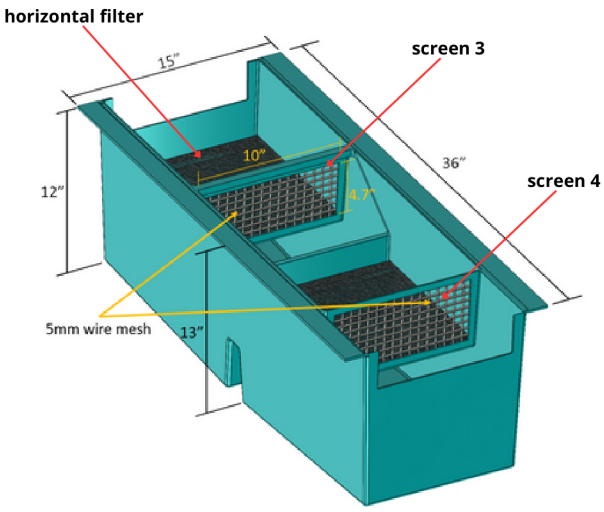


Figure 3-4: Middle Basin

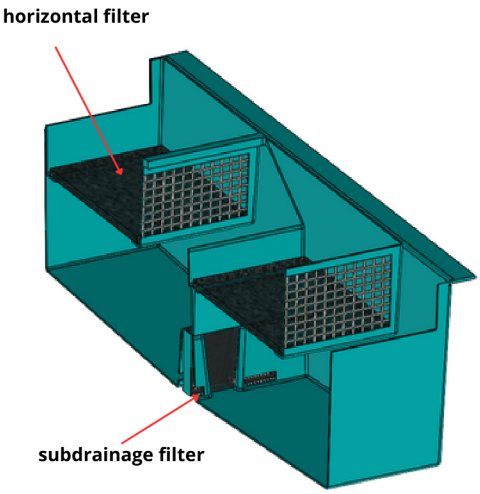


Figure 3-5: Middle Basin Section View

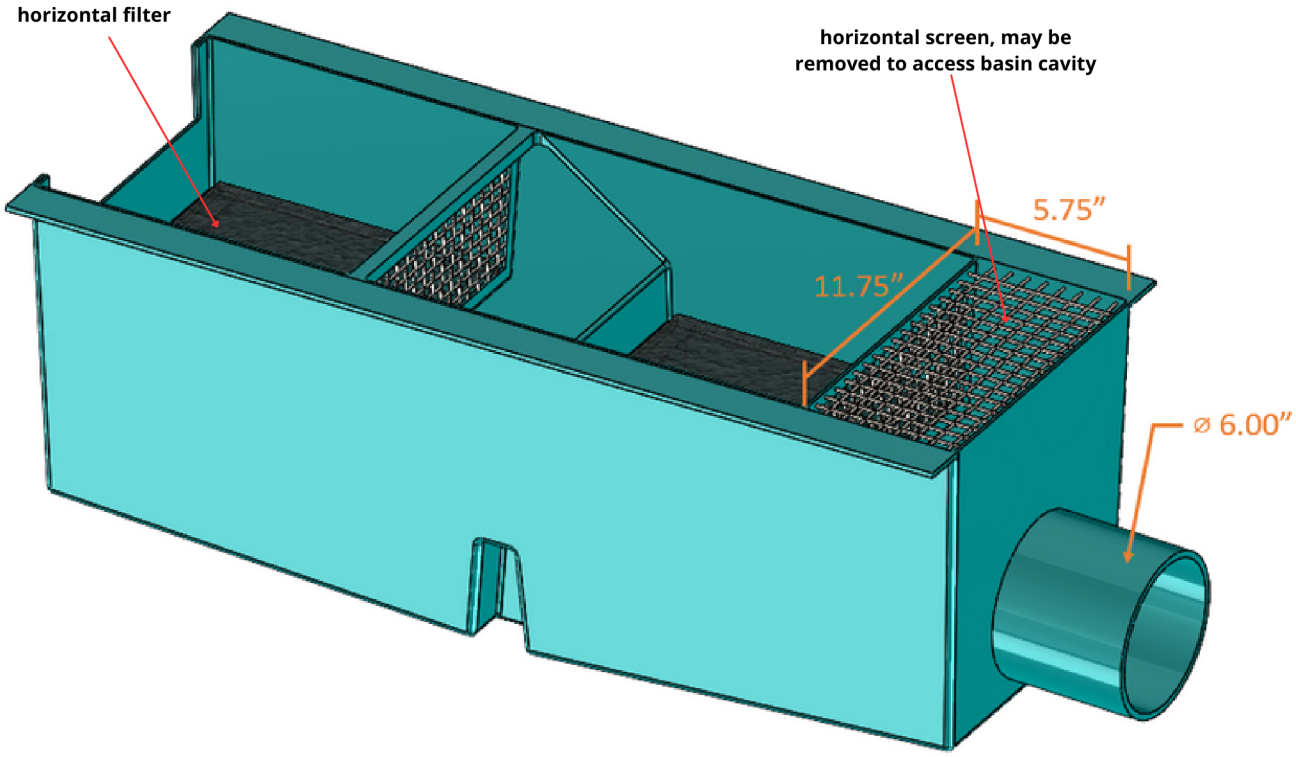


Figure 3-6: End Basin
*Note: same bounding dimensions as in Figure 3-4

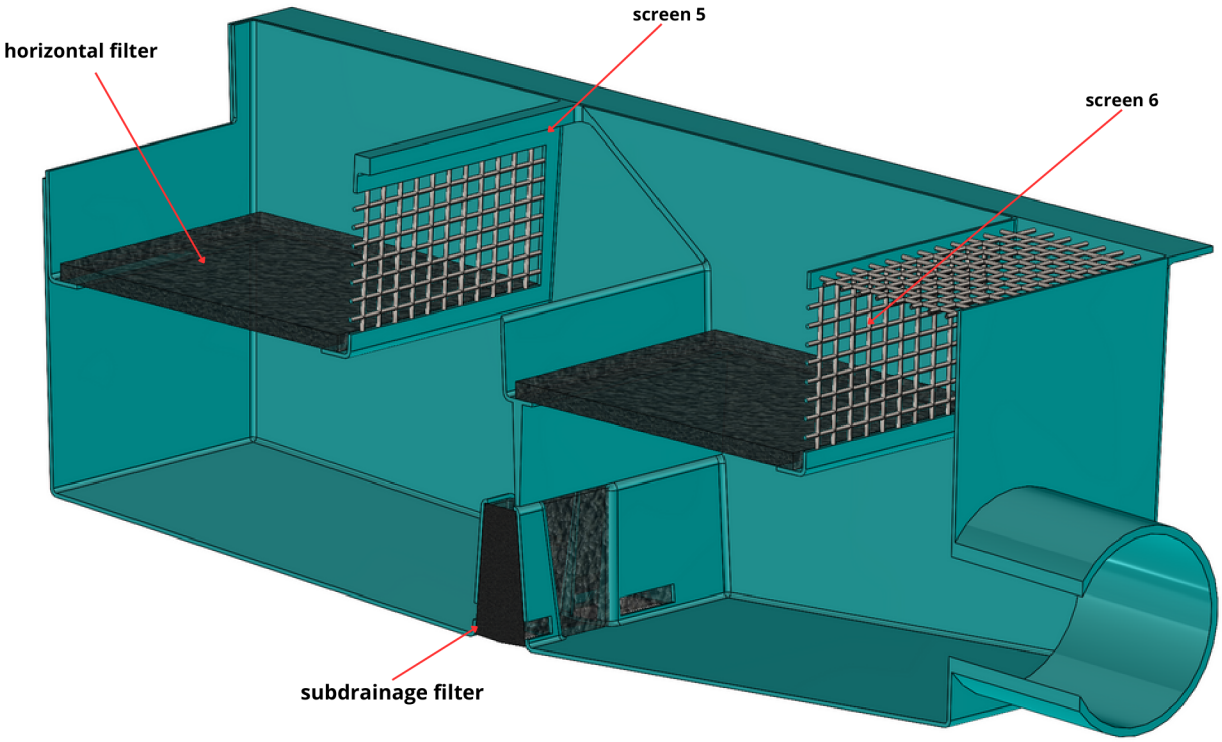


Figure 3-7: End Basin Section View

3F. Alternative Configurations: If the System includes two or more configurations, explain the purpose of each configuration and any mandatory installation conditions;

An example of an alternative design, would be two Systems connected in series with twice as many basins.

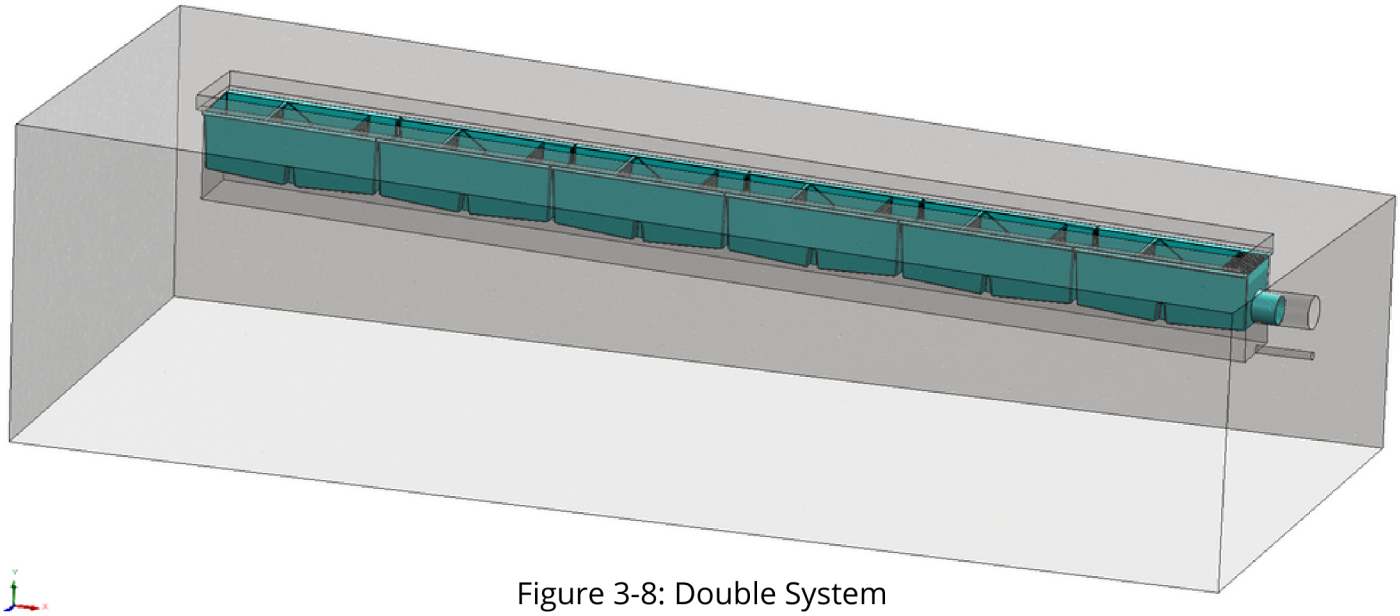


Figure 3-8: Double System

3G. Internal Bypass: If the System has an internal bypass, explain how the bypass functions to only allow a bypass of flows exceeding the peak flow rate; - 5 -

The System is designed to treat flows of up to 1.14 ft3/second which will flow into a 6" outlet pipe connected to the adjacent interior wall of the downstream third basin. The third basin of the unit includes an overflow function that allows additional flows to enter into the 6" outlet pipe. The 6" outlet pipe allows a flow of up to 1.14 ft3/second. Flows above the hydraulic capacity of the 6" outlet pipe remain external and bypasses the System which allows stormwater to flow downstream at the surface and not into the stormwater inlet as if no system is in place. Purchasers must be aware that once the Systems vertical screens and final horizontal screen become blinded and/or the surface grates become blinded by trash, all flows will flow down-steam at the surface.

3H. Previously Trapped Trash: Explain the condition(s) under which the System re-introduces previously trapped trash (e.g., via the internal bypass);

The System can only allow for the reintroduction of trash for flows exceeding its hydraulic capacity of 1.14 ft3/second or when the final vertical screen and horizontal screen becomes blinded.

3I. Calibration Feature: If the System includes an adjustable calibration feature, describe how the calibration feature functions; i. Photos: If any, provide the System installation photographs;

N/A.

3J. Material Type: Provide each material and material grade used to construct the System (e.g., stainless steel, plastic, etc.); and

The basins of the system as well as all filter housings are created through mold injection using a plastic called pDCPD(polydicyclopentadiene). The 5mm wire mesh is made of woven stainless steel type 316. Material specifications for the horizontal and subdrainage filters can be found in Appendix D.

3K. Design Life: Provide the estimated design life.

The warranty on devices is 365 days from date of purchase. Per our manufacturer, devices can last up to 20 years if properly handled and maintained.

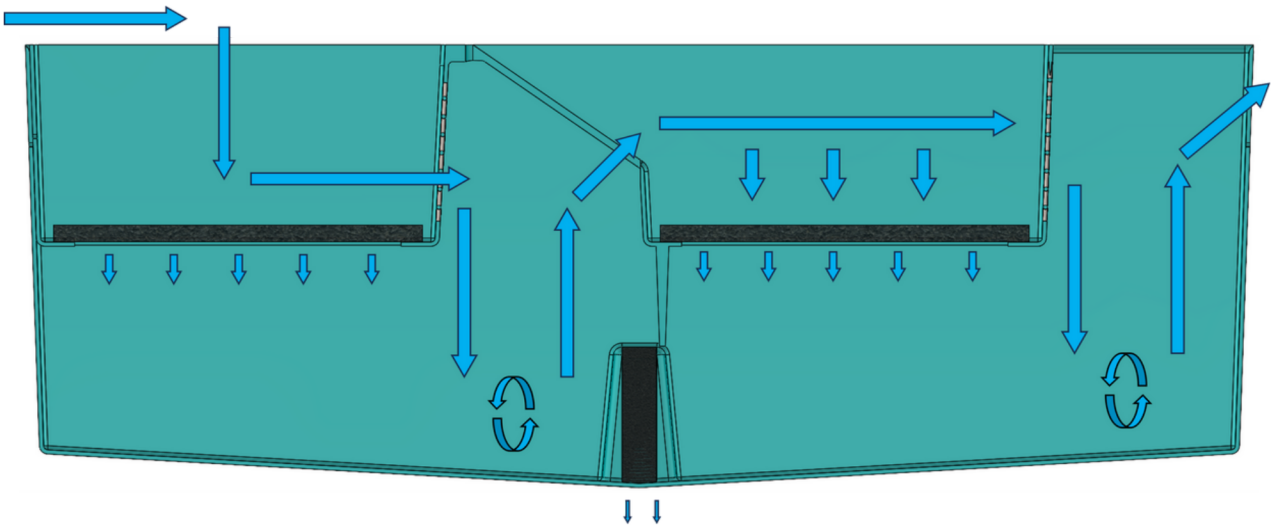


Figure 3-9: Flow Through the 1st and 2nd basin

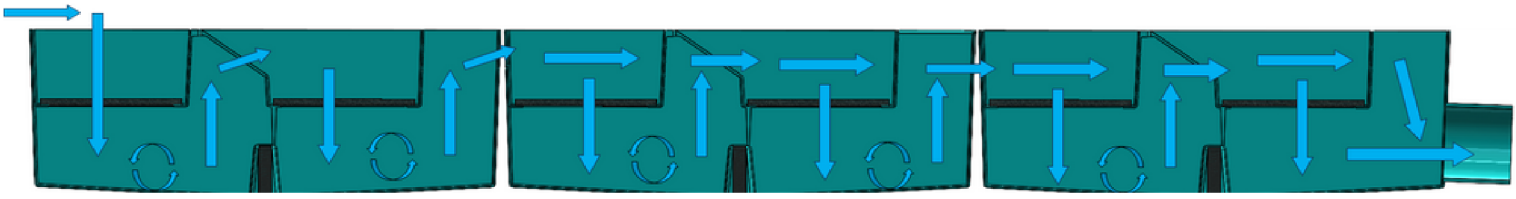


Figure 3-10: Flow Through a Standard 3-Basin System

4. Installation Guide

4A. Standard System installation procedures including calibration instructions if applicable;

Appendix A shows an informal depiction of the installation of the system. Our system is designed for locations where a typical curb and gutter inlet is not present.
Installation simply consists of placing the basins in the recessed concrete in the appropriate order. There will be one entry basin, one middle basin (or more if desired), and one exit basin. The entry basin can be identified by the single cutout at the top of it's front face. The middle basin can be identified by the two cutouts at the top of the front and back face. The exit basin can be identified by the exit pipe. The exit basin shall be placed first, with the exit pipe oriented downstream. The middle basin(s) shall be placed upstream and adjacent to the exit basin. Finally, the entry basin shall be placed upstream and adjacent to the middle basin(s). Lastly, there shall be no gaps between the basins this will be achieved through rubber gaskets between the basins.

4B. Description of System installation limitations and/or non-standard System installation procedures;

N/A.

4C. Methods for diagnosing and correcting installation errors.

Installation personnel shall inspect final installation to ensure there are no gaps that would allow mosquitos to fly out from beneath the basins. The invert of the vault shall have a positive flow to the discharge pipe which must be at or below the invert level.

5. Operation and Maintenance Information

5A. Inspection procedures and frequency considerations;

Inspection frequency will depend on site specific information, though for best results Kai Pono suggests quarterly inspections. However, the Municipal Storm Water Permit may specify more frequent maintenance.
Inspections should consider these aspects:

- Clogging of the system at any point in the path of flow (including subdrainage filters)
- Gaps between basins or at inlet/exit of system which would interrupt the flow of water
- Proper installation of filter housings
- Integrity of basins - informal inspection to identify any major damage

5B. Description of maintenance frequency considerations related to the systems hydraulic capacity at various levels of trash capture volumes (see section 3, above);

It is recommended that the system be serviced once the System reaches 50% of maximum trash capture volume in the end basin or as required by Municipal Stormwater permits. Maintenance of high-density subdrainage filters and horizontal filters should be performed every 2-3 Qualifying Rain Events (anytime more than 0.1" of rain occurs).

5C. Maintenance procedures, including procedures to clean the trash capture screen;

See Appendix B for maintenance instructions. The horizontal filters and high-density subdrainage filters should be replaced based on visual inspection and are not intended to be replaced often.

5D. Essential equipment and materials for proper maintenance activities;

Refer to appendix B.

5E. Description of the effects of deferred maintenance on system stuctural integrity, performance, odors, etc.

Deferred maintenance will have no negative impact on the basins themselves. However, deferred maintenance could possibly result in vertical screen blinding, which will allow water and trash to flow past the last grate, down gradient at the surface.,

5F. Repair procedures of the System's structural and screening components.

Should any of the systems components be damaged, Kai Pono should be contacted and the components should be repurchased or replaced based on warranty terms.

6. Vector Control Accessibility

6A. The date the System application was submitted for vector control accessibility design verification via email to the Mosquito Vector Control Association of California at Trashtreatment@mvcac.org. The Mosquito Vector Control Association of California has prepared a video (https://vimeo.com/462828578/5ca5a8d9d2) providing information regarding vector control accessibility;
Approved June 10th 2024. See full Approval Letter in Appendix G.

6B. The description and/or video that demonstrates how mosquito vector control personnel can readily access the bottom of the storm water vault and/or System for visual observation and mosquito treatment; and - 6 -

The system can easily be inspected and treated for mosquito vector control through the traffic grates which sit on top of the system. Minor disassembly may be required including removal of traffic grates and the 5mm horizontal screen in the last basin - this screen is not attached to the basin and may be removed with a common screwdriver or small plyers or a similar tool.

The system also includes a feature that protects against standing water. Figure 6-2 shows how standing water can escape our system by draining into a cavity below our system and into the existing storm water system. This is achieved by allowing excess water to slowly drip through the sub-drainage filter at the bottom of each basin. See Figure 6-3 for a close-up look at how this is achieved. See Appendix D for material specifications of the sub-drainage filter. Mosquitos will not be able to escape up through our system if in the cavity below our system. Note that the 5mm horizontal mesh screen (indicated by the blue arrow in Figure 6-5 and in Figure 3-6) may be easily removed for inspection and treatment.

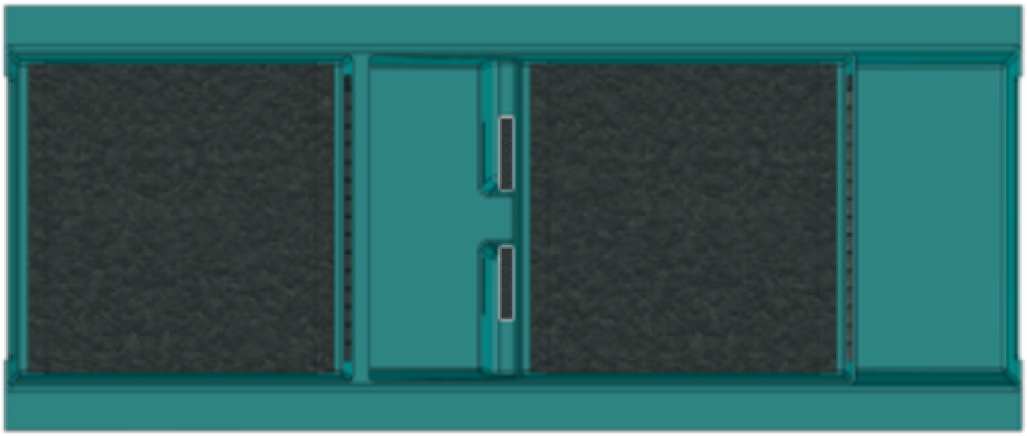


Figure 6-1

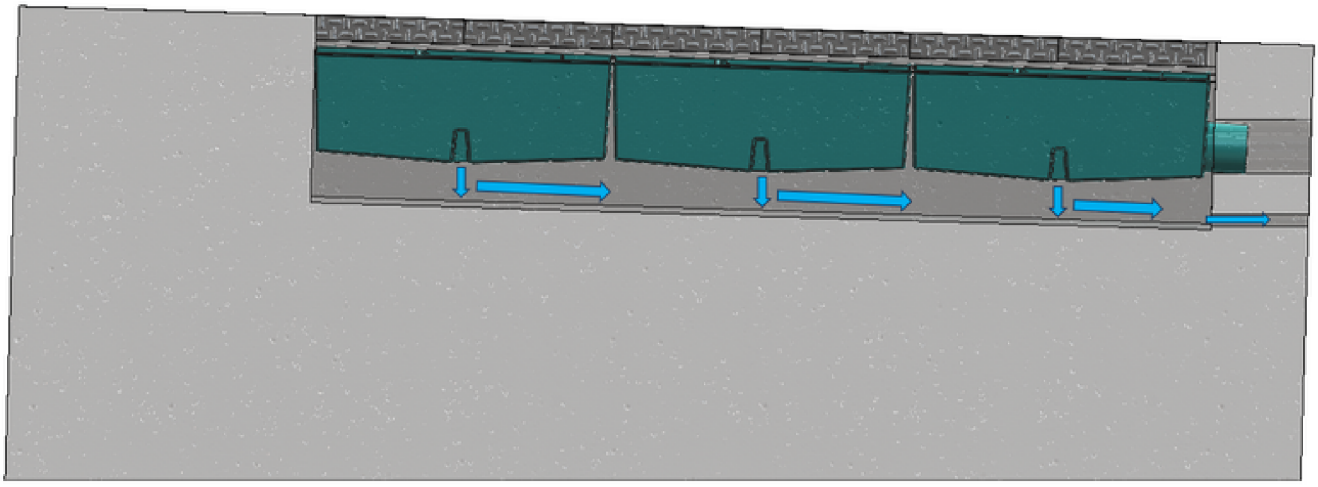


Figure 6-2

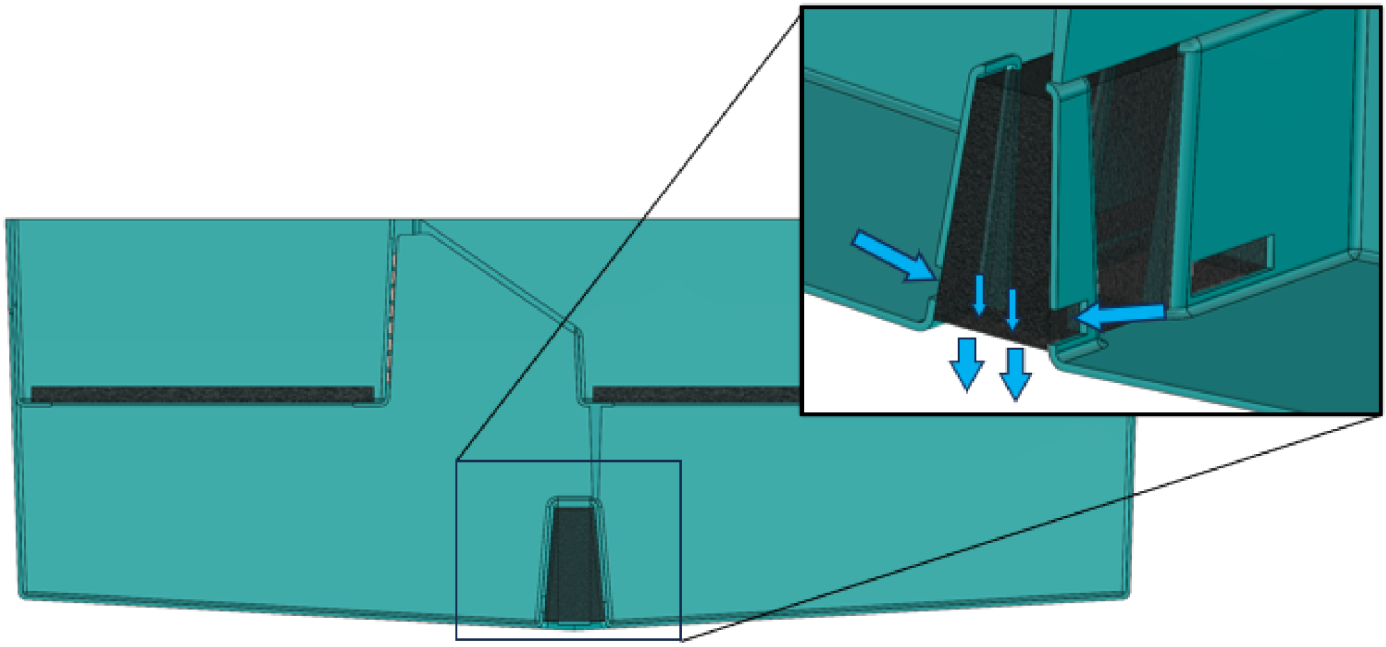


Figure 6-3

Figure 6-4

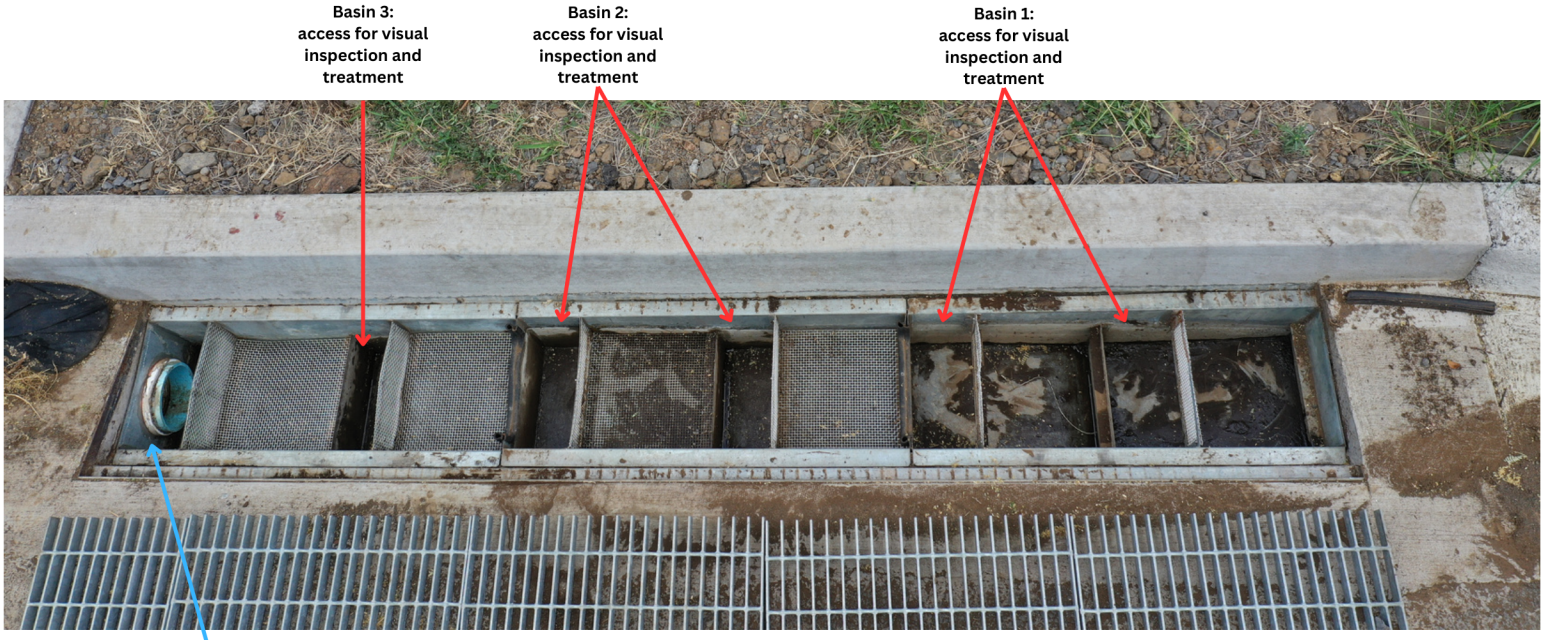


Figure 6-5

*Horizontal mesh is not shown in this figure
but is to be installed in official trash capture models

Figure 6-6

6C. The Mosquito Vector Control Association of California Letter of Verification as an attachment to the application when it becomes available. This letter shall verify that the System design allows full visual access for presence of standing water and treatment of mosquitoes when necessary. The Table of Contents shall note the Mosquito Vector Control Association of California approval letter.

7. Reliability Information

7A. Estimated design life of System components before major overhaul;
The Kai Pono Solutions Standard Basic System has a 20 year minimum design life.

7B. Warranty information;
Warranty letter included in Appendix C.

7C.Customer support information
Kai Pono Solutions has a nationwide customer support team with experience in sales, marketing, engineering and product management. The main contact regarding customer service can be reached at (navy@kaiponosolutions.com)

8. Field and Laboratory Testing Information and Analysis

8A. For Systems with 5-millimeter screening, any available field or laboratory testing information that demonstrates the System functionality and performance;

Pilot Study is attached.

8B. If the System does not include a 5-millimeter screen, adequate field or laboratory testing information that demonstrates the System captures trash particles of 5 millimeters or greater

N/A

APPENDIX A: INSTALLATION DEPICTION

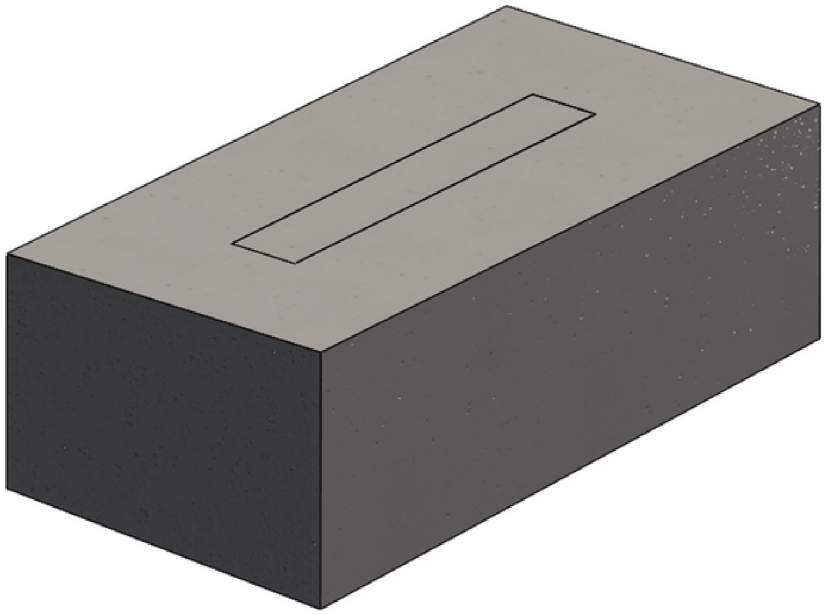


Figure A-1: Installation Step 1

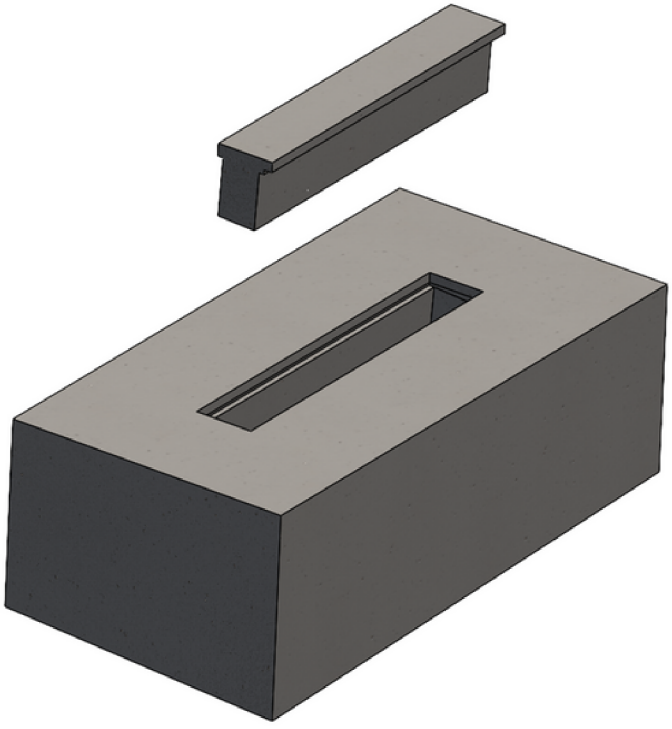


Figure A-2: Installation Step 2

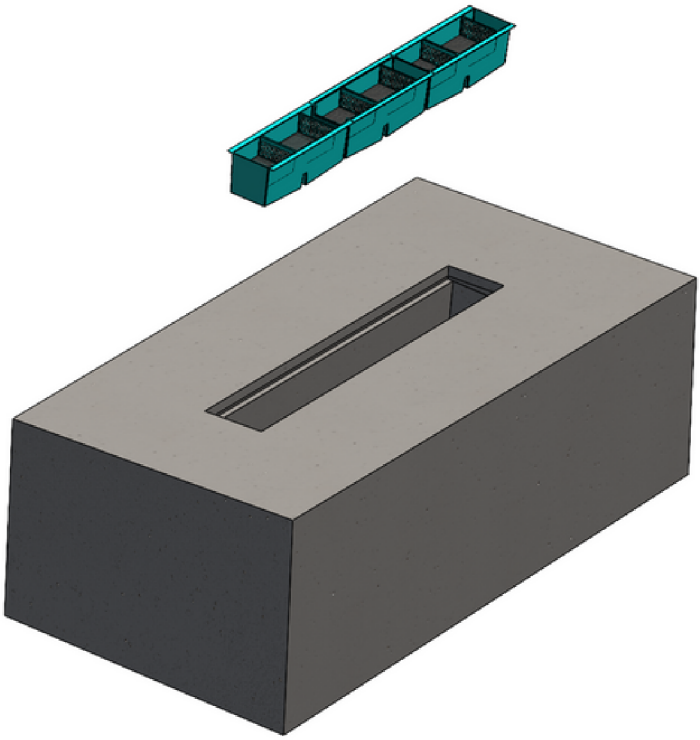


Figure A-3: Installation Step 3

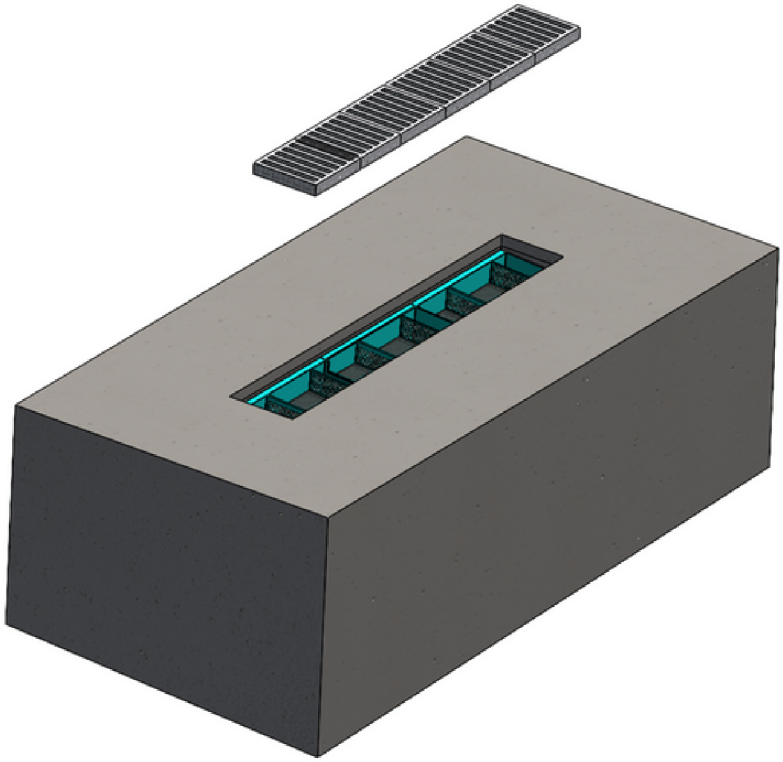


Figure A-4: Installation Step 4

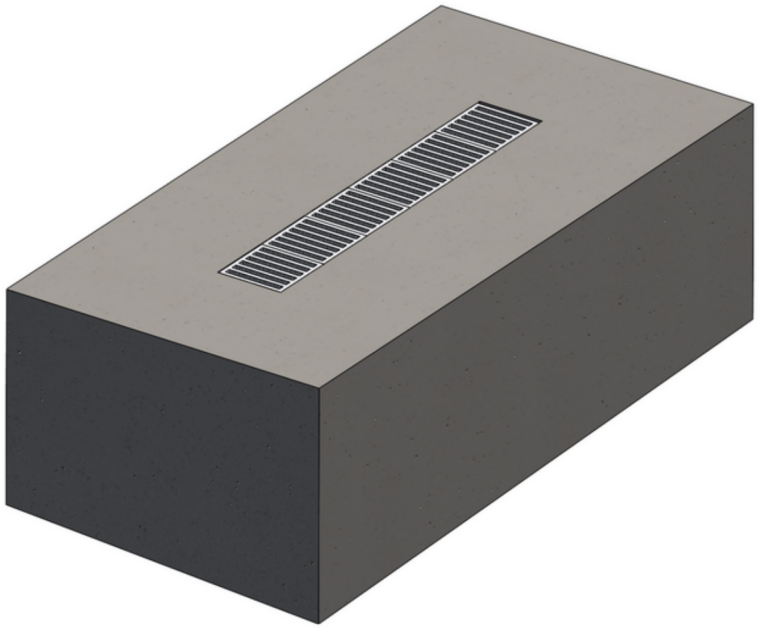


Figure A-5: Installation Step 5

APPENDIX B: MAINTENANCE INSTRUCTIONS

- **Overview**
- **Abbreviated Instructions**
- **INSTRUCTIONS: SET A**
  - Traffic Grate Removal
  - Filter Replacement & Debris Removal
  - Grate Replacement
- **INSTRUCTIONS: SET B (these steps may not be necessary)**
  - Basin Removal

Overview

Maintenance team shall follow local municipality traffic control requirements when maintaining the device. All traffic grates will be removed for an individual basin. Basins will be cleaned of debris, the debris will be stored in a bucket. Then the filter mats and filter media balls will be cleaned, or changed if necessary. The grates will be placed back on top of the basin. This is all repeated for all basins to be cleaned.

Abbreviated Instructions

1. Remove traffic grates using traffic grate removal tool
2. Remove used filter media as needed
3. Clean debris from basin
4. Replace filter media as needed
5. Replace Traffic Grates

Materials required:

- Traffic grate removal tool
- Gloves
- Bucket x 1 (for collection of debris or any expired filters)
- Vacuum for final cleaning (optional)
- Safety vests (1 per person)

NOTE: not all materials are required for every location. Required materials will be based on configuration of the system at a given location.

APPENDIX B: MAINTENANCE INSTRUCTIONS

INSTRUCTIONS: SET A

Traffic Grate Removal

1) Refer to local traffic control guidelines.

2) Acquire a grate removal tool and safely position yourself to prepare for traffic grate removal.

3) Using the grate removal tool, remove traffic grates one at a time.
   - Ensure that you do not block any sidewalks while you do this, or at any time during the maintenance process.

4) Stow away the grate removal tool.

Filter Replacement & Debris Removal

5) Acquire these 2 items:
- new filter mats (if necessary)
- empty bucket

6) If filter replacement is required, simply replace the filters as needed. If not, move on to step 7.

7) Remove the filter mat from its housing. Place the filter mat in the bucket and spray down with hose or light-duty power washer, ensure the material removed stays in the bucket.

8) Remove any debris that may be resting in the basin. Place in bucket with used filter mats.

9)Repeat steps 6-8 for the subdrainage filter maintenance.

10) Place the bucket out of the way of traffic.

11) IF REMOVAL OF THE BASIN IS NECESSARY, MOVE ON TO INSTRUCTION: SET B NOW. IF NOT, CONTINUE TO STEP 12.
- Repeat for each filter mat as necessary

APPENDIX B: MAINTENANCE INSTRUCTIONS

13) Repeat steps 6 through 10 for each basin as needed.

14) Stow away the bucket.

Grate Replacement

15) Acquire the grate removal tool. One by one, use the grate removal tool to replace the traffic grates on top of the basin.

16) Stow away the grate removal tool.

INSTRUCTIONS: SET B (THESE STEPS MAY NOT BE NECESSARY)

Basin Removal

1) Acquire 1 grate removal tool.

2) Safely position yourself to prepare for basin removal.

3) Hook the grate removal tool underneath the middle bulkhead. Safely lift the basin UP and out of the ground.

4) If necessary, carry the basin to a maintenance vehicle for transportation and acquire a new basin, bringing it back to your previous location next to the cavity.

5) Lower basin into the cavity and secure to adjacent basin.

6) Once all basins are properly installed, replace grates using grate removal tool.

APPENDIX C: WARRANTY LETTER

KAI PONO SOLUTIONS

SEPTEMBER 2022

WARRANTY

This Limited Warranty applies to Kai Pono Basins & Accessories (excludes filter media), and only for physical goods, purchased from Kai Pono Solutions.

What is covered by warranty?
The material covered by this warranty consists of Kai Pono Basins, Filter Media Holders, Bulkheads, and Attachment Pieces. Excluded from warranty is Kai Pono Solutions filter media, since each media has a different life span due to site specific contaminants.

Warranty
Kai Pono Solutions warrants that the products sold under this contract are substantially free from defects in material and workmanship for a period of one year after the date of delivery.

Kai Pono Solutions conveys that the products sold under this contract are in great condition and are free of defects. The buyer has 365 days from the date the device is received to make a report on the warranty.
Kai Pono Solutions will uphold the warranty on the device from the following situations:

- any defects in materials used to manufacture the product
- any defects in workmanship under normal use
- any broken components under normal use

In the event that warranty must take place, a representative from Kai Pono Solutions will use their best judgement to take one of the following actions to uphold the warranty agreement if it is within 365 days of the start of the warranty.
Kai Pono Solutions has the option to:

- repair the product, at no cost, if the product is still under warranty.
- repair any broken parts of a product using new or replacement parts
- exchange for a new product
- refund the price of the product

The Warranty Period for Basins purchased from Kai Pono Solutions is 365 days from the date of purchase. A product that has already gone through the warranty process will begin its own individual warranty cycle resulting in 365 days.

Kai Pono Solutions will not cover any warranty related to the following scenarios:

- Damage of a product resulting from negligence
- Damage of a product resulting from unauthorized modification of the product
- Damage caused by natural disaster
- Theft or loss of the product

Kai Pono Solutions

Sign & Date Here

APPENDIX D: Accompanying Materials

Steel Wire Mesh:
Vendor: McNichols
Product Name: McNichols Wire Mesh
Material: SS 316
Opening Size: 5.16mx5.16m"
Wire Diameter: 18 guage
Link: https://www.mcnichols.com/wire-mesh/square/stainless-steel-ss-310447?rbl=89101280&cId=177

Horizontal Filters:
Vendor: Matala USA
Product Name: Sheet Matala Black
Material: Matala (for more information see vendor website at www.matalusa.com)
Specific surface: 150 m^2/m^3
Fiber Diameter: 1.9m
Pore Size: pores no larger than 5mm

High Density Subdrainage Filters: (Only one subdrainage filter will be used in each basin. Filter type to be selected by Client.)
Vendor: Matala USA
Product Name: Sheet Matala Grey
Material: Matala (for more information see vendor website at www.matalusa.com)
Specific surface: 460 m^2/m^3
Fiber Diameter: 0.45m
Pore Size: pores no larger than 5mm

Vendor: Matala USA
Product Name: Sheet Matala Blue
Material: Matala (for more information see vendor website at www.matalusa.com)
Specific surface: 365 m^2/m^3
Fiber Diameter: 0.55m
Pore Size: pores no larger than 5mm

Vendor: Matala USA
Product Name: Sheet Matala Green
Material: Matala (for more information see vendor website at www.matalusa.com)
Specific surface: 290 m^2/m^3
Fiber Diameter: 0.9m

APPENDIX E: Pilot Results

AECOS, Inc.
45-939 Kamehameha Hwy, Suite 104 · Kaneohe, HI 96744
Telephone: (808) 234-7770 · Fax: (808) 234-7775 · aecos@aecos.com

CLIENT: Kai Pono Solutions
911 Lekeona Loop
Wailuku HI 96793
ATTENTION: Navy McKee navy@kaiponosolutions.com
808-896-9392

FILE No.: 1700
REPORT DATE: 08/16/2022
PAGE: 1 of 2

AECOS REPORT OF ANALYTICAL RESULTS

SAMPLE TYPE: Effluent
DATE SAMPLED: 07/20/22
***AECOS* LOG No.:** 45759
DATE RECEIVED: 07/20/22

SAMPLE ID⇨ / ANALYTE ⇩	Intake 1	Discharge 1	Intake 2	Discharge 2	Analysis Date Analyst ID
Total Suspended Solids (mg/L)	530.0	244	111	21.8	07/21/22 ml
Nitrate+Nitrite (mg /L)	2.46	2.22	2.70	2.66	07/25/22 EC
Total Phosphorus (mg /L)	4.62	2.55	2.92	1.98	08/02/22 EC
PCBs (µg/L)	ND	ND	ND	ND	07/26/22-08/05/22 EC
TPH Diesel (DRO C10-C28) (µg/L)	330	230	350	210	07/26-28/22 EC
TPH Motor Oil (MRO C17-C44) (µg/L)	510	370	580	360	07/26-28/22 EC
Glyphosate (µg/L)	860	810	780	790	07/29-30/22 EC
Arsenic (µg/L)	2.20	2.52	0.274 J	0.451 J	07/26/22 EC
Copper (µg/L)	370	371	423	412	07/26/22 EC
Lead (µg/L)	0.225 J	0.754 J	0.134 J	0.137 J	07/26/22 EC
Zinc (µg/L)	140	293	122	196	07/26/22 EC

Eurofins Calscience Report Number: 570-104138-1

ND – Not Detected (see report)

J – Result is less than the RL but greater than or equal to the MDL and concentration is an approximate value.

A. Mello
For *AECOS*, Inc.

APPENDIX E: Pilot Results

AECOS, Inc.
45-939 Kamehameha Hwy, Suite 104 · Kaneohe, HI 96744
Telephone: (808) 234-7770 · Fax: (808) 234-7775 · aecos@aecos.com

CLIENT: Kai Pono Solutions
911 Lekeona Loop
Wailuku HI 96793
ATTENTION: Navy McKee navy@kaiponosolutions.com
808-896-9392

FILE No.: 1700
REPORT DATE: 08/16/2022
PAGE: 2 of 2

AECOS REPORT OF ANALYTICAL RESULTS

SAMPLE TYPE: Effluent
DATE SAMPLED: 07/20/22

AECOS LOG No.: 45759
DATE RECEIVED: 07/20/22

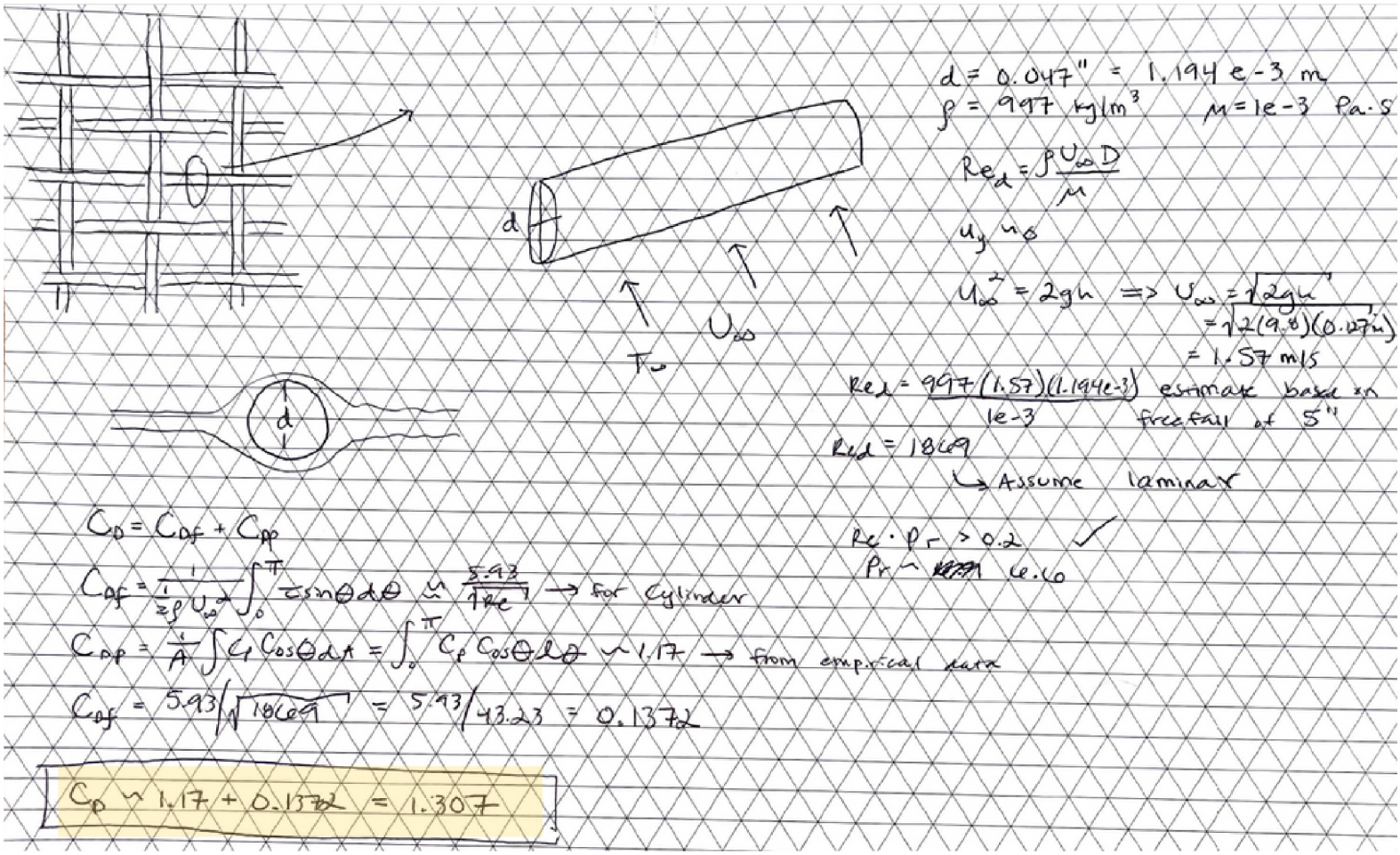
SAMPLE ID⇨ / ANALYTE ⇩	Intake 3	Discharge 3	Method	Reporting Limit / Detection Limit	Analysis Date / Analyst ID
Total Suspended Solids (mg/L)	2,635	7.0	SM2540D	0.1	07/21/22 ml
Nitrate+Nitrite (mg /L)	2.39	2.85	SM4500 NO3E	0.500 / 0.0860	07/25/22 EC
Total Phosphorus (mg /L)	2.27	2.16	EPA 365.1	Varies, see report	08/02/22 EC
PCBs (µg/L)	ND	ND	EPA 3510C / 608.3	Varies, see report	07/26/22-08/05/22 EC
TPH Diesel (DRO C10-C28) (µg/L)	44,000	1100	EPA 8015B	Varies, see report	07/26-28/22 EC
TPH Motor Oil (MRO C17-C44) (µg/L)	85,000	2000	EPA 8015B	Varies, see report	07/26-28/22 EC
Glyphosate (µg/L)	610	580	EPA 547	60 / 34	07/29-30/22 EC
Arsenic (µg/L)	0.258 J	0.345 J	EPA 200.8	1.00 / 0.136	07/26/22 EC
Copper (µg/L)	378	340	EPA 200.8	2.0 / 1.56	07/26/22 EC
Lead (µg/L)	0329 J	0.133 J	EPA 200.8	1.00 / 0.121	07/26/22 EC
Zinc (µg/L)	137	340	EPA 200.8	20.0 / 8.97	07/26/22 EC

Eurofins Calscience Report Number: 570-104138-1

ND – Not Detected (see report)

J – Result is less than the RL but greater than or equal to the MDL and concentration is an approximate value.

APPENDIX F: Drag Coefficient Calculation



APPENDIX G: Mosquito Vector Approval Letter

MVCAC
Mosquito and Vector Control Association of California

One Capitol Mall, Suite 320 • Sacramento, CA 95814 • p: (916) 440-0826 • f: (916) 444-7462 • e: mvcac@mvcac.org

Kai Pono Solutions
270 N El Camino Real Suite F346
Encinitas, CA 92879

June 10, 2024

Dear Ms. Mckee,

Thank you for the submission of the Kai Pono Solutions Standard Basic System for review by the Mosquito and Vector Control Association of California pursuant to the SWRCB Trash Treatment Control Device Application Requirements. The Association has reviewed the conceptual drawings for the Standard Basic System and verifies that provisions have been included in the design that allow for full visual access to all areas for presence of standing water, and when necessary, allows for treatments of mosquitoes.

While this verification letter confirms that inspection and treatment for the purpose of minimizing mosquito production should be possible with the Kai Pono Solutions Standard Basic System as presented, it does not affect the local mosquito control agency's rights and remedies under the State Mosquito Abatement and Vector Control District Law. For example, if the installed device or the associated stormwater system infrastructure becomes a mosquito breeding source, it may be determined by a local mosquito control agency to be a public nuisance in accordance with California Health and Safety Code sections 2060-2067.

"Public nuisance" means any of the following:

1. Any property, excluding water, that has been artificially altered from its natural condition so that it now supports the development, attraction, or harborage of vectors. The presence of vectors in their developmental stages on a property is prima facie evidence that the property is a public nuisance.
2. Any water that is a breeding place for vectors. The presence of vectors in their developmental stages in the water is prima facie evidence that the water is a public nuisance.
3. Any activity that supports the development, attraction, or harborage of vectors, or that facilitates the introduction or spread of vectors. (Heal. & Saf. Code § 2002 (j).)

Declaration of a facility or property as a public nuisance may result in penalties as provided under the Health and Safety Code. Municipalities and the vendors they work with are encouraged to discuss the design, installation, and maintenance of stormwater trash capture devices with their local mosquito control agency to reduce the potential for disease transmission and public nuisance associated with mosquito production.

Sincerely,

Megan MacNee
MVCAC Executive Director