# State Water Resources Control Board
## Division of Drinking Water

February 8, 2023

System No. 3610017

Jennifer Hodges
Havasu Water Company
148821 Havasu Lake Rd.
Havasu Lake, CA 92363
Jennifer@havasuent.com; HavasuWater@outlook.com

**CITATION NO. 05-13-23C-005**
**FAILURE TO COMPLY WITH SURFACE WATER TREATMENT RULE, WATERWORKS STANDARDS, DISINFECTION BYPRODUCT RULES, DIRECTIVES OF COMPLIANCE ORDER NO. 05-13-22R-001, CITATION NO. 05-13-22C-015, CITATION NO. 05-13-22C-019, CITATION NO. 05-13-22C-028, AND COMPLIANCE ORDER NO. 05-13-22R-002**
**FOR 2022**

Enclosed is Citation No. 05-13-23C-005 (hereinafter "Citation"), issued to the Havasu Water Company (hereinafter "Company") public water system. Please note that there are legally enforceable deadlines associated with this Order.

The Company will be billed at the State Water Resources Control Board's (hereinafter "State Water Board") hourly rate for the time spent on issuing this Citation. A public water system must reimburse the State Water Board for actual costs incurred by the State Water Board for specified enforcement actions, including preparing, issuing and monitoring compliance with a citation (Health & Saf. Code, § 116577, subd. (a)(1).). The Company will receive a bill sent from the State Water Board in August of the next fiscal year. This bill will contain fees for any enforcement time spent on the Company for the current fiscal year.

A process exists by which a public water system can petition the State Water Board for reconsideration of this citation. Petitions sent to the State Water Board "shall include the name and address of the petitioner, a copy of the order or decision for which the petitioner seeks reconsideration, identification of the reason the petitioner alleges the

issuance of the order or decision was inappropriate or improper, the specific action the petitioner requests, and other information as the state board may prescribe. The petition shall be accompanied by a statement of points and authorities of the legal issues raised by the petition." (Health & Saf. Code, § 116701, subd. (b).)

Petitions must be received by the State Water Board within 30 days of the issuance of this citation by the State Water Board. If the 30th day falls on a Saturday, Sunday, or state holiday, the petition is due the following business day by 5:00 p.m. Information regarding filing petitions may be found at:

Drinking Water Petitions for Reconsideration
https://www.waterboards.ca.gov/drinking_water/programs/petitions/instructions.html

The State Water Board finds that the poor physical condition and non-compliance of this water system has been a result of the lack of direct and continuous management of the water system's operation for the last several years. Your lack of complete responses to date to the findings and non-compliance with previous citation and compliance order directives is unacceptable to the State Water Board considering these directives are intended to help bring Havasu Water Company into compliance with the Health and Safety Code and Title 22 regulations for public health protection. We expect immediate attention and response to this citation and directives.

Should the Company fail to comply with the directives of this citation by the deadlines provided, the State Water Board may pursue the appointment of a receiver under the direction and control of a judge to oversee the water system's operations so as to comply with the California Safe Drinking Water Act. We feel this may be necessary to ensure the public's right to safe and reliable drinking water.

The State Water Board has issued an administrative penalty to Havasu Water Company in this citation. A significant portion of that penalty has been suspended, on the condition that the Company meet specified deadlines set forth in the citation. Should the Company fail to comply with these deadlines, the associated suspended penalties will come due.

If you have any questions regarding this matter, please contact Jarrett Hamud of my staff at 909-383-5289 or me at 909-383-4328.

Sincerely,

Wei H.

Water Boards

Digitally signed by Wei H. Chang Date: 2023.02.08 10:44:41 -08'00'

Wei H. Chang, P.E.
District Engineer
San Bernardino District
Southern California Field Operations Branch

Enclosures

Certified Mail No. 7022 1670 0001 2567 8499

cc:

1. Patrick Webb, Webb & Carey APC via pwebb@webbcarey.com
2. Gabriela Garcia, Environmental Health Specialist San Bernardino County Environmental Health Services via Gabriela.Garcia@dph.sbcounty.gov
3. Bruce DeBerry, Program Manager, CPUC via bruce.deberry@cpuc.ca.gov
4. Wilson Tsai, Senior Utilities Engineer, CPUC via wilson.tsai@cpuc.ca.gov
5. Kimberley Niemeyer, Attorney IV, Office of Chief Counsel, State Water Board, via Kimberley.Niemeyer@Waterboard.ca.gov
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7. Yvonne West, Office of Enforcement, State Water Board, via Yvonne.West@Waterboards.ca.gov
8. Nickolaus Knight, Office of Enforcement, State Water Board, via Nickolaus.Knight@Waterboards.ca.gov
9. Laura Mooney, Office of Enforcement, State Water Board, via Laura.Mooney@Waterboards.ca.gov
10. Jonathan Koltz, CPUC via jonathan.koltz@cpuc.ca.gov
11. Jessica Warner, CPUC via Jessica.Warner@cpuc.ca.gov

**Citation No. 05-13-23C-005**

STATE OF CALIFORNIA

STATE WATER RESOURCES CONTROL BOARD

DIVISION OF DRINKING WATER

**Name of Public Water System:** Havasu Water Company

**Water System No:** 3610017

**Attention**: Jennifer Hodges

148821 Havasu Lake Rd

Havasu Lake, CA 92363

**Issued**: February 8, 2023

**CITATION FOR NONCOMPLIANCE**

**CALIFORNIA HEALTH AND SAFETY CODE, SECTION 116555 AND**

**CALIFORNIA HEALTH AND SAFETY CODE, SECTION 116555, TITLE 17, CALIFORNIA CODE OF REGULATIONS, SECTIONS 64533, 64602, 64655, 64656, 64659,**

**COMPLIANCE ORDER NO. 05-13-22R-001, CITATION NO. 05-13-22C-015, CITATION NO. 05-13-22C-019, CITATION NO. 05-13-22C-028, AND COMPLIANCE ORDER 05-13-22C-002**

**FAILURE TO COMPLY WITH WATERWORKS STANDARDS, SURFACE WATER TREATMENT RULE, DISINFECTION BYPRODUCT RULE, AND DIRECTIVES OF COMPLIANCE ORDER NO. 05-13-22R-001, CITATION NO. 05-13-22C-015,**

**CITATION NO. 05-13-22C-019, CITATION NO. 05-13-22C-028, AND COMPLIANCE ORDER 05-13-22R-002**

**2022**

The State Water Resources Control Board (hereinafter "State Water Board") is authorized to issue a citation to a public water system when the State Water Board determines that the public water system has violated or is violating the California Safe Drinking Water Act (hereinafter "California SDWA") (California Health & Safety Code, division 104, part 12, chapter 4, commencing with section 116270), or any regulation, standard, permit, or order issued or adopted thereunder (Health & Saf. Code, § 116650, subd. (a).).

The State Water Board, acting by and through its Division of Drinking Water (hereinafter "Division"), and the Deputy Director for the Division, hereby issues Citation No. 05-13-23C-005 (hereinafter "Citation"), pursuant to California Health & Safety Code section 116650 to the Havasu Water Company (hereinafter "Company"), for violation of California Health & Safety Code section 116555, California Code of Regulations, title 22, sections 64602, 64654, 64655, 64659, 64533, Compliance Order No. 05-13-22R-001, Citation No. 05-13-22C-015, Citation No. 05-13-22C-019, Citation No. 05-13-22C-028, and Compliance Order 05-13-22R-002.

## STATEMENT OF FACTS

The Company is classified as a community public water system with a population of 361, serving 224 connections. The Company operates under Domestic Water Supply Permit No. 03-13-097P-004 issued by the State Department of Health Services on February 10, 1998. The Company is using an approved surface water source, Lake

Havasu, to supply potable water to the distribution system. The Company is classified as a D1 system, and the Havasu Water Treatment Plant is classified as a T2 facility.

All public water systems are required to comply with primary drinking water standards, as defined in Health & Safety Code, section 116275, subdivision (c). (Health & Saf.
Code, § 116555, subd. (a)(1).). Primary drinking water standards include maximum levels of contaminants, specific treatment techniques, and monitoring and reporting requirements as specified in regulations adopted by the State Water Board.

The State Board issued Compliance Order No. 05-13-22R-001 dated March 29, 2022 (Order 001), for failure to comply with surface water treatment rule and operator certification requirements. The State Board issued Citation No. 05-13-22C-015 (Citation 015) dated May 6, 2022, for failure to comply with the surface water treatment rule, operator certification requirements, and Order 001. The State Board issued Citation No. 05-13-22C-019 (Citation 019) dated July 28, 2022, for failure to provide required public notification. The State Board issued Citation No. 05-13-22C-028 (Citation 028), dated August 4, 2022, and Compliance Order 05-13-22R-002 (Order 002), dated September 14, 2022, for failures to comply with the previously issued enforcement actions. The Company did not petition Order 001, Citation 015, Citation 019, Citation 028, or Order 002. A list of directives and status of their compliance is available in Appendix 3. Compliance Orders and Citations listed above are included as Appendices 8, 9, 10, 11, and 12 for reference.

The Company has experienced multiple water outages and boil water notices for extended periods in 2022 and 2023, related to water main breaks, power outages, and

a lack of operators to properly operate the water treatment plant and distribution facilities. The Company has failed to follow numerous directives issued by the Division in previous

citations and compliance orders that were intended to bring the Company into compliance. The Division has concerns about the technical, managerial, and financial capacity and sustainability of the Company's operations and hence the provision of safe and reliable drinking water to the community that the Company serves.

## SURFACE WATER TREATMENT RULE VIOLATIONS

### The Company has not complied with Filtration Monitoring Requirements: Section 64655

Conventional or direct filtration treatment plants serving fewer than 10,000 persons shall monitor each individual filter effluent continuously, and the turbidity level shall be recorded at least once every 15 minutes (Cal. Code Regs., tit. 22, § 64655, subd. (a).). If there are two or fewer filters, a supplier may conduct continuous monitoring of the combined filter effluent in lieu of continuous monitoring of each individual filter and the results shall be recorded at least once every 15 minutes (Cal. Code Regs., tit. 22, § 64655, subd. (a), Table 64655, subd. (2)). The Havasu Surface Water Treatment Plant (Havasu WTP) utilizes five filters, three in the first stage and two in the second stage. The Company is required to monitor turbidity at the final two filters or the combined filter effluent for compliance. Per the March 23, 2022 deficiency list issued with Order 001 on March 29, 2022, the Company was required to repair printers for the turbidity monitors by April 15, 2022. The Division staff observed during the site inspection on November 9, 2022, that the printers do not function, recording is not completed every 15 minutes, and that turbidity monitoring is done visually by the onsite treatment operator while the Havasu WTP is running. For reference, the March 23, 2022 deficiency list with updates from the August 30, 2022 and November 9, 2022 inspections is available in Appendix 4. Invoices

submitted by the Company for the November 9, 2022 inspection are included in Appendix 5 for reference.

**The Company has not complied with Flow Measuring Requirements: Section 64656(a)**

During the November 9, 2022 site inspection, Division staff observed that the Havasu WTP was equipped with a flow accumulator/totalizer that is unable to provide instantaneous flow measurements of the Havasu WTP in addition to possibly being inaccurate due to the size of the pipe the totalizer is in. A totalizer meters the total amount of water that flows through a pipe, but does not provide the flow rate in the pipe.

The California SDWA requires that all approved surface water utilized by a supplier be provided with continuous disinfection treatment sufficient to ensure that the total treatment process provides inactivation of Giardia lamblia cysts and viruses, in conjunction with the removals obtained through filtration, to meet the reduction requirements (Cal. Code Regs., tit. 22, § 64654, subd. (a).). To determine compliance with the disinfection inactivation requirements specified in section 64654(a), a supplier shall develop and conduct a monitoring program to measure those parameters that affect the performance of the disinfection process (Cal. Code Regs., tit. 22 § 64656, subd. (a).).

In order to calculate compliance with this disinfection performance standard, the Company must be able to accurately measure several parameters, including flow rates, temperature, pH, and chlorine residual of water leaving the plant, as well as clearwell volume. Flow rate of the Havasu WTP is unable to be accurately measured and is estimated by tank level increases during Havasu WTP production and the possibly faulty totalizer data over time. As mentioned in the directive #3 of the Order 001, the

Company

had until April 15, 2022 to verify adequate functionality of Havasu WTP equipment. The Company is unable to accurately demonstrate compliance with the disinfection process performance for inactivation of *Giardia* and viruses with the existing equipment.

**The Havasu WTP has not complied with Reliability Requirements: Section 64659**

Alarm devices to provide warning of coagulation, filtration, and disinfection failures shall be included in the design and construction of all new and existing surface water treatment plants. (Cal. Code Regs., tit. 22, § 64659, subd. (a).) More specifically, all devices shall warn a person designated by the supplier as responsible for taking corrective action, or shall have provisions to shut the plant down until corrective action can be taken. (Cal. Code Regs., tit. 22, § 64659, subd. (a)(1).)

Division staff documented in a report dated June 12, 2018 that the Havasu WTP utilized an automatic flush-to-waste which would be initiated automatically when combined effluent turbidity exceeded 0.2 Nephelometric Turbidity Units (NTU) during the 2017 sanitary survey. The Havasu WTP would therefore flush treated water to waste as a safety mechanism for any plant failures that would have resulted in treated water turbidity levels rising above 0.2 NTU, such as coagulation or filtration failures.

During the March 23, 2022 inspection, the Company's former staff, Louie Richhart, informed the Division staff that the automatic flush-to-waste was set to 0.5 NTUs, whereas by law, 95% of the measurements taken each month must not exceed 0.2 NTU (Cal. Code Regs., tit. 22, § 64653, subd. (e)(2).). The setting of 0.5 NTU is not protective of public health as it would allow filters to exceed 0.2 NTU up to 0.5 NTU before corrective action is taken. The deficiency list issued March 29, 2022, required correction of the plant automatic flush-to-waste by June 21, 2022. An email dated September 24, 2022

(Appendix 6) from Mr. Patrick Webb, an attorney representing the Company, stated that "Plant Automatic flush-to-waste equipment to accomplish the flush-to-waste is in place & functioning." During the November 9, 2022 inspection, the Division staff observed that the plant automatic flush-to-waste equipment was nonfunctional and that the flush-to-waste must be manually initiated by the treatment operator based on operator-observed turbidity readings. Mr. Paul Berry, the President of EPD USA which is the manufacturer of the Havasu WTP filtration devices, was on site evaluating the Havasu WTP on January 18, 2023. In his report (Appendix 9), Mr. Berry stated that none of the automatic features on the system was functional.

Regarding disinfection alarms, the email dated April 13, 2022 from Mr. Webb stated that "[t]he Company and its certified treatment operator verify that all of the Havasu water treatment plant has functional … systems to provide warning of filtration and disinfection failures while attended and monitored[.]" The Division issued additional enforcement actions, Citation 015 and Citation 028, which required documentation regarding this statement to be submitted by May 20, 2022; the Division has received no documentation supporting Mr. Webb's statement from the Company. On the contrary, Division staff observed during the November 9, 2022 inspection that the Havasu WTP has no alarms or automatic shutdowns for disinfection failures.

The Havasu WTP does not have the alarm or automatic shutdown required by the California SDWA for disinfection failures and for coagulation/ filtration failures that result in turbidity greater than 0.2 NTU, despite claims by the Company to the contrary.

A continuous turbidity monitoring and recording unit on the combined filter effluent prior to clearwell storage is required (Cal. Code Regs., tit. 22, § 64659, subd. (a)(3).). As mentioned in the Filtration Monitoring Requirements, the Havasu WTP does not have

functional continuous recording equipment that would meet this reliability requirement. For reference, an evaluation of the Havasu WTP is available in Appendix 7.

**DISINFECTION BYPRODUCTS MAXIMUM CONTAMINANT LEVEL EXCEEDENCE**

**The Havasu WTP has not complied with Disinfection Byproduct Maximum Contaminant Level Requirements: Section 64533. Some people who drink water containing trihalomethanes (TTHM) in excess of the MCL over many years may experience liver, kidney, or central nervous system problems.**

Public water systems shall comply with the primary MCLs for the following disinfection byproducts: Total Trihalomethanes (TTHM) and Haloacetic Acids Five (HAA5). The MCLs for TTHM and HAA5 are 0.080 milligrams per liter (mg/L) or 80 micrograms per liter (µg/L) and 0.060 mg/L or 60 µg/L, respectively. (Cal. Code Regs., tit. 22, § 64533, subd. (a).) Water in excess of these levels violates the respective MCL. Previously, Compliance Order 05-13-15R-005 was issued on November 24, 2015, to the Company for violation of the TTHM MCL, and compliance dates are past due. Directive #1 of Order 05-13-15R-005 required that the Company comply with TTHM MCL by January 1, 2019, and remain in compliance thereafter.

The Company is required to collect two distribution system samples quarterly, from the sampling sites listed on its approved Stage 2 Disinfection Byproducts Monitoring Plan (Cal. Code Regs., tit. 22, § 64534.2, subd. (d).) Compliance with the TTHM and HAA5 MCLs is based on a locational running annual average, calculated quarterly, for each monitoring location (Cal. Code Regs., tit. 22, § 64535.2, subd. (e).)

The State Water Board has received laboratory results for TTHM from the sampling locations identified as the “Cement Plant” and “148621 Desert View Lane.” The locational running annual average TTHM concentrations from the Cement Plant and 148621 Desert View Lane were 0.136 mg/L and 0.1087 mg/L respectively. A summary of the Company’s TTHM monitoring results is presented in Table 1 below, indicating the Company has exceeded the TTHM MCL at least since the third quarter of 2021.

**Table 1 – TTHM Sample Results (mg/L)**

| D/DBP Site | PS Code | Sample Date | TTHM results, (mg/L) | RAA* | In compliance with MCL? |
|---|---|---|---|---|---|
| Cement Plant | CA3610017_DST_601 | 10/8/2021 | 0.1632 | 0.102 | No |
| | | 1/7/2022 | 0.0769 | 0.109 | No |
| | | 4/8/2022 | 0.1176 | 0.099 | No |
| | | 8/5/2022 | 0.1888 | 0.137 | No |
| | | 4th quarter 2022 | Not sampled | 0.128** | No |
| 148621 Desert View Lane | CA3610017_DST_602 | 10/8/2021 | 0.1183 | 0.080 | Yes |
| | | 1/7/2022 | 0.0779 | 0.080 | Yes |
| | | 4/8/2022 | 0.0899 | 0.091 | No |
| | | 8/5/2022 | 0.1487 | 0.109 | No |
| | | 4th quarter 2022 | Not sampled | 0.106** | No |

Note: *RAA means running annual average of current and preceding 3 quarters TTHM results. **Since there were no samples taken in fourth quarter 2022, the RAA is determined using the average of the results from first quarter 2022 to third quarter 2022.

**SUBMISSION AND PERFORMANCE OF CORRECTIVE ACTION PLAN**

**The Company has not complied with the Corrective Action Plan Requirements mandated in Compliance Order 05-13-22R-001**

Per Order 001, the Company was required to prepare a corrective action plan (CAP) for State Water Board approval, identifying improvements to the water system designed to correct the water quality problems identified and ensure that the Company delivers water to consumers that meets drinking water standards. The CAP was required to include all remaining deficiencies from the March 23, 2022 Deficiency List (see Appendix 4). The CAP was required to include a time schedule for completion of each of the phases of the project such as design, construction, and startup, and a date when the Company would be in compliance. The compliance date was required to be no later than Thursday, September 9, 2022. The CAP was to be submitted no later than April 29, 2022. Order 001 also required that the Company perform the actions outlined in the State Water Board-approved CAP, and each and every element of the CAP, according to the time schedule set forth therein. Citation 05-13-22C-015, Citation 05-13-22C-028, and Compliance Order 05-13-22R-002, issued May 6, 2022, August 4, 2022, and September 14, 2022, respectively, were issued to the Company for failure to provide an adequate CAP and failure to submit documentation proving the Company completed all items of the March 23, 2022 deficiency list (Appendix 4).

Several items identified in the Deficiency List pose significant risk to operation of the Company's facilities, and hence, a risk to the Company's provision of safe and reliable drinking water to the community the Company serves. Several items are also required to allow the Division to evaluate Company infrastructure. Division staff were informed by Company operators on January 3, 2023 that Mr. Paul Berry of EPD USA, the manufacturer of the Havasu WTP filtration devices was scheduled to complete an investigation of the Havasu WTP and its equipment January 18, 2023. The Division received a copy of the report from the January 18, 2023 inspection on January 27, 2023 (Appendix 9). Findings of the January 18, 2023 inspection are in line with the Division

evaluation and the inspection found several items posing risk to the operation of Company facilities. The Havasu WTP was observed to have significant damage to its flooring by Division staff during the March 23 and November 9, 2022 inspections, as well as by Mr. Paul Berry on January 18, 2023 inspection, potentially caused by leakage in the plant. Additional sagging of the flooring may affect the ability of the Havasu WTP to function and provide water to the community.

In addition to items noted in the Surface Water Treatment Rule Violations section of this Citation, Division staff observed that plant automatic controls, filter displays, and the automatic backwash cycle did not function. Plant automatic controls, filter displays, and the automatic backwash cycle are basic functions of the treatment plant that allow for greater ease of operation and reliability of function of the Havasu WTP. Additional items noted in the January 27, 2023 EPD USA report (Appendix 9) include a water quality issue in the second stage filters, turbidimeter maintenance, disinfection dosing levels, general housekeeping, failure of all automatic controls and features of the Havasu WTP, and suggestions to improve the Havasu WTP with current turbidimeter models, a new control console, a new control system, new flow-to-waste linkage valves, and coagulant feed pump replacements.

The Company has not completed required evaluations of the 7,000-gallon hydrotank or the 100,000-gallon clearwell to determine whether repairs or rehabilitations are needed. The integrity of hydrotank and clearwell is still unknown. Without a reliable hydrotank, the Company is at risk of being unable to maintain on-demand pressurized water in the distribution system. Without a reliable clearwell and if the clearwell collapses, filtered water will have no place to store, causing water storage and supply issues.

The Company has not provided documentation to show that the Havasu WTP polymer dosing pumps are NSF-61 certified. A water system shall not use any product in the production, treatment or distribution of drinking water that will result in its contact with the drinking water (including mechanical devices used in treatment/ transmission /distribution systems) that has not been tested and certified as meeting the specifications of NSF International/American National Standard Institute (NSF/ANSI) 61-2005 / Addendum 1.0-2005. (Cal. Code Regs., tit. 22, § 64591, subd. (a).) This certification process is meant to ensure that components used in the production, treatment or distribution of drinking water are not leaching contaminants into the water.

The CAP also required that the Company submit a technical report regarding its technical, managerial, and financial capacity and sustainability, and information related to achieving the goals of affordability and accessibility. (Health & Saf Code, § 116530). No report has been received by the Division. The Division has concerns about the technical, managerial, and financial capacity and sustainability of the Company's operations and hence the provision of safe and reliable drinking water to the community that the Company serves.

Based on the information gathered during the November 9, 2022 inspection, only nine of the 30 original deficiencies have been confirmed to have been addressed (Appendix 4). In addition, an adequate CAP has not been submitted as of the date of this citation. The June 10, 2022 Division response letter (Appendix 8) details what is expected in an adequate CAP.

**The Company has not complied with the requirements for Minimum Pressure in the Distribution System, which has caused ongoing boil water orders: Section 64602**

Each distribution system shall be operated in a manner to assure that the minimum operating pressure in the water main at the user service line connection throughout the distribution system is not less than 20 pounds per square inch at all times (Cal. Code Regs., tit. 22, § 64602, subd. (a).). The CAP required that the Company meet water supply and hence, system pressure demands. On October 7, 2022, the Company was required to issue a boil water notice due to customer reports, via phone calls and emails on October 6, 2022, of no water from their taps and several leaks in the distribution system. The leaks were reported at Showboat Road, Roan Drive, and Desert View Lane. Additional leaks in the distribution system were reported by customers on Malmedia Road, Sunbonnet Road, and Showboat Road from October 7, 2022, up to December 1, 2022. Sean Chapin, the Company's Site Operations Manager, has reported to the Division on the phone several times to explain the situation. Here is the summary of the phone communications: *Due to lack of mapping for the distribution valves, the Company is unable to identify all of the valves in the distribution system. Whenever the Company identifies a valve, the valve malfunctioned. If the Company identifies a malfunctioning valve (ex: a leaky valve), the valve is difficult to access. Because of these reasons, prompt repairs of leaks in the distribution system are nearly impossible*.

After the leaky valves were fixed around third week of December, the Company took appropriate bacteriological quality samples, and the Division lifted the boil water notice on December 22, 2022 after confirming the results are satisfactory.

On January 3, 2023, the Company was again required to issue a boil water notice due to customer reports, via phone calls and emails on January 2, 2023 of a water outage. Pat Hoban, the Company's certified treatment operator, reported that the outage was due to the Havasu WTP not being operated and customer demand utilizing all water available in the clearwell. After Mr. Hoban placed the Havasu WTP back online and

scheduled

bacteriological quality sampling from the laboratory, the Division lifted the boil water notice on January 13, 2023 after confirming the results are satisfactory.

The Company failed to maintain minimum distribution system pressure, which made customers boil their water before safely consuming it from October 7, 2022 to December 22, 2022 and from January 3, 2023 to January 13, 2023.

The CAP required that the Company identify the locations and functionality of all distribution valves, as well as replace and repair the malfunctioning valves, but the Company has been unable to replace and repair the valves in a timely manner, which caused frequent, prolonged, ongoing water outages. The Company is unable to identify all of the valves and their functionality in the distribution system as of the citation date; therefore, it is uncertain whether the minimum pressure can be reliably maintained in the distribution system.

## DETERMINATION

The State Water Board has determined that the Company has violated California Health & Safety Code, section 116555, and further determined that said violation has continued from April 15, 2022 through the date of this Citation. The Company failed to comply with the Surface Water Treatment Rule, specifically, California Code of Regulations, title 22, sections 64655, 64656, and 64659. The Company failed to comply with a primary drinking water standard pursuant to California Health & Safety Code, section 116555 and California Code of Regulations, title 22, section 64533, relating to the TTHM MCL. The Company failed to maintain system pressure to prevent prolonged water outage pursuant to California Code of Regulations, title 22, section 64602. The Company also failed to follow numerous directives issued by the Division in previous citations and compliance orders that were intended to bring the Company into compliance with the

California SDWA, namely: Directives 3, 6, 7, 9, 11, 12, 13, and 14 of Order 001; Directives 1, 2, 3, 4, 5, 6, 8, and 9 of Citation 015; Directives 1, 2, 3, 4, 5, and 6 of Citation 019; Directives 1, 2, 3, 4, 5, 6, 7, and 8 of Citation 28; and Directives 1, 2, 3, and 4 of Order 002.

## ADMINISTRATIVE PENALTIES

California Health & Safety Code section 116650 subdivision (a) allows for the issuance of a citation for failure to comply with the requirements of the California Safe Drinking Water Act, or any regulation, permit, standard, citation, or order issued thereunder. Subdivisions (d) and (e) thereof allow for the assessment of a penalty not to exceed one thousand dollars ($1,000) per day for each day that a violation occurs, for each violation that occurs.

The State Water Board hereby assesses upon Havasu Water Company an administrative penalty in the amount of $61,500. Of that amount, the Company shall pay $1,500 of the administrative penalty in accordance with the requirements set forth in Directive 11 of this Citation.

The remaining $60,000 is hereby suspended conditioned on completion of specified tasks set forth in this Citation in Table 2 below, to the satisfaction of the State Water Board. The Company must complete each task by the associated deadline listed in Table 2 or it will be required to make the corresponding partial payment of the administrative penalty also listed in Table 2.

If the Company fails to comply with a listed task set forth in Table 2 by the deadline indicated herein, the State Water Board will inform the Company by letter that the corresponding partial suspension of the penalty has been revoked and that the amount

of the penalty related to the missed deadline is accordingly due. Should the State Water Board revoke the suspension of any portion of this administrative penalty, the Company is directed to pay this penalty in accordance with the requirements set forth in Directive 11 of this Citation.

**Table 2. Listed Tasks**

| Deadline | Task | Penalty Owed for Missed Deadline |
|---|---|---|
| February 14, 2023 | Repair the existing main breaks, per Directive 3 of this Citation. [Note: The Company has complied with this directive by repairing the existing leaks that caused boil water order]. | $10,000 |
| February 28, 2023 | Revise Corrective Action Plan in line with the Division's response dated June 10, 2022 found in Appendix 8, including all new deficiencies on the deficiency list in Appendix 4. The Company must also include a financial plan in the submittal, per Directive 2 of this Citation. | $5,000 |
| June 14, 2023 | Install a flow meter that correctly measures instantaneous flow rate at the Havasu Surface Water Treatment Plant, per Directive 4 of this Citation. | $5,000 |
| June 14, 2023 | Repair printers for the turbidity monitors such that turbidity readings can be recorded at | $2,500 |

| | | |
|---|---|---|
| | least every 15 minutes, per Directive 5 of this Citation. | |
| June 14, 2023 | Provide adequate alarm or shutdown provisions for coagulation, filtration, and disinfection failures as well as provide automation to flush-to-waste when treated water turbidity exceeds 0.2 NTU, per Directive 6 of this Citation. | $2,500 |
| October 31, 2023 | Per Directive 7 of the citation, submit a preliminary study report (Report) for compliance with TTHM MCL. The report must include an engineering design with plans and specifications as well as a financial plan detailing how the Company is going to fund the materials, constructions, and installations of a treatment system needed to comply with TTHM MCL. | $35,000 |
| | | $60,000 |

**DIRECTIVES**

The Company is hereby directed to take the following actions:

1. By **February 28, 2023**, schedule comprehensive evaluations (in terms of reliability, functionality, safety, and maintainability) by qualified personnel of the

clearwell interior and exterior, and hydrotank. Inspections must be completed by **March 30, 2023**.

2. By **February 28, 2023**, complete and submit the Corrective Action Plan required under Directive 11 of Compliance Order 05-13-22R-001. The Corrective Action Plan must be revised in line with the Division's response dated June 10, 2022 found in Appendix 8 herein and must also include all new deficiencies on the deficiency list in Appendix 4 herein. The Company must also include a financial plan in the submittal that details how it will fund upgrades and other items required by the Corrective Action Plan. The financial plan must not depend on the funding application approval from the State Water Board, Division of Financial Assistance.

3. On or before **February 14, 2023**, comply with California Code of Regulations, title 22, section 64602, and remain in compliance by repairing the existing main breaks. **Note**: The Company has complied with this directive by repairing the existing leaks that caused boil water order.

4. On or before **June 14, 2023**, comply with California Code of Regulations, title 22, section 64654 and remain in compliance by installing a flow meter that correctly measures instantaneous flow rate at the Havasu Surface Water Treatment Plant.

5. On or before **June 14, 2023**, comply with California Code of Regulations, title 22, section 64655 and remain in compliance by repairing printers for the turbidity monitors and ensuring turbidity reading can be recorded at least every 15 minutes.

6. On or before **June 14, 2023**, comply with California Code of Regulations, title 22, section 64659 and remain in compliance by providing adequate alarm or automatic shutdown for coagulation, filtration, disinfection failures as well as providing automation to flush-to-waste or other automatic plant shutdown capabilities when treated water turbidity exceeds 0.2 NTU.

7. On or before **October 31, 2023**, submit a preliminary study report (Report) for compliance with the running annual average for TTHM MCL. The report must include an engineering design with plans and specifications as well as a financial plan detailing how the Company is going to fund the planning, materials, constructions, and installations of a treatment system needed to comply with TTHM MCL.

8. On or before **March 1, 2023 and monthly thereafter,** provide monthly updates to State Water Board on the progress on complying with the Corrective Action Plan per Directive #2, the Deficiency List in Appendix 4, the SWTR per Directives #3 through #6, and the TTHM MCL per Directive #7.

9. On or before **December 31, 2024**, the Company must comply with California Code of Regulations, title 22, section 64533 and remain in compliance by bringing the TTHM level below the MCL and complying with the running annual average for TTHM MCL.

10. On or before **March 1, 2023 and every three months thereafter**, notify all persons served by the Company of the violations of California Code of Regulations, title 22, sections 64654, 64655, 64659, and 64533, in conformance with sections 64463.4 and 64465. Public notification to the persons served by the Water System must continue quarterly until the State Water Board

determines that the Company is in compliance with sections 64654, 64655, 64559, and 64533. **Appendix 1**: Notification Template must be used to fulfill this directive, unless otherwise approved by the State Water Board. The contents of the public notice must be approved by the State Water Board prior to issuance. **The Company must edit the wording of the public notice, as necessary, to describe the monitoring and reporting violations for California Code of Regulations, title 22, sections 64654, 64655, 64659, and 64533.** The public notice must be completed in accordance with the following:

- By mail or direct delivery of the public notice to each customer served by the water system and;
- By one of the following secondary methods to reach persons not likely to be reached by mail or direct delivery;

  - By publication in a local newspaper, by delivery to community organizations or by posting in conspicuous public places served by the water system or on the internet. If the water system opts to issue the notice via internet website, the public notice must remain posted for a minimum of seven (7) consecutive days.

11. By **February 14, 2023**, submit to the State Water Board a check for the partial administrative penalty of $1,500 imposed by this Citation along with a copy of the "Notice of Administrative Penalty Form," which is attached as Appendix 2. The Citation number must be written on the check. The check must be made payable to the **State Water Resources Control Board** and submitted to:

SWRCB Accounting Office
ATTN: Drinking Water Program Fees
P.O. Box 1888

Sacramento, CA 95812-1888

12. In the event that the State Water Board by letter revokes a portion or all of a suspension of the penalty imposed by this Citation, submit a check to the State Water Board for the administrative penalty due by the deadline according to said letter, along with a copy of the "Notice of Administrative Penalty Form," which is attached as Appendix 2. The Citation number must be written on the check. The check must be made payable to the **State Water Resources Control Board** and submitted to:

SWRCB Accounting Office
ATTN: Drinking Water Program Fees
P.O. Box 1888
Sacramento, CA 95812-1888

All submittals required by this Citation, unless otherwise specified in the directives above, must be electronically submitted to the State Water Board at the following address. The subject line for all electronic submittals corresponding to this Citation must include the following information: Water System name and number, citation number and title of the document being submitted.

Wei H. Chang
dwpdist13@waterboards.ca.gov

The State Water Board reserves the right to make modifications to this Citation as it may deem necessary to protect public health and safety. Such modifications may be issued as amendments to this Citation and shall be effective upon issuance.

Nothing in this Citation relieves the Company of its obligation to meet the requirements of the California SDWA (California Health & Safety Code, division 104, part 12, chapter 4, commencing with section 116270), or any regulation, standard, permit or order issued or adopted thereunder.

## PARTIES BOUND

This Citation shall apply to and be binding upon the Company, its owners, shareholders, officers, directors, agents, employees, contractors, successors, and assignees.

## SEVERABILITY

If any provision of this Citation is held invalid or the application that provision to any circumstance is held invalid, that invalidity shall not affect other provisions or applications of this Citation that can be given effect without the invalid provision or application, and to this end the provisions of this Citation are severable.

## FURTHER ENFORCEMENT ACTION

The California SDWA authorizes the State Water Board to issue an order or citation with assessment of administrative penalties to a public water system for violation or continued violation of the requirements of the California SDWA or any regulation, permit, standard, citation, or order issued or adopted thereunder including, but not limited to, failure to correct a violation identified in a citation or compliance order. The California SDWA also authorizes the State Water Board to take action to suspend or revoke a permit that has been issued to a public water system if the public water system has violated applicable law or regulations or has failed to comply with an order of the State Water Board, and to petition the superior court to take various enforcement measures against a public water system that has failed to comply with an order of the

State Water Board. The State Water Board does not waive any further enforcement action by issuance of this Citation.

The State Water Board is authorized to assess a penalty in an amount not to exceed one thousand dollars ($1,000) per day for each day that a violation occurred, and for each day that a violation continues to occur. A separate penalty may be assessed for each violation and shall be in addition to any liability or penalty imposed under any other law (Health & Saf. Code, § 116650, subd. (e).). The State Water Board reserves the right to assess a penalty for all the violations identified in this Citation, up to the maximum penalty allowable by law.

Digitally signed by Sean F. McCarthy Date: 2023.02.08 11:01:25 -08'00'

Sean F. McCarthy, P.E.
Section Chief
South Coast Section
Southern California Field Operations Branch

Date

Appendices:

1. Notification Template
2. Notice of Administrative Penalty Form
3. Enforcement Directive Compliance Tracking
4. November 9, 2022 inspection updated Deficiency List
5. Combined Invoices submitted by the Company
6. September 24, 2022 e-mail from Mr. Patrick Webb
7. Havasu Water Treatment Plant Evaluation
8. June 10 Division Response

9. Evaluation Report from Mr. Paul Berry, president of the manufacturer of Havasu WTP filters

Certified Mail No. 7022 1670 0001 2567 8499

# APPENDIX 1 NOTIFICATION TEMPLATE

# IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

(The following two sentences are in Spanish relaying information on the importance of this notice. Translated to English it would read as follows. [This notice contains important information regarding your drinking water, please read the Spanish notice if it is included. If the Spanish notice is not included, please contact the water system and ask for a copy.])

Este aviso contiene información muy importante sobre su agua potable, por favor lea el aviso en español si va aquí incluido. Si el aviso en español no va incluido aquí, contacte al sistema de agua para pedir una copia.

**[Insert Water System Name] has levels of Total Trihalomethanes Above Drinking Water Standards**

Our water system recently failed a drinking water standard. Although this is not an emergency, as our customers, you have a right to know what you should do, what happened, and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Testing results we received on [Insert the date the water system received the results] show that our system exceeds the standard, or maximum contaminant level (MCL), for Total Trihalomethanes. The MCL standards for Total Trihalomethanes are 80 µg/L. The average level of Total Trihalomethanes over the last year was [Insert the running annual average for Total Trihalomethanes result in µg/L].

**What should I do?**

- You do not need to use an alternative (e.g., bottled) water supply.
- This is not an immediate risk. If it had been, you would have been notified immediately. However, some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer.
- If you have other health issues concerning the consumption of this water, you may wish to consult your doctor.

**What happened? What was done?**

[Insert a description of what happened and the corrective action that was taken or will be taken]

We anticipate resolving the problem within, [Insert time period to resolve].

For more information, please contact; [Insert water system contact name] at, [Insert water system contact phone number] or at the following mailing address: [Insert water system mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

**Secondary Notification Requirements**

Upon receipt of notification from a person operating a public water system, the following notification must be given within 10 days [per Health and Safety Code Section 116450(g)]:

- SCHOOLS: Must notify school employees, students, and parents (if the students are minors).
- RESIDENTIAL RENTAL PROPERTY OWNERS OR MANAGERS (including nursing homes and care facilities): Must notify tenants.
- BUSINESS PROPERTY OWNERS, MANAGERS, OR OPERATORS: Must notify employees of businesses located on the property.

This notice is being sent to you by the, [Insert water system name] water system.

State Water System ID number: [Insert public water system number]

Date distributed: [Insert date the notice is distributed]

# Appendix 2 Notice of Administrative Penalty Form

**NOTICE OF ADMINISTRATIVE PENALTY FORM**

# STATE OF CALIFORNIA
# STATE WATER RESOURCES CONTROL BOARD

# DIVISION OF DRINKING WATER

## Notice of Administrative Penalty

**System Name:** Havasu Water Company

**System Number:** 3610017

**Background**

On February 8, 2023, the Division of Drinking Water issued Citation 05-13-23C-005 to the Havasu Water Company. The Citation carried a civil penalty in the amount of **$1,500**.

**Method of Payment**

A check for the total amount of the civil penalty and a copy of this form must be submitted to the State Water Board by **February 14, 2023**. The Citation number must be written on the check, the check made payable to the **State Water Resources Control Board**, and submitted to:

SWRCB Accounting Office
ATTN: Drinking Water Program Fees
P.O. Box 1888
Sacramento, CA 95812-1888

Attach check below:

# APPENDIX 3 ENFORCEMENT DIRECTIVE COMPLIANCE TRACKING

# State Water Resources Control Board
## Division of Drinking Water

**Appendix 2 of Compliance Order No. 05-13-22R-003**

| Enforcement 05-13-22R-001 | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| **1** | The Company must operate the source, treatment, and distribution facilities in a manner that can provide disinfected water to customers, in a reliable manner, meeting a minimum 20 PSI at all times. | 4/1/2022 | No | The Company was able to initially meet compliance with this Directive per Mr. Pat Webb's email dated April 8, 2022 stated this is being achieved; However, the Company has not been able to reliably operate at a minimum of 20 psi, due to the ongoing leaks, and infrequent plant operations. Several outages have been reported to the Division. See Citation 05-13-22C-019 and Directive 3 of the Citation. |
| **2** | The Company must provide an alternative water supply to all customers. This may be using bottled water, hauled water, or an interconnection with another water system if Directive 1 cannot be met. | 4/2/2022 | Not applicable at this moment | Follow up enforcement issued regarding this directive. See Directive 7 of 05-13-22C-015. |
| **3** | The Company must obtain a certified treatment operator with a Grade 2 certificate (T2) and a certified distribution operator with a Grade 1 certificate (D1). | 4/12/2022 | No, but partially met the directive months later | Follow up enforcement issued regarding this directive. See Directive 2 and 3 of 05-13-22C-015 and Directive 1 of 05-13-22C-028. |

| Enforcement 05-13-22R-001 | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| **4** | The Company must comply with primary drinking water standards and surface water treatment requirements pursuant to CHSC, Sections 116555 and Title 22, California Code of Regulations, Sections 64652, 64653, 64654, 64655, 64656, 64659. | 4/12/2022 | No | Follow up enforcement issued regarding this directive. See Directive 1 of 05-13-22C-015. As observed during the November 9, 2022 site inspection, to date the Company is not meeting Section 64655, 64656, and 64659. |
| **5** | The Company must ensure that the Do not Drink Notice in Appendix 1 is issued to all affected customers of the Company (ex: hand delivering public notices door to door). By April 1, 2022, the notice must be distributed using electronic mail as well as mail delivery to customer addresses. | 3/30/2022 | Not applicable at this moment | Mr. Pat Webb's email on April 13, 2022 indicated this was completed by April 1, 2022. Division received a complaint (April 4, 2022) customers had not received a notice. |
| **6** | The Company, with the concurrence of the certified treatment operator required in Directive 3, verify that all the Havasu water treatment plant has functional chlorine analyzers, turbidimeters, filters that can be backwashed adequately, chlorine feed pumps or other disinfectant dosing methods, adequate chemical storage, adequate polymer dosing equipment, intake and distribution pumps, and alarm systems to provide warning of filtration and disinfection failures. The required sampling for monthly total coliform monitoring for raw water and the distribution system must also be completed by April 15, 2022. | 4/15/2022 | No | Several items were found to be non-functional during the March 23, 2022 site visit such as the automatic backwash, automatic plant flow to waste, turbidity recording equipment, and filter displays. Items were reported as acceptable by the Company (April 13, 2022 and September 24, 2022 emails from Mr. Pat Webb), but the Division has received no report or other documentation as requested to validate Mr. Webb’s statements regarding status of equipment currently at the site. During both the November 9, 2022, site visit by the Division and |

| Enforcement 05-13-22R-001 | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| | | | | the evaluation by EPD USA on January 18, 2023, several items, including all those mentioned above, were found to be nonfunctional as discussed in the Deficiency List in Appendix 4 and the report from EPD USA. Follow up enforcement issued regarding this directive. Directive 4 of 05-13-22C-015 and Directive 2 of 05-13-22C-028. |
| **7** | By April 1, 2022, and every Friday thereafter, the Company must submit a Weekly report showing the amount of water produced per day and a daily chlorine residual measurement. The report must also include daily meter reads (usually kilowatt hours or hours of operation) of the electrical meters that feed the pumps. | 4/1/2022 | No | Follow up enforcement issued regarding this directive. Directive 1A of 05-13-22C-019, Directive 3 of 05-13-22C-019, and Directive 6 of 05-13-22C-028 |
| **8** | The Company must install or have available and on-site adequate backup generators able to run the source, treatment, and distribution facilities. | 4/12/2022 | Yes | Mr. Pat Webb's email on April 13, 2022 indicated temporary on-site generators installed and will have a rental generator available for SCE scheduled shutdown on April 19, 2022. Sean Chapin with the Company is able to provide generators. |
| **9** | The Company must remove or repair all potential cross connections identified in the Deficiency List in Appendix 10. | 4/26/2022 | No | Follow up enforcement issued regarding this directive. See Directive 5 of 05-13-22C-015 and Directive 3 of 05-13-22C-028. During the |

| Enforcement 05-13-22R-001 | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| | | | | November 9, 2022, site visit it was found that all but one potential cross connection identified was removed or repaired. No Cross connection evaluation has been completed. |
| **10** | The Company must complete Appendix 2: Certification of Completion of Public Notification Form. Submit it together with a copy of the public notice required by Directive 5 to the State Water Board | 4/12/2022 | Submitted late | Submitted on April 13, 2022 |
| **11** | The Company must prepare a Corrective Action Plan for State Water Board approval, identifying improvements to the water system designed to correct the water quality problems identified and ensure that Company delivers water to consumers that meets drinking water standards. The plan must include all remaining deficiencies from the Deficiency List provided in Appendix 10. The plan must also include a time schedule for completion of each of the phases of the project such as design, construction, and startup, and a date that shows when Company will be in compliance. | 9/9/2022 | No | No adequate CAP has been submitted. See Directive 12 comments below and Directive 5 of 05-13-22C-028. Mr. Pat Webb's September 24, 2022 email stated an updated CAP was being completed within the week. No CAP submission has been received. |
| **12** | The Company must submit and present in person the Corrective Action Plan required under Directive 11 above, to the State Water Board's office located at 464 W. 4th Street San Bernardino, CA 92401 | 4/29/2022 | No | No adequate CAP has been submitted. Division met with HWC on April, 29, 2022 and discussed CAP requirements. Follow up enforcement issued regarding this directive. See Directive 6 of 05-13-22C-015 and |

| Enforcement 05-13-22R-001 | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| | | | | Directive 4 of 05-13-22C-028. |
| **13** | The Company must perform the actions outlined in the State Water Board approved Corrective Action Plan, and each and every element of said plan, according to the time schedule set forth therein. | 9/9/2022 | No | No documentation was submitted, some items were observed completed during the November 9, 2022 site visit. See Directive 5 of 05-13-22C-028. |
| **14** | The first of every month thereafter, the Company submit a report to the State Water Board in the form provided as Appendix 3, showing actions taken during the previous month to comply with the Corrective Action Plan. | 5/1/2022 | No | Nothing Submitted. No additional enforcement action taken to date. |
| **15** | The Company must complete and return to the State Water Board the “Notification of Receipt” form attached to this Order as Appendix 4. Completion of this form confirms that the Company has received this Order and understands that it contains legally enforceable directives(s) with due dates | 4/5/2022 | Submitted late | Submitted on April 13, 2022. No additional enforcement action taken to date. |

| Enforcement 05-13-22C-015 | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| **1A** | The Company must comply with the filtration and disinfection performance standards in the Surface Water Treatment Rule and Compliance Order No. 05- 13-22R-001 Directive 4. a. By May 13, 2022, and every Friday there after until directed by the Division to stop, the Company must submit reports with daily chlorine contact time calculations, reservoir water levels, flow rates at the treatment plant effluent, water temperature, pH, and reservoir effluent chlorine residual. Turbidity logs showing sample times should be included on these reports. | 5/13/2022 | No | Follow up enforcement issued regarding this directive. Directive 3 of 05-13-22C-019, and Directive 6 of 05-13-22C-028. Not in Compliance per 05-13-22R-003. To date, per the November 9, 2022 site inspection, the Company is not meeting Sections 64655, 64656, and 64659. |
| **1B** | The Company must continue posting a boil water notice to all customers until compliance with the Surface Water Treatment Rule is achieved and the Division approves lifting of the notice. | N/A | | Complied |
| **2** | By May 13, 2022, provide valid contracts, scope-of-work, or other documentation that demonstrate that only Certified Treatment Operators are performing duties that necessitate a certified Treatment Operator. All activities on logbooks should be signed off by person performing the activity. | 5/13/2022 | Partially met | Discussed in a meeting. Mr. Pat Hoban is certified treatment operator. Adequate scope of work, or other documentation has not been submitted; However no additional enforcement issued. |
| **3** | By May 13, 2022, provide contracts, scope-of-work, or other documentation that demonstrate that only Certified Distribution Operators are performing duties that necessitate a certified Distribution Operator. | 5/13/2022 | No but met the directive months later. | Follow up enforcement issued regarding this directive. See Directive 4 of 05-13-22C-019 and Directive 1 of 05-13-22C-028. Received submission of distribution operator contract September 30, 2022. |

| Enforcement 05-13-22C-015 | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| **4** | By May 20, 2022, provide documentation that Compliance Order 05-13-22R-001 Directive 6 has been complied with. Documentation may include certification from technicians from equipment manufacturer or other qualified persons that equipment is functional. Nonfunctional equipment should be replaced or repaired as necessary. | 5/20/2022 | No | Nothing Submitted. Follow up enforcement issued regarding this directive. See Directive 2 of 05-13-22C-028. During the November 9, 2022 site visit by the Division and a January 18, 2023 inspection by EPD USA. several items were found to be nonfunctional as discussed in the Deficiency List in Appendix 4. |
| **5** | By May 20, 2022, provide documentation that Compliance Order 05-13-22R-001 Directive 9 has been complied with. Documentation may include a cross connection inspector or specialist checks on the potential cross connections and verifies that there is no cross connection or that necessary equipment repair has been completed. | 5/20/2022 | No | Nothing Submitted. Follow up enforcement issued regarding this directive. See Directive 3 of 05-13-22C-028. During the November 9, 2022, site visit it was found that all but one potential cross connection identified was removed or repaired. No evaluation of the site has been completed. |
| **6** | By May 20, 2022, complete and submit the Corrective Action Plan required under Directive 11 of Compliance Order 05-13-22R-001. If the Corrective Action Plan includes the Company receiving grant funding, the Company must include alternative plan steps in case grant funding is not available to the Company | 5/20/2022 | No | No adequate CAP has been submitted. Inadequate CAP submitted May 19, 2022. On June 10, 2022, the Division sent a response letter requiring an adequate CAP be submitted by June 24, 2022. Follow up enforcement issued regarding this directive. See Directive 4 of 05-13-22C-028. Mr. Pat Webb's September 24, 2022 email stated an updated CAP was being |

| Enforcement 05-13-22C-015 | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| | | | | completed within the week. No CAP submission has been received. |
| **7** | By May 10, 2022, the Company must provide an alternative water supply to all customers independently of the bottled water provided by San Bernardino County Office of Emergency Services if the Company is still on a boil water notice by May 10, 2022. If the boil water notice is lifted by May 10, 2022, the Company must create a plan of action detailing how the Company will provide an alternative water supply to customers if needed in future. The plan must be submitted for review and approval by the Division by May 13, 2022. The alternative water supply may include but is not limited to bottled water, hauled water, or water from an interconnection with another public water system | 5/10/2022 | No | Discussed in meeting but no plan submitted. No additional enforcement action taken to date as the Boil Water Notice continued past May 10, 2022 and bottled water was still available for customers. |
| **8** | By June 6, 2022, submit a check to the State Water Board for the administrative penalty of $1500 imposed by this Citation along with a copy of the “Notice of Administrative Penalty Form,” which is attached as Appendix 1. The Citation number must be written on the check. The check must be made payable to the State Water Resources Control Board | 6/6/2022 | No | Nothing Submitted. Follow up enforcement issued regarding this directive. See Directive 7 of 05-13-22C-028. |

| Enforcement 05-13-22C-015 | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| **9** | By May 10, 2022, complete and return to the State Water Board the “Notification of Receipt” form attached to this Citation as Appendix 2. Completion of this form confirms that Company has received this Citation and understands that it contains legally enforceable directives(s) with due dates. | 5/10/2022 | No | Nothing Submitted. No additional enforcement action taken to date. |

| **Enforcement 05-13-22C-019** | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| **1** | By August 29, 2022, notify all persons served by the Company of the violation of CCR, Title 22, Section 64463.1 in conformance with Sections 64463.4 and 64465. Appendix 1: Notification Template must be used to fulfill this Directive, unless otherwise approved by the State Water Board and contents of Appendix 1 must be approved by the State Water Board prior to issuance. The Company must edit the wording of the sample notification as necessary. The notification must be completed in accordance with the following: By mail or direct delivery of the Public Notification to each customer served by the water system and; By one of the following secondary methods to reach persons not likely to be reached by mail or direct delivery;<br>Ø By publication in a local newspaper, by delivery to community organizations or by posting in conspicuous public places served by the water system or on the internet. If the water system opts to issue the notice via internet website, the public notice must remain posted for a minimum of seven (7) consecutive days. | 8/29/2022 | No | Compliance unknown. Nothing Submitted. No additional enforcement action taken to date. |

| Enforcement 05-13-22C-019 | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| **2** | By September 2, 2022, the Company must develop and submit for review by the Division, a map of valves in the distribution system. The Company must develop a valve exercise program that targets a minimum of annual valve exercising. The Company must keep records of valve exercising and have them available for review upon Division request. | 9/2/2022 | No | Nothing Submitted. No additional enforcement action taken to date. A map of the valves was observed during the November 9, 2022 inspection. Company staff stated that the map is not fully accurate. |
| **3** | By August 1, 2022, the Company must begin taking weekly distribution system pressure readings and chlorine residual readings at the routine bacteriological monitoring site and routine disinfection by product monitoring site. Beginning August 5, 2022, and every Friday thereafter the Company must submit logs of the results for the distribution system pressure and chlorine residual readings to the Division. | 8/5/2022 | No | Division is unsure if samples were taken weeks of 8/1-8/5 and 8/7-8/12. First submission 8/22 and no dates provided. No additional enforcement action taken to date. Directive 6 of 05-13-22C-028 requires monitoring continue. |
| **4** | By August 5, 2022, please provide documentation that Rick Miller or another certified distribution operator was making operations decisions for the Everet break repair and disinfection. Documentation can include but is not limited to billing or correspondence showing operations decisions were being made by a certified distribution operator. | 8/5/2022 | No | Nothing Submitted. No additional enforcement action taken to date. Directive 1 of 05-13-22C-028 is related to Distribution Operator Certification. |

| **Enforcement 05-13-22C-019** | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| **5** | By August 2, 2022, complete and return to the State Water Board the "Notification of Receipt" form attached to this Citation as Appendix 3. Completion of this form confirms that Company has received this Citation and understands that it contains legally enforceable directives(s) with due dates. | 8/2/2022 | No | Nothing Submitted. No additional enforcement action taken to date. |
| **6** | Complete Appendix 2: Compliance Certification Form. Submit it together with a copy of the public notifications required by Directive 1 and Directive 2 to the State Water Board by September 5, 2022. | 9/5/2022 | No | Nothing Submitted. No additional enforcement action taken to date. |

| **Enforcement 05-13-22C-026** | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| 1 | By August 3, 2022, complete an EAR for 2021 and submit it to the State Water Board. Instructions for completing and submitting the EAR may be found at Water Boards Annual Report (https://ear.waterboards.ca.gov/). | 8/3/2022 | No | The report was submitted on October 5, 2022. The Division sent it back for revisions and provided comments October 11, 2022. The Division was informed that the EAR was ready for additional review by the Company on October 30, 2022. Additional comments requesting revision were sent by the Division November 15, 2022. The EAR was submitted December 5, 2022 and accepted. |
| 2 | By July 27, 2022, complete and return to the State Water Board the "Notification of Receipt" from | 7/27/2022 | No | Nothing Submitted. No additional enforcement action taken to date. |

| Enforcement 05-13-22C-026 | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| | attached to this Citation as Appendix 1. Completion of this form confirms that the System has received this Citation and understands that it contains legally enforceable directives(s) with due dates. | | | |

| Enforcement 05-13-22C-027 | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| **1** | By August 5, 2022, submit a draft 2021 Consumer Confidence Report to the State Water Board for review and approval. By August 19, 2022, complete a Consumer Confidence Report, as required by the California Code of Regulations, Title 22, Sections 64480 through 64483, for calendar year 2021 and mail or directly deliver one copy of the Consumer Confidence Report to each customer. | 8/5/2022 | No | A report was submitted on September 26, 2022; however it was mostly blank. The Division provided comments and requested a revision October 11, 2022. A revised copy was submitted October 30, 2022. Revisions were sent back to the Company on November 16, 2022 with conditional approval. It is unknown if the CCR has been distributed. |
| **2** | By August 19, 2022, submit a copy of the 2021 Consumer Confidence Report to the State Water Board at http://drinc.ca.gov/ear/. | 8/19/2022 | No | Nothing Submitted. No additional enforcement action taken to date. |
| **3** | By October 1, 2022, submit a Certification Form (Appendix 1), indicating the date the report was distributed to customers at http://drinc.ca.gov/ear/ | 10/1/2022 | No | Certification form was submitted September 26, 2022; however items in the Certification form were stated to be inaccurate. |

| Enforcement 05-13-22C-027 | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| **4** | By August 3, 2022, complete and return to the State Water Board the "Notification of Receipt" form attached to this Citation as Appendix 2. Completion of this form confirms that Company has received this Citation and understands that it contains legally enforceable directives(s) with due dates. | 8/3/2022 | No | Nothing Submitted. No additional enforcement action taken to date. |

| Enforcement 05-13-22C-028 | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| **1** | By August 12, 2022, provide contracts, scope-of-work, or other documentation that demonstrate that only Certified Distribution Operators are performing duties that necessitate a certified Distribution Operator. | 8/12/2022 | No but met the directive seven weeks later | No additional enforcement action taken to date. Received submission of contract September 30, 2022. |
| **2** | By August 26, 2022, provide documentation that Compliance Order 05-13-22R001 Directive 6 has been complied with. Documentation may include certification from technicians from equipment manufacturer or other qualified persons that equipment is functional. Nonfunctional equipment should be replaced or repaired as necessary | 8/26/2022 | No | No evaluations completed. No documentation provided. Some items were observed to be non functional during the November 9, 2022 inspection by Division personnel and a January 18, 2023 inspection by EPD USA. |
| **3** | By August 26, 2022, provide documentation that Compliance Order 05-13-22R001 Directive 9 has been complied with. Documentation may include a cross connection inspector or specialist checks on the potential cross connections and verifies that there is no cross | 8/26/2022 | No | No evaluations completed. No documentation provided. Some items were observed to be completed during the November 9, 2022 inspection. |

| Enforcement 05-13-22C-028 | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| | connection or that necessary equipment repair has been completed. | | | |
| **4** | By August 12, 2022, complete and submit the Corrective Action Plan required under Directive 11 of Compliance Order 05-13-22R-001. The Corrective Action Plan must be revised in line with the Division Response dated June 10, 2022 found in Appendix 3. The Company must also include a financial plan in the submittal that details how it will fund items entailed in the Corrective Action Plan. | 8/12/2022 | No | Nothing Submitted. Mr. Pat Webb's September 24, 2022 email stated an updated CAP was being completed within the week. No CAP submission has been received. |
| **5** | By September 9, 2022 the Company must provide documentation, including all evaluations completed, sufficient to prove that the Company has completed all 31 items listed in the March 23, 2022 deficiency list. | 9/9/2022 | No | No evaluations completed. No documentation provided. Some items were observed to be completed during the November 9, 2022 inspection. See Appendix 4. Additional deficiencies were found during the November 9, 2022 inspection. |
| **6** | The Company must continue submitting weekly monitoring reports per Compliance Order 05-13-22R-001, Citation 05-13-22C-015, and Citation 05-13-22C-019. | N/A | No | Late submittals. Started submitting pressure and distribution chlorine residual monitoring on August 22, 2022 after reminders from Jarrett. No additional enforcement actions taken. |

| Enforcement 05-13-22C-028 | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline?** | **Comments** |
| **7** | By September 6, 2022, submit a check to the State Water Board for theadministrative penalty of $3,000 imposed by this Citation along with a copy of the "Notice of Administrative Penalty Form," which is attached as Appendix 1. By September 14, 2022 the Company must submit a check to the State Water Board for the administrative penalty of $1,500 imposed by Citation number 05-13-22C-015 along with a copy of the "Notice of Administrative Penalty Form," in Appendix 1 of the referenced Citation. The Citation numbers must be written on the checks. The checks must be made payable to the State Water Resources Control Board and submitted. | 9/6/2022 and 9/14/2022 | No | Nothing Submitted. No additional enforcement action taken to date. |
| **8** | By August 10, 2022, complete and return to the State Water Board the "Notification of Receipt" form attached to this Citation as Appendix 2. Completion of this form confirms that Company has received this Citation and understands that it contains legally enforceable directives(s) with due dates | 8/10/2022 | No | Nothing Submitted. No additional enforcement action taken to date. |

| Compliance Order 05-13-22R-002 | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline** | **Comments** |
| **1** | By **September 21, 2022**, contact the Division of Drinking Water at dwpdist13@waterboards.ca.gov and Wei.Chang@waterboards.ca.gov , and schedule an on-site inspection of the water treatment plant property, which includes the storage reservoir, hydropneumatic tank, distribution pumps, and treatment facilities. The inspection must occur no later than **October 14, 2022**. | 9/212022 | No | The Division was not contacted by the Company regarding scheduling of a site visit. Due to the lack of response by the Company, the Division escalated the issue to the State Water Boards Office of Enforcement who was able to get in contact with the Company and schedule a site visit for November 9, 2022. |
| **2** | By **October 14, 2022**, the Company must provide documentation of all records kept by the Company including all:<br>a. Treatment plant operations and monitoring logs including turbidity recordings, chlorine residual recordings, flow meter recordings, tank water level recordings, water temperature and pH measurements, and turbidimeter calibrations,<br>b. Operator logs, including daily work hours and activities performed,<br>c. Improvements completed since March 2022<br>d. Inspection reports or other evaluations made of Company's facilities,<br>e. Invoices for all repairs completed, materials purchased, and inspections or other evaluations made since March 2022 | 10/14/2022 | No, but met the directive months later | Documentation of records kept by the Company were not submitted to the Division until the November 9, 2022 inspection. |

| **Compliance Order 05-13-22R-002** | | | | |
|---|---|---|---|---|
| **No.** | **Directives** | **Deadline** | **Meet Deadline** | **Comments** |
| **3** | By September 20, 2022, complete and return to the State Water Board the "Notification of Receipt" form attached to this Order as Appendix 1. Completion of this form confirms that the Company has received this Order and understands that it contains legally enforceable directives(s) with due dates. | 9/20/2022 | No | Nothing Submitted. No additional enforcement action taken to date. |
| **4** | Comply with all overdue directives from the previous citations and compliance orders issued in 2022 as listed in Attachment 2 of Order 05-13-22R-002. | Various | Ongoing | See items in this appendix. This document lists all the overdue directives from the previous citations and compliance orders. |

**From:** Patrick Webb
**To:** Hamud, Jarrett@Waterboards
**Cc:** Jennifer - Havasu; jennifer623@cox.net
**Subject:** RE: HWC Enforcement Compliance Tracking
**Date:** Saturday, September 24, 2022 2:12:15 PM

EXTERNAL:

Jarrett: Here are HWC's responses to the alleged outstanding deficiencies as listed in the original Appendix 11 and summarized in your September 8, 2022 email below. Please let us know if there are any other outstanding items:

1. HWC has been making potable water since the March Boil Water Notice was lifted.
2. We are not aware of any cross-connections in the system. The waste & backwash effluent lines have been raised 2 times the pipe diameter per requirements.
3. The hose referred to as a potential cross connection has been removed.
4. The reservoir level indicator has been re-screened.
5. System hydro tank condition is being inspected.
6. Pump facility & controls-intake pump is functioning & we have a spare.
7. The hose at the distribution pumps has been removed.
8. We are awaiting parts with which to rebuild the distribution pumps, should they require service in the future.
9. Management has supplied disinfected water since April 6, 2022 per our log book.
10. Operator Compliance for State Regs-we are awaiting Rick Miller's signed copy of the D1 contract which we have requested several times.
11. Havasu plant condition- all filters have had media inspected, replacement media was ordered & delivered, filters 4 & 5 have been replaced with new media & filter media for filters 1 thru 3 has been purchased, delivered & awaiting scheduled downtime for replacement. The automatic backflush will be reinstated when the plant controls are repaired or updated, upon receipt of the grants that have been pending for the last 5 years.
12. Footpad in treatment plant will be replaced per the Corrective Action Plan upon receipt of sufficient grant funds.
13. Filter displays awaiting a schedule for EPD to evaluate the instrumentation & controls
14. Check valve will be replaced per the Corrective Action Plan.
15. Turbidity meters – we've obtained a hand held meter and in process replacing the others per the Corrective Action Plan.
16. 2nd stage filters-new media in 2nd stage filters should be adequate to remove any excess polymer
17. Plant Automatic Flush to Waste- the equipment to accomplish the flush to waste is in place & functioning, the (EPD) equipment & controls will be evaluated by manufacturer
18. Plant Chlorine Storage-the chlorine gas tanks are now adequately chained/secured for storage

19. Plant Polymer Storage-cloth was removed & replaced with a plastic cap
20. Polymer Dosing Pump-is NSF 61 certified for that use
21. Stage 1 Polymer Injection Point-there was no expanding foam it was just polymer build up which was removed, cleaned, reinstalled & no longer leaks
22. Distribution – we exercised every fire hydrant in the community & there are a few scheduled for repair
23. Distribution system valve condition-we are in the process of identifying, inspecting and cycling the valves.
24. Exposed main line is being recovered.
25. Active Leaks-these were on Malamedia, Everett & Panoply & all have been repaired
26. Clear Well Interior Condition-per the Corrective Action Plan we are having the tank inspected.

- Pumps, Facilities, Controls-are in process of being refurbished as noted above
- Backup Power Supply-a water facility transfer switch is in place & we currently use readily available rented mobile power on an as needed basis.

27) Public Notification of Everet leak- the affected customers on Everet were notified of the repairs made to stop the leak per direction from from Rick Miller–the other portions of the system were not affected and the system was back on line and functional by morning

28) We previously provided the scope of work performed by Pat Hoban.

29) An update to the Corrective Action Plan is being completed within the week.

30) The 2022 EAR is being completed within the week.

31) The Consumer Confidence Report is being completed, upon receipt of lab reports on contaminants.

Patrick Webb
Webb & Carey
APC
402 West Broadway Ste
400 San Diego CA 92101
619-548-4727
pwebb@webbcarey.com

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**From:** Hamud, Jarrett@Waterboards [mailto:Jarrett.Hamud@Waterboards.ca.gov]
**Sent:** Thursday, September 8, 2022 1:51 PM
**To:** missionpower@outlook.com; balancingshop@yahoo.com
**Cc:** Jennifer - Havasu <jennifer@havasuent.com>; Patrick Webb <pwebb@webbcarey.com>; Chang, Wei@Waterboards <Wei.Chang@waterboards.ca.gov>; McCarthy, Sean@Waterboards <Sean.McCarthy@waterboards.ca.gov>; Cazares, Hector I.@Waterboards <Hector.Cazares@Waterboards.ca.gov>
**Subject:** HWC Enforcement Compliance Tracking

Hi All,

Please see below for a list of most items outstanding from Enforcement Actions issued to the Company by the Division, as well as some upcoming enforcement action due dates for the Company.

Items Outstanding from Enforcement Actions:

- Notification of Receipt Forms from all Citations, not including the Compliance Order as that was submitted one day late.
- Documentation that a Certified Distribution Operator is retained AND is performing duties that necessitate a certified Distribution Operator.
- Documentation that a Certified Distribution Operator was making decisions during the Everet break repair and disinfection.
- Documentation of scope of work that will be performed by Pat Hoban or other Certified Treatment Operators. At this time, Pat Hoban is reporting all days that he is at the plant.
- Documentation that potential cross connections are removed/repaired and that there are no cross connections in the system.
- Documentation that nonfunctional equipment in the treatment plant and plant intake has been repaired or replaced and all other equipment has been verified to be functional.
- An adequate Corrective Action Plan. Monthly status reports tracking corrective actions being taken were required but have not been submitted.
- Completion of the 2022 Annual Report.
- Completion, submittal for review by the Division, and distribution of the approved Consumer Confidence Report to all customers and the Division.
- A map of valves in the distribution system. A valve exercise program targeting a minimum of annual valve exercising. Future record keeping of valve exercising and availability for Division review.
- Public notification regarding the Everet main break and public notification failure

Upcoming Items from Enforcement Actions

- Documentation, including all evaluations completed, that all 31 deficiency list items have been completed. All items of the CAP must also have been completed. The CAP was required to cover these deficiencies. Due 9/9

It should be noted that the Company must also continue completing and submitting Weekly monitoring reports each Friday.

If you have any questions regarding this matter, please contact me.

Best regards,
Jarrett Hamud
Water Resources Control Engineer
State Water Resources Control Board – Division of
Drinking Water 464 West 4th Street, Ste 437
San Bernardino, CA 92401
Direct (909)383-5289 | Jarrett.Hamud@waterboards.ca.gov

*PLEASE NOTE that for the foreseeable future our office staff will be teleworking. The most effective way of reaching me for the time being is through email. If it is an emergency then please refer to your emergency notification plan.*

# APPENDIX 4 NOVEMBER 9, 2022 INSPECTION UPDATED DEFICIENCY LIST

**STATE OF CALIFORNIA**
**STATE WATER RESOURCES CONTROL BOARD**
**DIVISION OF DRINKING WATER**

**March 23, 2022 DEFICIENCY LIST UPDATED DECEMBER 21, 2022**
**PWS Name: Havasu Water Company**
**PWS ID No.: CA3610017**
**Updated By: Jarrett Hamud**

| SIGNIFICANT DEFICIENCIES IDENTIFIED | | | | |
|---|---|---|---|---|
| **Date Found** | **Description of Deficiency** | **Correction Due Date** | **Date Corrected Confirmed** | **Comments** |
| **TREATMENT** | | | | |
| 3/23/2022 | **Havasu Water Treatment Plant Operation:** It is unknown if water supplied from the Havasu Water Treatment Plant is receiving adequate disinfection. All water supplied by the Company should have a detectable residual and meet chlorine contact time requirements. | 4/22/2022 | | Weekly monitoring and reporting are being done. Some reporting shows there is not enough chlorine contact time. |
| 3/23/2022 | **Potential Cross Connection:** Plant flow to waste and backwash piping was observed to not have adequate clearance or protection from drainage retention ponds. Piping should terminate at least two times the pipe diameter above the ponds. Piping should also be capped when not in use, screened, or otherwise protected. | 4/22/2022 | 11/9/2022 | See photo 1 in appendix. |

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| 3/23/2022 | **Potential Cross Connection:** Plant backwash supply water line has an unprotected hose bib with hose connected leading to plant drainage retention ponds. The hose should be removed. The hose bib should be removed or have adequate backflow protection installed. | 4/22/2022 | | Hose still connected but removed from drainage pond. See photo 2 in appendix. The Company has not had any cross connection evaluations completed to document there are no additional cross connections in the system. **The Company must remove the hose or have adequate backflow protection installed.** The Company should have a cross connection evaluation completed. |
| 11/9/2022 | **Turbidity Recording Equipment:** Printers for turbidity monitors do not function adequately. Turbidity readings are required to taken and recorded every 15 minutes. **The Company must install adequate recording equipment and ensure functionality by the Correction due date.** | 2/7/2023 | | The plant is unable to meet CCR Section 64655 as adequate recording of turbidity is unable to be performed by plant. |

| FINISHED WATER STORAGE | | | | |
|---|---|---|---|---|
| 3/23/2022 | **Reservoir Level Indicator:** Level Indicators should be plugged or screened to prevent the entry of surface contamination, insects, other animals, and dirt and debris. | 4/22/2022 | | No repair though Pat Webb reported to be repaired in September 24 email. See photo 3 in appendix. **The Level indicator must be plugged, screened, or otherwise protected.** |
| 3/23/2022 | **System Hydrotank Condition:** The status of the condition of the Company's 7,000-gallon hydrotank is uncertain. It is not outfitted with a pressure relief valve. It was reported that it is water-logged and is severely rust deteriorated inside and out. No known cleaning or internal inspection has been completed on the hydrotank. Water level is unable to be measured due to degraded level indicators. Condition of wooden supports that pressure tank rests on is also unknown. The Company should have a comprehensive evaluation completed and repair or replace the hydrotank as necessary as soon as possible. | 4/22/2022 | | No evaluation or repairs have been completed. Mr. Pat Webb reported that it was being inspected in the September 24 email. Replacement level indicator was stated to be ordered, no invoice has been received by Division showing purchase of materials. Company stated that system would need to be shutdown to replace the level indicator and has not had opportunity. **The Company must have an evaluation of the hydrotank completed.** |

| PUMPS, PUMP FACILITIES, AND CONTROLS | | | | |
|---|---|---|---|---|
| 3/23/2022 | **Intake Pump:** The intake pump was found to be in a state of disrepair. Emergency operators were unable to identify how to activate the intake pump. The Company should repair or replace the intake pump as necessary. | 4/22/2022 | | Intake pump is currently operational. **Please verify that there is a backup pump available for the intake.** |
| 3/23/2022 | **Potential Cross Connection:** During the site visit, a hose was observed connected to the distribution pump without backflow protection. The hose should be removed or provided with adequate backflow protection. | 4/22/2022 | 11/9/2022 | Hose was observed removed. See photo 4 |
| 3/23/2022 | **Potential Cross Connection:** During the site visit, a leak from the intake pump by the treatment plant was identified as a potential backflow risk. The Company should repair the leak as soon as possible. | 4/22/2022 | | The leak has been dug up and repair attempted but further repairs are necessary. See Photo 5. **The leak must be repaired.** |

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| **SYSTEM MANAGEMENT AND OPERATION** | | | | |
| 3/23/2022 | **Water Supply Demands:** The Company is not able to meet water supply demands and has had a water outage since March 21, 2022. The Company should provide adequate water supply. | 4/22/2022 | | The Division has received several reports of water outages in the distribution system since pressure was restored to the distribution system March 2022. Leaks and treatment operator availability may be areas of concern as plant must be operated with staff on site. |
| **OPERATOR COMPLAINCE WITH STATE REGULATIONS** | | | | |
| 3/23/2022 | **Treatment Operator Compliance:** The Company has not had a required certified T2 or greater operator since March 4, 2022. The Company should employ a certified T2 or greater operator as soon as possible. | 4/22/2022 | | The Company has hired Pat Hoban, a T2 operator, however, an adequate scope of work has not been submitted to the Division. **An adequate scope of work must be submitted.** |
| 3/23/2022 | **Distribution Operator Compliance:** The Company has not had a required certified D1 or greater operator since March 4, 2022. The Company should employ a certified D1 or greater operator as soon as possible. | 4/22/2022 | 9/30/2022 | The Company submitted a contract signed by Rick Miller, a D1 operator. |

| POTENTIAL HEALTH HAZARD DEFICIENCIES IDENTIFIED | | | | |
|---|---|---|---|---|
| **Date Found** | **Description of Deficiency** | **Correction Due Date** | **Date Corrected Confirmed** | **Comments** |
| **TREATMENT** | | | | |
| 3/23/2022 | **Havasu Plant Condition:** Status of several aspects of the plant are degrading and may be beyond repair. The Company should take steps to evaluate plant condition and repair or replace as necessary.<br>The following issues were reported or observed during the inspection:<br>• Filter #3 has failed and turbidity spikes when it is running media in filters were last replaced February 17, 2016.<br>• Filters were last inspected and cleaned September 27, 2020. The Company should be completing annual inspections of filter media. Filters are reported to currently need a cleaning for mudballs.<br>• Evidence of extensive filter and piping leakage in the treatment plant was observed. | 6/21/2022 | | • The Company has purchased new media from EPD for the five filters and installed new media in the two finishing filters. Photo 6. **The Company must replace media in the three remaining filters**<br>• The Company reports that it has scheduled January 18, 2023 for Mr. Berry from EPD to evaluate filters and plant. **The Company must have the treatment plant evaluated.**<br>• Severe leaking in the plant is still occurring, several gasket changes have been performed. **Drainage must be updated to keep plant floor dry.** Photo 7<br>• No jar testing capabilities so dosage is based on effluent NTU. |

| | | | | |
|---|---|---|---|---|
| 3/23/2022 | **Havasu Plant Condition Continued:**<br>• Automatic backflush does not work and must be manually initiated.<br>• Treatment plant building footpad is sagging under weight of treatment plant equipment and causing bowing of plant piping.<br>• Filter displays do not work and filter operations must be manually completed.<br>• The check valve between plant intake plant may be broken and causing backflow conditions as polymer has been found in raw water samples.<br>• Printers for turbidity monitors do not function adequately.<br>• Polymer dosed between stage 1 and stage 2 filters is not removed by stage 2 filters and may be indicative of failure of stage 2 filters. | 6/21/2022 | | • Backwash cycle is still manually actuated as automatic controls do not function. **The Company must rehabilitate, repair, or replace equipment so the backwash cycle may function as intended.**<br>• The Company has stated intention to replace the flooring, but no repair has been completed. **Sagging is currently significant and a risk and the plant must be repaired**.<br>• Filter Displays still not working Photo 8. **Displays must be repaired or replaced**.<br>• Printers do not function. Turbidity results are not recorded adequately, only by operator visual. Photo 9. **The Company must install adequate recording equipment and ensure functionality**.<br>• The check valve has been dug up and repair attempted but further repairs are necessary Photo 5. **The leak must be repaired.** |

| | | | | |
|---|---|---|---|---|
| 11/9/2022 | **Flow accumulator measuring device:** Flow accumulator may not be accurate due to pipe size. The Company should utilize a instantaneous flow reader rather than a totalizer for more accurate reporting and monitoring. **The Company must verify the accuracy of the flow measuring device and replace or repair as necessary by the correction due date.** | 2/7/2023 | | |
| 3/23/2022 | **Plant Automatic Flush to Waste:** Automatic plant flush to waste is set to .5 NTU and would allow for turbidities greater than .2 NTU to flow into the system. | 6/21/2022 | | Reported by Pat Webb to be functional in 9/24/2022 email, however automatic flush to waste is not functional and is controlled manually. Lack of functioning automatic flush to waste is a risk as there is potential for turbidities over allowable levels to go to system. **A functioning automatic flow to waste must be installed at the plant as a safeguard for public health. The plant must have adequate reliability features such as alarms.** |
| 3/23/2022 | **Plant Chlorine Storage:** Plant chlorine gas tanks were observed to not be adequately chained in storage. Chlorine gas tanks should be stored with adequate protective measures. | 6/21/2022 | 11/9/2022 | See photo 10 |

| | | | | |
|---|---|---|---|---|
| 3/23/2022 | **Plant Polymer Storage:** Plant polymer storage barrel was observed to not be adequately covered. A shirt or cloth was used to cover the polymer dosing line. Only NSF 61 certified material should be used to cover storage barrels. | 6/21/2022 | 11/9/2022 | Shirt/cloth was removed. Food grade bucket now used. Photo 11 |
| 3/23/2022 | **Polymer Dosing Pump NSF 61 Certification:** It is unknown if the polymer dosing pumps are NSF 61 certified. Only NSF 61 certified pumps should be used in chemical dosing. | 6/21/2022 | | Company states they are NSF 61 certified, but DDW has no evidence this is correct. Company states that dosing pumps were rebuilt. Invoice submitted showed only one set of parts purchased. Tubing from pumps to injection point has been replaced. **The Company must provide evidence the polymer dosing pumps are NSF 61 certified.** |
| 3/23/2022 | **Stage 1 Polymer Injection Point:** Stage 1 polymer dosing has expanding foam covering the injection point. The injection point should be adequately tapped to prevent leakage using NSF 61 certified materials. | 6/21/2022 | 11/9/2022 | See photo 11 |

| DISTRIBUTION | | | | |
|---|---|---|---|---|
| 3/23/2022 | **System Fire Hydrants Condition:** A unknown number of fire hydrants in system are reported to be non functional. The Company should investigate and replace or repair as necessary. | 6/21/2022 | | No evidence submitted. Company previously reported repaired. |
| 3/23/2022 | **Distribution System Valve Condition:** An unknown number of valves in the distribution system are reported to be non functional. The Company should investigate and replace or repair as necessary. Additionally the Company should develop a valve exercise plan to regularly exercise valves in the system**.** | 6/21/2022 | | Valves are reported to be still found old and non-functional per a 11/21/22 phone call with Sean Chapin, in addition to being difficult to find. **The Company must find and repair/replace all valves as necessary.** |
| 3/23/2022 | **Exposed Main Line:** An exposed six-inch main line was observed in the distribution system. It was reported to have been in this state for several years as it requires frequent repairs. The Company should replace or retrofit this section of the distribution system so that the mainline will be adequately protected. | 6/21/2022 | 11/9/2022 | See photo 12 |

| | | | | |
|---|---|---|---|---|
| 3/23/2022 | **Active Leaks:** It was reported that there are at least two actively leaking water mains in the distribution system. As the system was in a water outage during the power outage, there was no observed water, though there evidence of significant ponding in the roadway. Any leaks should be repaired and properly disinfected per American Water Works Association Standards C651-05. | 6/21/2022 | | Temporarily repaired leak sites were observed during the 11/9/2022 inspection. Unrepaired leaks were reported by Company staff at the time of the inspection though not observed. As of 12/21/2022 there was one unrepaired leak reported in the system. **Please verify that all leaks have been repaired. Customers reported leaks 2/7/23** |
| **FINISHED WATER STORAGE** | | | | |
| 3/23/2022 | **Clearwell Interior Condition:** Clearwell tank interior condition is unknown. It is recommended the company have a comprehensive evaluation completed. It was also reported that interior bolts are rusting. | 6/21/2022 | | No comprehensive evaluation has been reported. **A comprehensive evaluation must be completed and submitted to the Division.** |
| **PUMPS, PUMP FACILITIES, AND CONTROLS** | | | | |
| 3/23/2022 | **Intake Piping:** Piping at the plant intake was observed to have several uncapped or screened outlets. Outlets should be removed, capped, screened, or otherwise protected as necessary. Non functional pumps should also be removed from the piping network and blind flanged. | 3/23/2023 | | No changes observed during 8/30/2022 inspection. |

| RESILIENCY AND PREPAREDNESS | | | | |
|---|---|---|---|---|
| 3/23/2022 | **Generator Condition:** The water system's back up generator is in a state of disrepair and is unable to provide back up power in case of a power outage. The Company should install adequate backup power. | 6/21/2022 | 4/13/2022 | The water system has access to temporary generator rentals as needed. |

| MINOR DEFICIENCIES IDENTIFIED | | | | |
|---|---|---|---|---|
| **Date Found** | **Description of Deficiency** | **Correction Due Date** | **Date Corrected Confirmed** | **Date Corrected Confirmed** |
| **FINISHED WATER STORAGE** | | | | |
| 3/23/2022 | **Hydrotank Meter:** The meter at the influent to the hydrotank was reported to be broken. The meter should be replaced or repaired. | 3/23/2023 | | No changes observed during 11/9/2022 inspection. See photo 13. **The meter must be replaced.** |
| 3/23/2022 | **Clearwell Overflow:** The clearwells overflow pipe was not secured adequately and is free floating from the clearwells exterior. The overflow pipe should be securely fastened. | 3/23/2023 | 11/9/2022 | U-clamp has been used to fasten to tank. See photo Photo 14 |
| **PUMPS, PUMP FACILITIES, AND CONTROLS** | | | | |
| 3/23/2022 | **Distribution Pump Conditions:** It was reported that only one of the two pumps providing pressure to the distribution system was functional. | 3/23/2023 | | The Company has ordered bearing parts kits to repack the pumps and provided invoices. **Please verify that the backup distribution pump is functional.** |

| REQUESTS AND RECOMMENDATIONS | | | | |
|---|---|---|---|---|
| **Date Found** | **Description of Deficiency** | **Correction Due Date** | **Date Corrected Confirmed** | **Comments** |
| **PUMPS, PUMP FACILITIES, AND CONTROLS** | | | | |
| 3/23/2022 | **Intake Magnetic Switch:** During the site visit, it was reported that the automatic magnetic switch to turn on the plant intake pump was broken. The switch should be repaired or replaced. | 4/22/2022 | | Please verify this repair has been completed. |
| **HEALTH AND SAFETY CODE** | | | | |
| 3/23/2022 | **Submit a Technical Report:** The Company must provide information related to technical, managerial, and financial capacity and sustainability, and information related to achieving the goals of affordability and accessibility, purusant to Health and Safety Code 116530. | 6/21/2022 | | No TMF has been received. **The Company must complete and submit a TMF.** |

# November 10, 2022 Site Visit Havasu Water Company

Appendix 1 of Deficiency List

# Photo 1 – Cross connection removed pond piping






# Photo 2 – backwash supply connection






# Photo 3 – Reservoir Level indicator hole



# Photo 4 Distribution Pump hose






# Photo 5 – intake check






# Photo 6 – Filter






# Photo 7 – inundated flooring in treatment plant






Photo 8 – filter display and auto controls nonfunctional




Photo 9 – turbidity monitoring printers offline

# Photo 10 – Chlorine storage






# Photo 11 – Polymer






# Photo 11 – polymer injection






# Photo 12 – Exposed Mainline






# Photo 13 - Hydrotank






# Photo 14 – Reservoir overflow






# APPENDIX 5 COMBINED INVOICES SUBMITTED BY THE COMPANY

# Q00E111ueBooK

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Remit To:
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TEL: (847) 689-3000
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**F.E.I.N.: 52-2418852**

## INVOICE

| INVOICE NO. | PAGE NO. |
|---|---|
| 988062 | 1 of 1 |
| CUSTOMER NO. | DATE |
| 1053929 | 05/23/22 |

**View** online at: http:/lysabluebook.biUtrust.com
V\leb Enrollment Token: XMP VXL QFQ

BILL **TO:** 1MM29
274 1 SP 0.530 E0274X 10399 09143068802 S2 P8046852 0001:0001

HAVASU WATER COMPANY
PO BOX 1690
HAVASU LAKE CA 92363-1690

SI◂IPTO: 3

H1WASU WATER COMPANY
148821 HAVASU LAKE RD
NEEDLES CA 92363
USA

Ordered by: 0003 SEAN CHAPIN

At1ention: 0003 SEAN CHAPIN

| CUSTOMER P.O. NO. | SHIP DATE | SLP | T | CODE | SALES ORDER NO. | WIH | FREIGHT | SHIP VIA |
|---|---|---|---|---|---|---|---|---|
| TERMS VERBAL | 05/23/22 | CMV | NET 30 | CA | :348701 | 21 | PREPAID | FEDEXGRND |

| USA STOCK NO. | DESCRIPTION | ORDERED | SHIPPED | BACK0RDER | UIM | PRICE | PER | EXTENSION |
|---|---|---|---|---|---|---|---|---|
| 61052 | LMI Repair Kit (SP-85HV) | 1 | 1 | 0 | EA | 188.00 | EA | 188. |
| | SOS VISIT WWW.USABLUEBOOK.COM | | | | | | | |
| CA | CR Released | | | 0 | EA | 0.00 | EA | 0.0 |

| DISCOUNT |
|---|
| 0.00 |

tion agency, a collectic

THANK YOU for your business!
**1.5%** MONTHLY FINANCE CHARGE ON AMOUNTS JO DAYS PAST DUE
Discounts Apply to Merchandise Only

| | | | | |
|---|---|---|---|---|
| 188.00 | 0.00 | 15.85 | | 220.36 |

Should it become necessary to refer your unpaid balance to a llection agencir. a collec:tion fee. not to exceed 25% of the balance referred; plus reasonable attorney's fees; and court sis wnen necnsSclry, will be added to the balance due.

Please Detach and Return Bottom Portion t Ensure PropEr Credit to Your Account

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| INVOICE NO. | CUSTOMER NO. | DATE | TOTAL |
|---|---|---|---|
| 988062 | 1053929 | 05/23/22 | 220.36 |

**REMITTANCE ADDRESS**

HAVASU WATER COMPANY
PO BOX 1690
HAVASU LAKE CA 92363-1690

USABlueBook

0001:0001

P.O. Box 9004
Gurnee, IL 60031-9004

# OD0f111ueBooK

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P.O. Box 9004
Gurnee, IL 60031-9004
TEL: (847) 689-3000
FAX: (B47) 689-3001
TOLL FRE:E: 1-800-493·9876
F.E.t.N.: 52-2418862


## INVOICE

| VOICE NO. | PAGE NO. |
|---|---|
| 966308 | 1 of 1 |
| STOMER NO. | DATE |
| 1053929 | 05/03/22 |

View online at: http:1/usabluebook.bi)ltrust.com
Web Enrollment Token: XMP VXL QFQ

BILL TO; 1053929

7561 MB 0.485 ED268 10438 09063681018 S2 P9012790 0002:0002

HAVASU WATER COMPANY
PO BOX 1690
HAVASU LAKE CA 92363-1690

SHIPTO: 3

HAVASU WATER
COMPANY 148:321
HAVASU LAKE RD
NEEDLES CA 92363
USA

Attention: 0003 SEAN CHAPIN

Ordered by: 0003 SEAN CHAPIN

| CUSTOMER P.O. NO. | SHIP DATE | SLP | TERMS | T | SAi.E,SQROER NO, | WJH | FREIGHT | SHIP VIA |
|---|---|---|---|---|---|---|---|---|
| PLANT429 | 05103/22 | TNL | NET30 | | 34007fi | 21 | PREPAID | FEDEXGRND |

| USA STOCK NO. | DESCRIPTION | ORDERED | SHIl PED | BACKORDER | UJM | PRICE | PER | EXTENSION |
|---|---|---|---|---|---|---|---|---|
| 17214 | 3/8'OD X1/4'1D Translucent PE Discharge Tubing 50-ft Roll | 1 | 1 | 0 | RL | 18.99 | Rl | 18.99 |
| 62413 | Tubing 1/2' OD x 318' ID Disc Translucent Polyethylene 100' | | 1 | 0 | RL | 37.95 | RL | 37.95 |
| 29273 | Injection Quill PVC/HasVCer 1/2" NPTF X 1/2" NPTM | 2 | 2 | 0 | EA | 117.00 | EA | 234.00 |
| 20759 | Stenner Flow Indicator 3/8 Tubing W/Bracket | 2 | 2 | 0 | EA | 27.77 | EA | 55.54 |
| CA | CR Released | | | 0 | EA | 0.00 | EA | 0.00 |

THANK YOU for your businessl
1,51/o MONTHLY FINANCE CHARGE ON AMOUNTS 30 DAYS PAST DUE
Discounts Apply to Merchandise Only

| MERCHANDIS | TAX | FREIGH |
|---|---|---|
| 346.48 | 28.44 | 20.49 |
| 0.00 | 0,00_ | 395.41 |

Should It become necessary to refer your unpaid balance10 a c llection agency a colleclion fee, not to **exceed** 25% of the balance rererred; plus reasonable attorney's fees: and court sti: when nece;sary, will be added to lha balance due.

Please Detach and Return Bottom Portion t Ensure Proper ,Cr,adlt t,, Your Account

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| INVOICE NO. | CUSTOMER NO. | .DATE | TOTAL |
|---|---|---|---|
| 966308 | 1053929 | 05/03/22 | 395.41 |

HAVASU WATER COMPANY
PO BOX 1690
HAVASU LAKE CA 92363-1690

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60031-
9004

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F.E.!.N.;; 62-2416852

INVC)ICE

| 'AGE NO. |
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| 966264 | 1 of 1 |
| 1053929 | 05/03/22 |

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Wei:> Enrollment Token: **XMP VXL** QFQ

BILL TO: 1053929
7561 MB D.485 E0268X 10437 D9063680644 S2 P9012790 0001:0002

HAVASU WATER COMPANY
PO BOX 1690
HAVASU LAKE CA 92363-1690

SHIPTO: 3

HAVASU WATER COMPANY
1481121 HAVASU LAKE RD
NEEDLES CA 92363
USA

Ordered by: 0003 SEAN CHAPIN

| CUSTOMER P.O. NO. | SHIP DATE | SLP | TERMS | TAX CODE | SAU,S ()ROEi{ NO. | W/H | FREIGHT | SHIP VIA |
|---|---|---|---|---|---|---|---|---|
| 4/19 | 05/03/22 | CCA | NET30 | A | 334001 | 21 | FXD/PPD | FEDE:XGRND |

| USA STOCK NO. | • PESCRIPTION | ORDERED | SHIPPED | BACKORDER· | UtM· | PRICE | If>ER | EXTENSION |
|---|---|---|---|---|---|---|---|---|
| 77504 | Hach Free Chlorine SwilTest Dispenser 250 1ests 2802300 SOS VISIT WWW.USABLUEBOOK.COM | 1 | 1 | 0 | EA | 77.19 | EA | 77.19 |
| HACHSURCHA | Hach Surcharge | | 1 | | EA | 9.26 | EA | 9.26 |

| | | | | |
|---|---|---|---|---|
| | ,mff | TAX | idi[d:o• | TOTAL |
| | 0 .00 7 | 6.70 | | 93.15 |

THANK YOU for your businessl
1.6% MONTHLY FINANCE CHARGE
ON AMOUNTS 30 DAYS PAST DUE
Discounts Apply to Merchandise Only

Should it become necessary to refer your unpaid balance to a co eclion agency, a co,llectitmfee, t10l to exceed 25% of the balance referred; plus reasonable attorney's fees; and court c sts whim necessary, will be added to the balance due.

---------- Please Detach and Return Bottom Portion to _nsure_ProperCre_dltto Your Account

# Q!J0EBlueBooK

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**-"""IMPORTANTtt****
Please include this customer#
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| INVOICE NO. | CUSTOMER NO. | DATE | TOTAL |
|---|---|---|---|
| 966264 | 1053929 | 05/03/22 | 93.15 |

HAVASU WATER COMPANY
PO BOX 1690
HAVASU LAKE CA 92363-1690

**REMITTANCE ADDRESS**
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□001:0002

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F.E.I.N.: 52-2418852

## INVOICE

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952690 1 of 1

[redacted]

1053929 04/20/22

**View online at:** http:1/usabluebook.billtrust.com
Web Enrollment Token: XMP VXL QFQ

**BILL TO:** 1053929

HAVASU WATER COMPANY
PO BOX 1690
HAVASU LAKE CA 92363-1690

**SHIP TO:** 3

HAVASU WATER COMPANY
148821 HAVASU LAKE RD
NEEDLES CA 92363
USA

Ordered by: 0003 SEAN CHAPIN

| CUSTOMER P.O. NO. | SHIP DATE | SLP | TERMS | TAX CODE | SALES ORDER NO. | W/H | FREIGHT | SHIPVIA |
|---|---|---|---|---|---|---|---|---|
| 4/19 | 04/20/22 | CCA | NET 30 | CA | 340018 | 33 | FXD/PPD | FEDEXGRND |

| USA SJ'OCK NO. | DESCRIPTION | ORDI:RED | SHIPPED | BACKORDER | U/M | PRICE | PER | EXTENSION |
|---|---|---|---|---|---|---|---|---|
| CA | CR Released | 1 | 1 | 0 | EA | 0.00 | IEA | 0.00 |
| 32841 | Hach 21000 Turbidimeter Kit<br>Hach# 2100001<br>SOS VISIT WWW.USABLUEBOOK.COM | | | 0 | EA | 1.567.00 | IEA | 1,567.00 |
| HACHSURCHA | Hach Surcharge | | | | EA | 188.04 | EA | 188.04 |

**THANK YOU for your business** I
**1.5% MONTHLY FINANCE CHARGE**
**ON AMOUNTS 30 DAYS PAST DUE**
**Discounts Apply to Merchandise Only**

| | | ·DIM | TAX | FREIGHT | TOTAL |
|---|---|---|---|---|---|
| 1,567.00 | 188.04 | 0.00 1 | 136.02 | | 1,891.06 |

Should it become necessary to refer your unpaid balance to a co ection agency. a collection fee. not to exceed 25% of the balance referred; plus reasonable attorney·s fees; and court c sis whim necessary. will be added lo the balance due.

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on the face of your remittance check.

| INVOICE NO. | CUSTOMER NO. | DATE | TOTAL |
|---|---|---|---|
| 952690 | 1053929 | 04/20/22 | 1,891.06 |

HAVASU WATER COMPANY
PO BOX 1690
HAVASU LAKE CA 92363-1690

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USAl3lueBook
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Gurnee, IL 60031-9004

# USABlueBooK

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Gurnee, IL 60031-9004

TEL: (847)689-3 00
FAX: (847)689-3 01
TOLL FREE: l-800-493-9 76
F.E.I.N: 52-2418 52

## INVOICE

| INVOICE NO. | PAGE NO. |
|---|---|
| 950974 | 1 |
| **CUSTOMER NO.** | **DATE** |
| 1053929 | 04/19/22 |

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HAVASU WATER COMPANY
P.O.BOX 1690
HAVASU LAKE, CA 92363
USA

**SHIP** TO: 3
HAVASU WATER COMPANY
148821 HAVASU LAKE RD
NEEDLES, CA 92363
USA

| CUSTOMER P.O. NO. | SHIP DATE | SLP | TERMS | AX CODE | SALES ORDER NO. | WH | FREIGHT | SHIP VIA |
|---|---|---|---|---|---|---|---|---|
| 4/19 | 04/19/22 | CCA | NET 30 | C | 334001 | 21 | FXD/PPD | FEDEXGRND |

| USA STOCK NO. | DESCRIPTION | ORDERED | SHIPPED | BACK ORDER | U/M | PRICE | PER | EXTENSION |
|---|---|---|---|---|---|---|---|---|
| 87890 | Hach DR300 Chlorine, F & T Colorimeter, LPV445.97.00110 | 1 | 1 | 0 | EA | 526.00 | EA | 526.00 |
| 32130 | Hach DPD 1 (Free) for 10 mL Sample, 100/pk (2105569) Lot# A2019 | 1 | 1 1 | 0 | EA | 25.49 | EA | 25.49 |
| 77504 | Hach Free Chlorine SwifTest Dispenser, 250 tests, 2802300 | 1 | 0 | 1 | EA | 77.19 | El!, | .00 |
| CA | CR Released | 1 | 1 | 0 | EA | .00 | EA | .00 |
| HACHSURCH | Hach Surcharge | 1 | 1 | | EA | 66.18 | EA | 66.18 |

| MERCHANDISE | MISCELLANEOUS | DISCOUNT | TAX | FREIGHT | TOTAL |
|---|---|---|---|---|---|
| 551.49 | 66.18 | .00 | 48.86 | 12.79 | 679.32 |

**THANK YOU for your business!**
1.5% MONTHLY FINANCE CHARGE ON AMOUNTS 30 DAYS PAST DUE
Discounts Apply to Merchandise Only

your unpaid balance to a collection agency, a collection fee, not to exceed 25% of the costs when necessary, will be added to the balance due.

Should it become necessary to refer your u balance referred; plus reasonable attorney's fees; and

Ensure Proper Credit to Your Account

| STOMER NO. | INVOICE NO. | DATE | TOTAL |
|---|---|---|---|
| .053929 | | | |

Please Detach and Return Bottom Portion to

******IMPORTANT*******
Please include this customer#
on the face of your remittance check

REMIT TO: USABlueBook,
P.O. Bo

USABlueBooK

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|---|---|---|
| 950974 | 04/19/22 | 679.32 |

9004, Gurnee, IL 60031-9004

# OD0EBlueBooK

*Gst the Besl lreatmenr*

## INV()ICE

Remit To:
P.O. Box 9004
Gurnee, IL 60031-9004
TEL: (847} 689-3000
**FAX:** (847) 689-3001
TOLL FREE: 1-800-493-9876
F.E.I.N.; **52•2418852**

133481 1 of 1

105392'.9 10/05/22

View online at: http://usabluebook.lbjUtrust.com
We•b Enrollment Token: XMPV)CL QFQ

**BILL TO:** 1053929
MI1 1 MB 0.616 E0480X I0812 D9769642588 2 r93070B1 0001;00D1

HAVASU WATER COMPANY
PO BOX 1690
HAVASU LAKE CA 92363-1690

**SHIP** TO; 3

HAVASU WATER COMPANY
148821 HAVASU IAKE RD
NEI:DLES CA 92363
USA

. _____O.rdered.by.J)003 SEAIILC8API N _____. ___Attention:.lloro.SE/<N_CHAPIN----------

| 1--C-'-U_S-I_'OM_E_R_P._O_._N_O_. | -t-_S_H_IP_D_A_T_t:_.., | s_t:_P_+- _____T_E_R_M_S | TAX_--+-co_,o_e:_+--sALESORD◆R NO. | WIH | FRE«iHT | SHIP VIA |
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| NANCY | 10/05/22 | TNL | NET 30 | A 421530 | 01 | FXD/PPD FEDEXOVR |

| USA STOCK NO, | DESCRIPTIOf( | ORDERED | SHIPPED | BACKORDER | UJM | PRICE | PER | EXTENSION, |
|---|---|---|---|---|---|---|---|---|
| RHOLDOK 32130 | RHOLD Restriction Approved | 1 | 1 | 0 | EA | 0.01) | EA | 0.00 |
| | Hach DPD 1 (Free) for 10 ml Sample 100/pk (2105569) Lot# A2210 Exp: 08/3 3 | 3 | 3 | 0 | EA | 25.41◆ | EA | 76.47 |
| CA 38034 | CR Released | 1 | 1 | 0 | EA | 0.00 | EA | 0.00 |
| | PMN Multijet 3/4x 9"L CubicFt Zenner Water Meter Dir Read Ser# 00847929 1 00848148 | 2 | 2 | 0 | EA | 91.9!5 | EA | 1a:t9o |
| HACHSURCHA | Hach Surcharge | | | | EA | S.10 | EA | 9.18 |

THANK YOU for your business!
1.5% MONTHLY FINANCE CHARGE
ON AMOUNTS 30 DAYS PAST DUE
Discounts Apply to **Merchandise** Only

| | | | | | | |
|---|---|---|---|---|---|---|
| 260.37 | 9.18 | 0 00 | 29.00 | #:J$[•Ul 104.158 | 403.23 | |

Should it become necessary to refer your unpaid balance to a c lectior, agency, a c:ollection fee, not to exceed 25°◆ of_the balance referred; plus reasona6le attorney's fees; and court ts when necessary, will be added to the balance due.

P_l_e_ase D_e_t_a_c_h an_d Re_t_urn Bo_'_lt_om_Po_rt_ion_to E_m1u_r_e Proper C_r_edit to _Y_our Ac_count

OD0u111ueBooK
*GBt the Best lreatmenr*

PO BOX 1690
HAVASU LAKE CA 92363-1690

**_,..,..IMPORTANT****
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on the face of your remittance check.

**REMITTANCE ADDRESS**

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Gumee, IL 60031-9004

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SCOUNT

| INVOICE NO. | CUSTOMER NO. | DATE | TOTAL |
|---|---|---|---|
| 133481 | 1053929 | | |

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**FAX: (847) 689-3001**
TOLL **FREE: 1-800-493-9876**
**F.E.I.N.: S2-24188S2**

## CREDIT MEMO

| | PAGE NO. |
|---|---|
| 136278 | 1 of 1 |
| | DATE |
| 1053929 | 10/07/22 |

**View online at: http://usabluebook.biUtrust.com**
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**BILL TO:** 1053929

HAVASU WATER COMPANY
P.O.BOX 1690
HAVASU LAKE CA 92363
USA

**SHIF'TO:** 3

HAVA.SU WATER COMPANY
148€21 HAVASU LAKE RD
NEEDLES CA 92363
USA

Ordered by:

| C:USTOMER P.O. NO. | SHIP DATE | SLP | TERMS | TAX CODE | SALES C>RDER NO. | W/H | FREIGHT | SHIPVIA |
|---|---|---|---|---|---|---|---|---|
| NANCY | 10/07/22 | TNL | 1%/10 NET 30 | CA | C44367 | 01 | PREPAID | |

| USA STOCK NO. | DESCRIPTION | ORDERED | SHIPPED | BACKOR.DER | U/M | PRICE | PER | EXTENSION |
|---|---|---|---|---|---|---|---|---|
| | PARTIAL CREDIT FOR FREIGHT CHARGED ON INV #133481 CREDIT HAS BEEN APPLIED TOWARDS INV#133481 | | | | | | | |

THANK YOU for your business!
1.5% MONTHLY FINANCE CHARGE
ON AMOUNTS 30 DAYS PAST DUE
Discounts Apply to Merchandise Only

| | | MU | TAX | FREIGH | |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | -6.41 | -82.68 | -89.09 |

Should it become necessary to refer your unpaid balance to a c lection agency, a collection fee, not to exceed 25% of the balance referred; plus reasonable attorney's fees; and court c sis when necei;sary, will be added to the balance due.

**Please** Detach and Return Bottom Portion to Ensurn Proper Cre,dit tc, Your Account

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Please include this customer#
on the face of your remittance check.

| INVOICE NO. | CUSTOMER NO. | DATE | TOTAL |
|---|---|---|---|
| 136278 | 1053929 | 10/07/22 | -89.09 |

HAVASU WATER COMPANY
P.O.BOX 1690
HAVASU LAKE CA
92363 USA

**REMITTANCE ADDRESS**
I,11..11,,, II.,,,,11,.,,III,I,,II.,,Il...,l,,111.,,, l.,I..II,I
USABlueBook
P.O. Box 9004
Gurnee, IL 60031-9004

# OD0ElllueBooK

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Gurnee, IL 60031-9004
TEL: (847) 689-3000
FAX: (847) 689-3001
TOLL FREE: 1-800-493-9876
F.E.1.N.: 52-2418852

## Notice of Past Due Ac1:ount

r 'hu/M#;Ui•[redacted]I
1053929 08/02/2022 J

View online at: http://usabiuebook.blUtrust.com
Web Enrollment Token: XMP VICI QFQ

Page 1 of 1

**BILL TO:**
**19887** 1 AB 0.461 **E0229X 10266D9482318370S21'9180562** 0001:0001

HAVASU WATER COMPANY
PO BOX 1690
HAVASU LAKE CA 92363-1690

The invoice(s) listed are 42 days or m:ire past due. To prevent further action remit payment immediately.

| INVOICE | DATE | REFERENCE# | AMOUNT |
|---|---|---|---|
| 9@.974 | ()4/19'2Q?.-2 | 4/1[redacted] | 679.32 |
| 952690 | 04/20/2022 | 4/19 | 1891.06 ✓ |
| 966264 | 05/03/2022 | 4/19 | 93.15 |
| 966308 | 05/03/2022 | PLANT429 | 395.41 ✓✓ |
| 988062 | 05/23/2022 | VERBAL | 220.36 |
| SC0963 | 06/24/2022 | | 39.58 |

SA BLUE BOO, COM

| TOTAL BALANCE | TOTAL PAST DUE |
|---|---|
| 3369.37 | 3318.88 |

**THANK** YOU
Accounts Receivable
TOLL FREE 1-800-493-9876
email: ar@usabluebook com

A 1.5% MONTHLY FINANCE CHARGE has Deen applied on aninvoices 30 days or mora past due and is indicated by •SC-. If you have contacted us with status of invoice(s), disregard this notice.

REMIT TO:
USABlueBook
PO Box 9004
Gurnee, IL 60031-9004

[redacted]lueBooK
*6l1t111e Best 1tatmenr*

CHECK LIST

WATER HEATER
I B.EMENTS
I™ERMOSW
I REUEF VAi.YE
I DRIPTIJ8E
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GAS WATER HEATERS
] TH.t.10COUPLE
I BURNER
I CQIfflIOL IQASI
J FLUE PIPE
J RELIEFHAUIE

TOILET
J BAU.COCK
JA.APPER
J SUPPI.YUNE
J WAX SEAL& C1..0SETBOITS

DRAINS CLEANING
KITCHEN SINK
WASiiERLINE
LAVAIORV LINE
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I KITCHEN SINK
SINK FAUCET
SINKDRAIN

GAAeAGEOISI'OSAL
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TIJB & SHOWER
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TU8 CA SHOWER ORAIH
NEW CONSTRUCTION
CAAWLS AOUGH
DRAINAGE
P.S.(
SI.All ROUGH
DRAINAGE
PS.I.

| ITEM OR PART DESCRIPTION | PRICE |
|---|---|
| 1 Backflow | 531.00 |
| 1" 1" Back flow rebuild kit | 180.70 |
| 3/8 x 3/8 x 12 supply line | 15.00 |
| Handle lavatory | 6.00 |
| Flush valve kolca | 55.90 |

CRAIG PLUMBING CONTRACTORS, INC.
2051 HOLLY AVE. STE. 100 (928) 453-7173
LAKE HAVASU CITY, AZ 86403
fv. UC # 081958 CA LIC. #440567 NV UC. #53210

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I HAVE THE AUTHORITY TO ORDER THE ABOVE WORK AND DO SO

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*EEWFP,*
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FINAL

OUR TRAINED PERSONNEL SUGGEST THE FOLLOWING IMPRCNEMENTS

0 COMMERCIAL **REPAIR**
D FUIOR 01,,.....t
0 0/WASHER BOOSTER
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**LABOR GUARAN'RE**

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Dana Kepner Company, LLC
Western Industrial Supply, LLC

# Invoice

*** D U P L I C A T E ***

| Customer# | Invoice Date | Invoice# |
|---|---|---|
| 34520000 | 7/12/22 | 9516899-00 |
| **Customer PO #** | **PO Date** | **Page#** |
| REPAIR | 7/11/22 | 1 of 1 |

**Bill To**
HAVASU WATER CO
25108 MARGUERITE PKWY
SUITE A-252
MISSION VIEJO, CA 92692

**Ship To**
HAVASU WATER CO
25108 MARGUERITE PKWY
SUITE A-252
MISSION VIEJO, CA 92692

**Instructions**

| Ship Point | Via | Shipped | Terms |
|---|---|---|---|
| | PICKUP | 7/12/22 | Net 30 Days |

**Remit To**
Dana Kepner Company, LLC
PO Box 710281
Denver, CO 80271-0281

**Notes**

| Line | Product and Description | Order Quantity | Backorder Quantity | Shipped Qty | UM | Unit Price | Price UM | Amount(Net) |
|---|---|---|---|---|---|---|---|---|
| 1 | 62FC2W3250429<br>FC2W-3 FORD ULTRA FLEX WIDE RANGE COUPLING 3" 2.50-4.29 RANGE | 1.00 | 0.00 | 1.00 | PCS | 226.09 | PCS | 226.09 |
| | 237S437338<br>3X2" PVC REDUCER BUSHING SS | 2.00 | 0.00 | 2.00 | PCS | 6.68 | PCS | 13.36 |
| | 308S0340BE<br>3"X20' PVC SCH40 PIPE, BELLED END WHITE | 1.00 | 0.00 | 20 | Pcs | 8.691 | /ft | 173.80 |
| | 437S429030<br>3" SCH 40 PVC CPLG, SxS, #429030 | 1.00 | 0.00 | 1.00 | PCS | 5.34 | PCS | 5.34 |

**4 Lines Total** — **Qty Shipped Total** 5.00

| | |
|---|---|
| **Subtotal** | **418.59** |
| **City Tax** | **0.00** |
| **County Tax** | **5.22** |
| **State Tax** | **27.22** |
| **Total Due** | **451.03** |

Dana Kepner Company, LLC/Western Industrial Supply, LLC standard terms and conditions apply. All returns must be approved and in full saleable condition Returns will be subject to a restocking charge. Service charges will be applied to invoices that are not paid within terms

# QUOTATION

*****THIS IS NOT AN INVOICE*****

| Order Number | |
|---|---|
| 11308534 | |
| Order Date | Page |
| 9/15/2022 | I of2 |
| Customer ID | |
| 56304 | |

3525 Essco Street
Kingman, AZ 86409
US
928-757-3138

Quote Expires On: l 1/15/2022

****Please reference this quote number when placing your order.****

**ALL ITEMS SUBJECT TO PRIOR SALE**

**Bill To:**

CASH SALE KfNGMAN 1033
3525 Essco Street
KINGMAN , AZ 86401
US

(999) 999-9999

**Ship To:**

COUNTER CASH KM F33
WILL CALL
KINGMAN , AZ 86401
US

**Ordered By:** Default Contact

**Sales Representative:** DMORGAN

| *PO Number* | *Terms* | *Ship Route* | *Carrier* |
|---|---|---|---|
| | COD DUE ON DELIVERY | | |

| *Ordered* | *Allocated* | *Remaining* | *UOM* | *Item ID* / *Item Description* | *Pricing UOM* / *Size* | *Unit Price* | *Extended Price* |
|---|---|---|---|---|---|---|---|
| 1.00 | 0.00 | 1.00 | EA | 6311 2RSJEM<br>SKF | EA<br>1.0 | 163.7714 | 163.77 |
| 1.00 | 0.00 | 1.00 | EA | 62102RSJEM<br>SKF | EA<br>1.0 | 74.3286 | 74.33 |
| 1.00 | 0.00 | 1.00 | EA | 6312 2RSJEM<br>SKF | EA<br>1.0 | 201.6429 | 201.64 |
| 1.00 | 0.00 | 1.00 | EA | 6208 2RSJEM<br>SKF | EA<br>1.0 | 51.6000 | 51.60 |

All information is confidential and proprietary of Purvis Industries.

PURVIS INDUSTRIES

Dist Pump rebuild

# QUOTATION

*****THIS IS NOT AN INVOICE*****

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# QUOTATION

*****THIS IS NOT AN INVOICE*****

3525 Essco Street
Kingman, AZ 86409
US
928-757-3138

| Order Number | |
|---|---|
| 11308534 | |
| Order Date | Page |
| 9/15/2022 | 2 of2 |
| Customer ID | |
| 56304 | |

Quote Expires On: 11/15/2022

****Please reference this quote number when placing your order.*''**

**ALL ITEMS SUBJECT TO PRIOR SALE**

| Ordered | Allocated | Remai11i11g | UOM | Item ID<br>Item Description | Pricing UOM<br>Size | Unit Price | Extended Price |
|---|---|---|---|---|---|---|---|

*Total lines: 4*

| | |
|---|---|
| ***SUB-TOTAL:*** | 491.34 |
| ***TAX:*** | 27.51 |
| ***AMOUNT DUE:*** | **518.85** |
| *U.S. Dollars* | |

All information is confidential and proprietary of Purvis Industries.

PURVIS INDUSTRIES

Dist Pump Rebuild

# QUOTATION

*****THIS IS NOT AN INVOICE*****

RPfArAnr1> httn<dlwww n,1n1ic:inrl11c:triPc:r.nm/ASSFTStnnr.1IMFNTS/(:MS/FNfT,armo:: nf S::ilP<: nrlf fnr TArm-=:nf S::ilP<:

Clean Water for the World

EPD USA, Inc.
P.O. Box 941
Banning, CA 92220
951-849-7474

# EPD Invoice

| Date | 7/14/2022 |
|---|---|
| Invoice# | 251273 |

**Bill To**

Havasu Water Co.
PO Box 1690
Havasu Lake, CA 92363

**Ship To**

Havasu Water Co.
148821 Havasu lake Rd
Havasu Lake, CA 92363
760-858-4619

| S.O. No. | P.O. No. | Terms | Ship Date | Ship Via |
|---|---|---|---|---|
| 108530 | 01072022/2 | Net30 | 7/14/2022 | Best/Fast |

| Item | Qty. | Description | Ordered | Prev. Invo... | Backor... | Rate | Amount |
|---|---|---|---|---|---|---|---|
| 2-0020-085 | 135 | MEDIA-# 50 GARNET 55 LB BAG | 135 | 0 | 0 | 31.00 | 4,185.00T |
| 2-0020-138 | 90 | MEDIA-60/80 GARNET 55 LB BAG | 90 | 0 | 0 | 27.00 | 2,430.00T |
| 308-1050 | 3 | 4 GASKET" | 3 | 0 | 0 | 20.60 | 61.80T |
| 307-1015 | 3 | Gasket, Manway, Yoke Style | 3 | 0 | 0 | 21.63 | 64.89T |
| I I04-1080 | 5 | ANODE ASSY-MAGNESIUM | 5 | 0 | 0 | 213.15 | l,065.75T |
| 308-I070 | 3 | O-RJNG-WALL-.362" IDx.103" | 3 | 0 | 0 | I.SI | 4.53T |
| 308-1098 | 9 | O-RING-WALL-4.646 IDx.098"" | 9 | 0 | 0 | 13.52 | 121.68T |
| FREIGHT | | FREIGHT CHARGES | | | | 26.65 | 26.65 |
| | | Earp CA | | | | 7.75% | 614.86 |

| | |
|---|---|
| **Subtotal** | $7,960.30 |

Any shortages and/or damage must be reported lo EPD USA, Inc. within five business days of delivery.

| | |
|---|---|
| **Total** | $8,575.16 |
| **Payments/Credits** | $0.00 |
| **Balance Due** | $8.575.16 |

Clean Water for the World

EPD USA, Inc.
P.O. Box 941
Banning, CA 92220
951-849-7474

# EPD Invoice

| Date | 4/21/2022 |
|---|---|
| Invoice # | 251168 |

PAID
04/29/2022

**Bill To**

Havasu Water Co.
1 Main St
Havasu Lake, CA 92363

**Ship To**

Pat Hoban
7040 Pahaska Trail
Big River, Ca 92242

| S.O. No. | P.O. No. | Terms | Ship Date | Ship Via |
|---|---|---|---|---|
| 108475 | PerPaul | Credit Card | 4/29/2022 | Best/Fast |

| Item | Qty. | Description | Ordered | Prev. Invo... | Backor... | Rate | Amount |
|---|---|---|---|---|---|---|---|
| 307-1015 | 3 | Gasket, Manway, Yoke Style | 3 | 0 | 0 | 21.63 | 64.89T |
| 308-1048 | 10 | Seal, Pipe, Grooved, 2" | 10 | 0 | 0 | 18.90 | 189.00T |
| FREIGHT | 1 | FREIGHT CHARGES | 1 | 0 | | 17.42 | 17.42 |
| | | Sales Tax | | | | 7.75% | 19.68 |

| | |
|---|---|
| **Subtotal** | $271.31 |

Any shortages and/or damage must be reported to EPD USA, Inc. within five business days of delivery.

| | |
|---|---|
| **Total** | $290.99 |
| **Payments/Credits** | -$290.99 |
| **Balance Due** | $0.00 |

# INVOICE

HD Supply Facilities Maintenance LTD
D/B/A USABlueBook
PO Box 9004
Gurnee, IL 60031-9004
(800) 548-1234

NO. 952690



04/20/22

**Bill-to:** 1053929
HAVASU WATER COMPANY

P.O.BOX 1690
HAVASU LAKE, CA 92363
USA

**Ship-to:** 3
HAVASU WATER COMPANY

148821 HAVASU LAKE RD
NEEDLES, CA 92363
USA

| REFERENCE # | SHIPPED | SALESPERSON | TERMS | TAX CODE | DOC # | WH | FREIGHT | SHIP VIA |
|---|---|---|---|---|---|---|---|---|
| 4/19 | 04/20/22 | CCA Carolyn Ca | NET 30 | CA | 34001B | 33 | FXD/PPD | FEDEXGRND |

| ITEM | DESCRIPTION | ORDERED | SHIPPED | BACKORDRD | UM | PRICE | UM | EXTENSION |
|---|---|---|---|---|---|---|---|---|
| CA | CR Released | 1 | 1 | 0 | EA | .00 | EA | .00 |
| 32841 | Hach 2100Q Turbidimeter Kit<br>Hach # 2100Q01 | 1 | 1 | 0 | EA | 1567.00 | EA | 1567.00 |
| HACHSURCH | Hach Surcharge | 1 | 1 | | EA | 188.04 | EA | 188.04 |

| MERCHANDISE | MISC | DISCOUNT | TAX | FREIGHT | TOTAL DUE |
|---|---|---|---|---|---|
| 1567.00 | 188.04 | .00 | 136.02 | | 1891.06 |

INVOICE

HD Supply Facilities Maintenance LTD
D/B/A USABlueBook
PO Box 9004
Gurnee, IL 60031-9004
(800) 548-1234

NO. 023002

Page 1

09/27/19

Bill-to: 1053929
HAVASU WATER COMPANY

P.O.BOX 1690
HAVASU LAKE, CA 92363
USA

Ship-to: 1
HAVASU WATER COMPANY
C/O HAVASU HARDWARE
1 MAIN ST
HAVASU LAKE, CA 92363
USA
ATTN 0002 LOUIE RICHHART

| REFERENCE # | SHIPPED | SALESPERSON | TERMS | TAX CODE | DOC # | WH | FREIGHT | SHIP VIA |
|---|---|---|---|---|---|---|---|---|
| VERBAL LOUIE | 09/27/19 | DEE Delia Esca | NET 30 | CA | 734267 | 21 | FXD/PPD | UPS |

| ITEM | DESCRIPTION | ORDERED | SHIPPED | BACKORDRD | UM | PRICE | UM | EXTENSION |
|---|---|---|---|---|---|---|---|---|
| RHOLDOK | RHOLD Restriction Approved | 1 | 1 | 0 | EA | .00 | EA | .00 |
| 16635 | Zenner 5/8'' x 3/4'' No Lead | 12 | 12 | 0 | EA | 61.77 | EA | 741.24 |
| | Meter Direct Read, CU Feet | | | | | | | |
| | Ser# 01310561 | | 1 | | | | | |
| | 01310562 | | 1 | | | | | |
| | 01310563 | | 1 | | | | | |
| | 01310564 | | 1 | | | | | |
| | 01310565 | | 1 | | | | | |
| | 01310566 | | 1 | | | | | |
| | 20007400 | | 1 | | | | | |
| | 20007401 | | 1 | | | | | |
| | 20007402 | | 1 | | | | | |

CONTINUED

INVOICE

HD Supply Facilities Maintenance LTD
D/B/A USABlueBook
PO Box 9004
Gurnee, IL 60031-9004
(800) 548-1234

NO. 023002

Page 2

09/27/19

Bill-to: 1053929
HAVASU WATER COMPANY

P.O.BOX 1690
HAVASU LAKE, CA 92363
USA

Ship-to: 1
HAVASU WATER COMPANY
C/O HAVASU HARDWARE
1 MAIN ST
HAVASU LAKE, CA 92363
USA
ATTN 0002 LOUIE RICHHART

| REFERENCE # | SHIPPED | SALESPERSON | TERMS | TAX CODE | DOC # | WH | FREIGHT | SHIP VIA |
|---|---|---|---|---|---|---|---|---|
| VERBAL LOUIE | 09/27/19 | DEE Delia Esca | NET 30 | CA | 734267 | 21 | FXD/PPD | UPS |

| ITEM | DESCRIPTION | ORDERED | SHIPPED | BACKORDRD | UM | PRICE | UM | EXTENSION |
|---|---|---|---|---|---|---|---|---|
| | 20007403 | | 1 | | | | | |
| | 20007404 | | 1 | | | | | |
| | 20007405 | | 1 | | | | | |
| 17656 | Meter Gasket, Rubber 3/4" | 1 | 1 | 0 | PK | 24.95 | PK | 24.95 |
| | (1/8" Thick) 100/pk | | | | | | | |
| CA | CR Released | 1 | 1 | 0 | EA | .00 | EA | .00 |

| | | | | | |
|---|---|---|---|---|---|
| 766.19 | .00 | .00 | 67.04 | 46.38 | 879.61 |

# INVOICE

HD Supply Facilities Maintenance LTD
D/B/A USABlueBook
PO Box 9004
Gurnee, IL 60031-9004
(800) 548-1234

NO. 029735



10/04/19

Bill-to: 1053929
HAVASU WATER COMPANY

P.O.BOX 1690
HAVASU LAKE, CA 92363
USA

Ship-to: 1
HAVASU WATER COMPANY
C/O HAVASU HARDWARE
1 MAIN ST
HAVASU LAKE, CA 92363
USA
ATTN TEDDYE GOODGAME

| REFERENCE # | SHIPPED | SALESPERSON | TERMS | TAX CODE | DOC # | WH | FREIGHT | SHIP VIA |
|---|---|---|---|---|---|---|---|---|
| VERBAL LOUIE | 10/04/19 | DEE Delia Esca | NET 30 | CA | 739336 | 50 | FXD/PPD | UPS |

| ITEM | DESCRIPTION | ORDERED | SHIPPED | BACKORDRD | UM | PRICE | UM | EXTENSION |
|---|---|---|---|---|---|---|---|---|
| RHOLDOK | RHOLD Restriction Approved | 1 | 1 | 0 | EA | .00 | EA | .00 |
| CA | CR Released | 1 | 1 | 0 | EA | .00 | EA | .00 |
| 16638 | Zenner 1-1/2'' No Lead Meter Direct Read, CU Feet Ser# 01061757 | 1 | 1 | 0 | EA | 421.32 | EA | 421.32 |
| 73196 | Meter Flange Kit,1.5''Low Lead w/gaskets,flanges,nuts bolts | 1 | 1 | 0 | EA | 144.95 | EA | 144.95 |

| MERCHANDISE | MISC | DISCOUNT | TAX | FREIGHT | TOTAL DUE |
|---|---|---|---|---|---|
| 566.27 | .00 | .00 | 51.13 | 53.49 | 670.89 |

# INVOICE

HD Supply Facilities Maintenance LTD
D/B/A USABlueBook
PO Box 9004
Gurnee, IL 60031-9004
(800) 548-1234

NO. 748859



10/05/21

Bill-to: 1053929
HAVASU WATER COMPANY

P.O.BOX 1690
HAVASU LAKE, CA 92363
USA

Ship-to: 2
HAVASU WATER COMPANY
148486 DESERTVIEW DR
HAVASU LAKE , CA 92363
USA

ATTN LOUIE RICHHART

| REFERENCE # | SHIPPED | SALESPERSON | TERMS | TAX CODE | DOC # | WH | FREIGHT | SHIP VIA |
|---|---|---|---|---|---|---|---|---|
| NO PO | 10/05/21 | SRW Sonia Wood | NET 30 | CA | 232578 | 21 | FXD/PPD | FEDEXGRND |

| ITEM | DESCRIPTION | ORDERED | SHIPPED | BACKORDRD | UM | PRICE | UM | EXTENSION |
|---|---|---|---|---|---|---|---|---|
| 38032 | PMN Multijet 5/8x3/4'' CubicFt Zenner Water Meter, Dir Read | 6 | 6 | 0 | EA | 70.95 | EA | 425.70 |
| | Ser# 01160231 | | 1 | | | | | |
| | 01160232 | | 1 | | | | | |
| | 01160234 | | 1 | | | | | |
| | 31015120 | | 1 | | | | | |
| | 31015121 | | 1 | | | | | |
| | 31015122 | | 1 | | | | | |
| CA | CR Released | 1 | 1 | 0 | EA | .00 | EA | .00 |
| RHOLDOK | RHOLD Restriction Approved | 1 | 1 | 0 | EA | .00 | EA | .00 |

| MERCHANDISE | MISC | DISCOUNT | TAX | FREIGHT | TOTAL DUE |
|---|---|---|---|---|---|
| 425.70 | .00 | .00 | 32.99 | .00 | 458.69 |

# INVOICE

HD Supply Facilities Maintenance LTD
D/B/A USABlueBook
PO Box 9004
Gurnee, IL 60031-9004
(800) 548-1234

NO. 950974



04/19/22

**Bill-to:** 1053929
HAVASU WATER COMPANY

P.O.BOX 1690
HAVASU LAKE, CA 92363
USA

**Ship-to:** 3
HAVASU WATER COMPANY

148821 HAVASU LAKE RD
NEEDLES, CA 92363
USA

| REFERENCE # | SHIPPED | SALESPERSON | TERMS | TAX CODE | DOC # | WH | FREIGHT | SHIP VIA |
|---|---|---|---|---|---|---|---|---|
| 4/19 | 04/19/22 | CCA Carolyn Ca | NET 30 | CA | 334001 | 21 | FXD/PPD | FEDEXGRND |

| ITEM | DESCRIPTION | ORDERED | SHIPPED | BACKORDRD | UM | PRICE | UM | EXTENSION |
|---|---|---|---|---|---|---|---|---|
| 87890 | Hach DR300 Chlorine, F & T Colorimeter, LPV445.97.00110 | 1 | 1 | 0 | EA | 526.00 | EA | 526.00 |
| 32130 | Hach DPD 1 (Free) for 10 mL Sample, 100/pk (2105569) Lot# A2019 | 1 | 1<br>1 | 0 | EA | 25.49 | EA | 25.49 |
| 77504 | Hach Free Chlorine SwifTest Dispenser, 250 tests, 2802300 | 1 | 0 | 1 | EA | 77.19 | EA | .00 |
| CA | CR Released | 1 | 1 | 0 | EA | .00 | EA | .00 |
| HACHSURCH | Hach Surcharge | 1 | 1 | | EA | 66.18 | EA | 66.18 |

| MERCHANDISE | MISC | DISCOUNT | TAX | FREIGHT | TOTAL DUE |
|---|---|---|---|---|---|
| 551.49 | 66.18 | .00 | 48.86 | 12.79 | 679.32 |

# McMASTER-CARR

# Invoice

562-692-5911
562-695-2323 (fax)
la.sales@mcmaster.com

| | |
|---|---|
| Purchase Order | **PLANT REPAIRS** |
| Total | **$30.51** |
| Invoice | **78279112** |
| Invoice Date | **5/17/22** |
| Payment Terms | **2% 10, Net 30** |

Deduct $0.42 on merchandise and tax if paid by 5/27/22.

Billed to

HAVASU WATER CO
P O BOX 1690
HAVASU LAKE CA 92363

Shipped to

Havasu Water Co
148821 Havasu Lake Dr
Havasu Lake CA 92363

Mail Payment to

McMaster-Carr
PO Box 7690
Chicago IL 60680-7690

Your Account 404191700

Sean Chapin placed this order.

| Line | | Product | Ordered | Shipped | Balance | Price | Total |
|---|---|---|---|---|---|---|---|
| 1 | 8516T237 | Oil-Resistant Compressible Buna-N Gasket with Bolt Holes, for 2-1/2 Pipe Size, ANSI 150, 1/8" Thick | 3 Each | 3 | 0 | 3.03 Each | 9.09 |
| 2 | 8516T238 | Oil-Resistant Compressible Buna-N Gasket with Bolt Holes, for 3 Pipe Size, ANSI 150, 1/8" Thick | 3 Each | 3 | 0 | 3.41 Each | 10.23 |

| | |
|---|---|
| Merchandise | 19.32 |
| Sales Tax | 1.50 |
| Shipping | 9.69 |
| Total | $30.51 |

| Packing List | Shipped | Weight | Carrier | Tracking |
|---|---|---|---|---|
| 1194874-01 | 5/17/22 | 2 lb | UPS | 1Z9293810349983186 |

# APPENDIX 6 SEPTEMBER 24, 2022 E-MAIL FROM MR. PATRICK WEBB

## Hamud, Jarrett@Waterboards

**From:** Patrick Webb <pwebb@webbcarey.com>
**Sent:** Saturday, September 24, 2022 2:09 PM
**To:** 'Hamud, Jarrett@Waterboards'
**Cc:** Jennifer - Havasu; jennifer623@cox.net
**Subject:** RE: HWC Enforcement Compliance Tracking

EXTERNAL:

Jarrett: Here are HWC's responses to the alleged outstanding deficiencies as listed in the original Appendix 11 and summarized in your September 8, 2022 email below. Please let us know if there are any other outstanding items:

1. HWC has been making potable water since the March Boil Water Notice was lifted.
2. We are not aware of any cross-connections in the system. The waste & backwash effluent lines have been raised 2 times the pipe diameter per requirements.
3. The hose referred to as a potential cross connection has been removed.
4. The reservoir level indicator has been re-screened.
5. System hydro tank condition is being inspected.
6. Pump facility & controls-intake pump is functioning & we have a spare.
7. The hose at the distribution pumps has been removed.
8. We are awaiting parts with which to rebuild the distribution pumps, should they require service in the future.
9. Management has supplied disinfected water since April 6, 2022 per our log book.
10. Operator Compliance for State Regs-we are awaiting Rick Miller's signed copy of the D1 contract which we have requested several times.
11. Havasu plant condition- all filters have had media inspected, replacement media was ordered & delivered, filters 4 & 5 have been replaced with new media & filter media for filters 1 thru 3 has been purchased, delivered & awaiting scheduled downtime for replacement. The automatic backflush will be reinstated when the plant controls are repaired or updated, upon receipt of the grants that have been pending for the last 5 years.
12. Footpad in treatment plant will be replaced per the Corrective Action Plan upon receipt of sufficient grant funds.
13. Filter displays awaiting a schedule for EPD to evaluate the instrumentation & controls
14. Check valve will be replaced per the Corrective Action Plan.
15. Turbidity meters – we've obtained a hand held meter and in process replacing the others per the Corrective Action Plan.
16. 2nd stage filters-new media in 2nd stage filters should be adequate to remove any excess polymer

17. Plant Automatic Flush to Waste- the equipment to accomplish the flush to waste is in place & functioning, the (EPD) equipment & controls will be evaluated by manufacturer
18. Plant Chlorine Storage-the chlorine gas tanks are now adequately chained/secured for storage
19. Plant Polymer Storage-cloth was removed & replaced with a plastic cap
20. Polymer Dosing Pump-is NSF 61 certified for that use
21. Stage 1 Polymer Injection Point-there was no expanding foam it was just polymer build up which was removed, cleaned, reinstalled & no longer leaks
22. Distribution – we exercised every fire hydrant in the community & there are a few scheduled for repair
23. Distribution system valve condition-we are in the process of identifying, inspecting and cycling the valves.
24. Exposed main line is being recovered.
25. Active Leaks-these were on Malamedia, Everett & Panoply & all have been repaired
26. Clear Well Interior Condition-per the Corrective Action Plan we are having the tank inspected.

- Pumps, Facilities, Controls-are in process of being refurbished as noted above
- Backup Power Supply-a water facility transfer switch is in place & we currently use readily available rented mobile power on an as needed basis.

27) Public Notification of Everet leak- the affected customers on Everet were notified of the repairs made to stop the leak per direction from from Rick Miller–the other portions of the system were not affected and the system was back on line and functional by morning

28) We previously provided the scope of work performed by Pat Hoban.

29) An update to the Corrective Action Plan is being completed within the week.

30) The 2022 EAR is being completed within the week.

31) The Consumer Confidence Report is being completed, upon receipt of lab reports on contaminants.

Patrick Webb
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---

**From:** Hamud, Jarrett@Waterboards [mailto:Jarrett.Hamud@Waterboards.ca.gov]
**Sent:** Thursday, September 8, 2022 1:51 PM
**To:** missionpower@outlook.com; balancingshop@yahoo.com
**Cc:** Jennifer - Havasu <jennifer@havasuent.com>; Patrick Webb <pwebb@webbcarey.com>; Chang, Wei@Waterboards <Wei.Chang@waterboards.ca.gov>; McCarthy, Sean@Waterboards <Sean.McCarthy@waterboards.ca.gov>; Cazares, Hector I.@Waterboards <Hector.Cazares@Waterboards.ca.gov>
**Subject:** HWC Enforcement Compliance Tracking

Hi All,

Please see below for a list of most items outstanding from Enforcement Actions issued to the Company by the Division, as well as some upcoming enforcement action due dates for the Company.

Items Outstanding from Enforcement Actions:

- Notification of Receipt Forms from all Citations, not including the Compliance Order as that was submitted one day late.

- Documentation that a Certified Distribution Operator is retained AND is performing duties that necessitate a certified Distribution Operator.
- Documentation that a Certified Distribution Operator was making decisions during the Everet break repair and disinfection.
- Documentation of scope of work that will be performed by Pat Hoban or other Certified Treatment Operators. At this time, Pat Hoban is reporting all days that he is at the plant.
- Documentation that potential cross connections are removed/repaired and that there are no cross connections in the system.
- Documentation that nonfunctional equipment in the treatment plant and plant intake has been repaired or replaced and all other equipment has been verified to be functional.
- An adequate Corrective Action Plan. Monthly status reports tracking corrective actions being taken were required but have not been submitted.
- Completion of the 2022 Annual Report.
- Completion, submittal for review by the Division, and distribution of the approved Consumer Confidence Report to all customers and the Division.
- A map of valves in the distribution system. A valve exercise program targeting a minimum of annual valve exercising. Future record keeping of valve exercising and availability for Division review.
- Public notification regarding the Everet main break and public notification failure

Upcoming Items from Enforcement Actions

- Documentation, including all evaluations completed, that all 31 deficiency list items have been completed. All items of the CAP must also have been completed. The CAP was required to cover these deficiencies. Due 9/9

It should be noted that the Company must also continue completing and submitting Weekly monitoring reports each Friday.

If you have any questions regarding this matter, please contact me.

Best regards,
Jarrett Hamud
Water Resources Control Engineer
State Water Resources Control Board – Division of Drinking Water
464 West 4th Street, Ste 437
San Bernardino, CA 92401
Direct (909)383-5289 | Jarrett.Hamud@waterboards.ca.gov

*PLEASE NOTE that for the foreseeable future our office staff will be teleworking. The most effective way of reaching me for the time being is through email. If it is an emergency then please refer to your emergency notification plan.*

# APPENDIX 7 HAVASU WATER TREATMENT PLANT EVALUATION

**STATE OF CALIFORNIA**
**STATE WATER RESOURCES CONTROL BOARD**
**DIVISION OF DRINKING WATER**

# 2022 Surface Water Treatment Plant Evaluation

| | |
|---|---|
| Name of Water Treatment Plant: | **Havasu Surface Water Treatment Plant** |
| Flow Range: | Previously reported as **79-280 gpm;** The current operator states flows are kept below **60 gpm.** |
| Design Capacity: | **324 gpm with raw water < 6 NTU**<br>**135 gpm with raw water <20 NTU** |
| Hours of operation: | **Various, overnight** |
| System Name: | **Havasu Water Company** |
| System Number: | **3610017** |
| Date of Inspection: | |
| Inspectors: | **Jarrett Hamud / SWRCB-DDW** |

## A. SOURCE OF SUPPLY

### 1. Source(s):

Lake Havasu

### 2. Date of Last Watershed Sanitary Survey:

The last Watershed Sanitary Survey was conducted by the Metropolitan Water District with the December 2016 *Colorado River Watershed Sanitary Survey 2015 Update*. The Havasu Water Company (Company) is past due for submitting a Watershed Sanitary Survey.

*REQUIREMENT: Watershed sanitary surveys required every five years [22 CCR Section 64665(a)].*

### 3. Does the watershed sanitary survey report adequately address all required content? Are there changes needed/recommended?

Yes, all required content is addressed. The Company should prepare a supplement to discuss specific concerns for its intakes and ability to ensure regulatory requirements.

*REQUIREMENT: Required content for Watershed Sanitary Surveys is from 22 CCR Section 64665(c): description of watershed, summary of water quality, a description of activities/sources of contamination and any significant changes since the last survey which could affect water quality, a description of watershed control and management practices,*

*an evaluation of the system's ability to meet requirements of this chapter, and recommendations for corrective actions.*

**4. Describe any significant sewage discharge on the watershed:**

Municipal and industrial discharges are located throughout the Colorado River and Lake Havasu Watersheds. The December 2016 Watershed Sanitary Survey reported nine municipal and industrial NPDES permits that authorized discharges of 16.3 million gallons per day within and adjacent to the Lake Mohave and Lake Havasu watersheds. The majority of these permits are for wastewater treatment. The majority of discharges are from wastewater plants. Other potential contaminant sources for Lake Havasu include recreational use of Lake Havasu, landfills, agriculture such as dairies, septic systems, and urban stormwater runoff from cities like Lake Havasu City, Arizona that do not conduct storm water monitoring programs before lake discharge.

**5. Was *Cryptosporidium* or *E. Coli* monitored pursuant to the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) [22 CCR 64650 (f)]?**

No. A second round of *E. Coli* monitoring has not been submitted per the LT2ESWTR. Monitoring was to begin in October 2017 and end in September 2018 with two samples a month during that period. Fecal coliform monitoring which has been completed by the Company can not be used in lieu of *E. Coli* monitoring for the LT2ESWTR.

**6. What is the LT2 Bin Classification for the round?**

The annual average of *E. Coli* monitoring for round 1 was less than 10 E. coli/100 ml. This round would classify this water treatment facility as Bin 1 which requires no additional monitoring or treatment for Cryptosporidium. Monitoring must be submitted for the second round so that it may be determined if additional Cryptosporidium monitoring is required.

**Table 1: Monthly Mean Raw Total Coliform in MPN/100 mL (2017-2022)**

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2017 | 130 | 14 | 17 | 4.5 | 22 | 17 | 79 | 540 | 34 | 23 | 17 | 6.8 |
| 2018 | 4.5 | 4.5 | 6.8 | 6.8 | 11 | 49 | 220 | 170 | 240 | 79 | 33 | 33 |
| 2019 | 6.8 | 7.8 | 7.8 | 23 | 13 | 23 | 49 | 79 | 23 | 33 | 4.5 | 49 |
| 2020 | 7.8 | ND | 4.5 | 17 | 49 | 49 | 130 | 170 | 240 | 240 | 49 | 2 |
| 2021 | 7.8 | 13 | 23 | 11 | 33 | 22 | 33 | 170 | 33 | 49 | 13 | 17 |
| 2022 | 1.8 | 23 | 6.8 | 33 | 27 | 23 | 23 | 240 | 4.5 | | | |

Notes: <1 = non-detect. NA = not available. In 2017 monthly monitoring from January to September and then twice per month.

**Table 2: Monthly Mean Raw Fecal Coliform in MPN/100 mL (2017-2022)**

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2017 | 1.8 | 2.0 | 11 | ND | 7.8 | 4.5 | 7.8 | 49 | 22 | 4.5 | ND | ND |
| 2018 | ND | ND | ND | 2.0 | 1.8 | ND | ND | 170 | 9.3 | 27 | 4.5 | 4 |
| 2019 | 4.5 | ND | ND | ND | ND | 2.0 | 17 | 49 | 2.0 | 11 | ND | 7.8 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2020 | ND | ND | ND | ND | 13 | 7.8 | 13 | 11 | 14 | 13 | 11 | ND |
| 2021 | ND | ND | ND | 2.0 | 13 | ND | 7.8 | 70 | 4.5 | 17 | ND | 2.0 |
| 2022 | 1.8 | 23 | ND | ND | ND | 2.0 | 2.0 | 49 | ND | | | |

Notes: <1 = non-detect. NA = not available. In 2017 monthly monitoring from January to September and then twice per month.

*REQUIREMENT: Each supplier using an approved surface water source shall monitor the raw water supply for total coliform and either fecal coliform or E. coli bacteria at least once a month [22 CCR 64654.8 (b)]*

**Table 3: Required Log Reduction for Source**

| | Required log reduction |
|---|---|
| *Giardia* | 3 |
| Virus | 4 |
| *Cryptosporidium* | 2 |

*REQUIREMENT: Minimum 3-log Giardia, 4-log virus, and 2-log Cryptosporidium from 22 CCR Section 64652. Additional reduction may be required by the Division through permit [California SDWA Section 116540].*

### 7. Discussion and Appraisal:

The Company must complete a second round of LT2 monitoring so that the water treatment facility may be properly categorized with a correct BIN number. The last reported dive inspection of the intake was during the summer of 2017. The Company must complete and submit a new watershed sanitary survey report as the current one on file is over five years old.

## B. TREATMENT TECHNOLOGY

### 1. Type of Treatment:

Alternative filtration using Environmental Products Division (EPD) inline, dual-stage high-rate pressure filters. The system is classified by the Division as an equivalent to direct filtration.

### 2. Is this an approved technology?

Yes, approved in permit.

*REQUIREMENT: Approved Technologies: Conventional treatment, direct filtration, DE filtration, slow sand treatment [22 CCR Section 64653(a)]. Alternative technologies may be approved through permit [22 CCR Section 64653 (e), (h)].*

**Table 4: Removal Credit for Filtration Technology**

| | Log Reduction Credit by Permit |
|---|---|
| *Giardia* | 2.0 |
| Virus | 1.0 |
| *Cryptosporidium* | 2.0 |

*REQUIREMENT: Surface water treatment filtration credit for conventional, direct, diatomaceous earth, and slow sand filtration is specified in 22 CCR Section 64653 (b). The Division's approval of alternative filtration technologies, including establishment of performance standards and monitoring requirements, shall be done in accordance with the permit process specified in section 116525 through 116550 of the Health and Safety Code [22 CCR Section 64653 (h)]. Removal credit is given only if the plant is in compliance with the performance standards in 22 CCR Section 64653. Additional removal credits must be demonstrated [22 CCR Section 64653(d)].*

**3. Inactivation method and credit:**

Inactivation is provided through disinfection contact time from gas chlorine. Credit for inactivation is noted in the table below.

**Table 5: Inactivation Credit for Disinfection Technology**

| | Log reduction |
|---|---|
| *Giardia* | 1.0 |
| Virus | 3.0 |
| *Cryptosporidium* | 0 |

**4. If using disinfection contact time, how is credit determined?**

Contact time is determined from 1.) time in transmission line to the 100,000-gallon clearwell 2.) time in the 100,000-gallon clearwell. Baffling factors are based on configurations, flow rate, pH range, temperature, and chlorine residual at entry point into the distribution.

*REQUIREMENT: Disinfectant contact time determined from point of disinfection application or a previous point of disinfection residual measurement to a point before or at the point where residual disinfectant concentration is measured [22 CCR Section 64651.32].*

**Table 6: Log Reduction Provided with Filtration and Disinfection**

| | Log reduction |
|---|---|
| *Giardia* | 3.0 |
| Virus | 4.0 |

| | |
|---|---|
| *Cryptosporidium* | 2.0 |

**5. Total treatment reductions adequate for source?**

Yes.

**6. Discussion and Appraisal**:

Treatment technology adequately provides required log reduction for the source.

## C. PERFORMANCE STANDARDS

**FILTRATION**

**Table 7: Monthly 95th Percentile Combined Filter Effluent Turbidity, NTU (2018-2021)**

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2018 | 0.17 | 0.17 | 0.15 | 0.18 | 0.16 | 0.14 | 0.14 | 0.14 | 0.15 | 0.17 | 0.18 | 0.17 |
| 2019 | 0.16 | 0.17 | 0.17 | 0.16 | 0.17 | 0.15 | 0.16 | 0.17 | 0.19 | 0.17 | 0.19 | 0.19 |
| 2020 | 0.17 | 0.17 | 0.17 | 0.18 | 0.16 | 0.16 | 0.16 | 0.15 | 0.12 | 0.11 | 0.12 | 0.09 |
| 2021 | 0.11 | 0.11 | 0.10 | 0.10 | 0.11 | 0.11 | 0.11 | 0.11 | 0.13 | 0.09 | 0.10 | 0.10 |
| 2022 | 0.10 | NR | NR | NR | 0.19 | 0.18 | 0.19 | 0.19 | 0.19 | 0.19 | | |

Notes: NA = not available. NR = not reported. Maximum 95$^{th}$ percentile allowed is 0.3 NTU.

**Table 8: Maximum Discrete Combined Filter Effluent Turbidity, NTU (2018-2021)**

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2018 | 0.17 | 0.18 | 0.16 | 0.19 | 0.17 | 0.15 | 0.15 | 0.14 | 0.17 | 0.18 | 0.19 | 0.20 |
| 2019 | 0.16 | 0.17 | 0.18 | 0.19 | 0.18 | 0.17 | 0.18 | 0.18 | 0.19 | 0.19 | 0.19 | 0.20 |
| 2020 | 0.17 | 0.18 | 0.18 | 0.19 | 0.17 | 0.16 | 0.17 | 0.17 | 0.12 | 0.14 | 0.13 | 0.09 |
| 2021 | 0.12 | 0.16 | 0.12 | 0.12 | 0.12 | 0.11 | 0.15 | 0.13 | 0.19 | 0.09 | 0.11 | 0.10 |
| 2022 | 0.18 | NR | NR | 0.29 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | | |

Notes: NA = not available. NR = not reported. Maximum turbidity must be ≤ 1.0 NTU.

*REQUIREMENT: The Havasu EPD WTP is an alternative treatment facility filters which requires plant specific performance requirements. These are noted in the appendix of the February 10, 1998 Permit No. 03-13-97P-004 and the June 2001 California Surface Water Treatment Alternative Filtration Technology Demonstration Report. Performance standards for alternative filtration cannot be less stringent than direct and conventional filtration per 22 CCR Section 64653 (e)(2).*

*The combined filter effluent shall be*

*≤ 0.2 NTU in 95% of the measurements taken each month*
*≤ 1.0 NTU at all times (Permit requires <5.0 NTU which is less stringent so <1 NTU applies).*
*≤ 1.0 NTU in eight consecutive hours when using a continuous monitoring program.*
*≤ 1.0 NTU in two samples taken consecutively when using a grab sampling program.*

*[Permit No. 03-13-97P-004, Appendix, 22 CCR Section 64653 (e)(2)]*

**1. Discussion and Appraisal:**

Review of monthly reports from 2018 to 2021 shows all filtration performance requirements were met in all months reviewed. There was no combined filter effluent exceedance reported in 2018 to 2021. During 2022 the plant exceeded combined filter effluent requirements during April, 2022; Citation 05-13-22C-015, dated May 6, 2022, cited the Company for failing to meet the CFE specific performance requirements during April 2022. The Company was on a boil water notice or do not drink notice from March 19, 2022 to May 27, 2022. The plant does not have adequate turbidity monitoring equipment to meet requirements of 22 CCR Section 64655 which require turbidity monitoring samples to be taken and recorded every 15 minutes, having this equipment would allow for accurate 95$^{th}$ percentile reporting.

## DISINFECTION

**1. Minimum residual in the water delivered to the distribution system during the past 12 months:**

The lowest reported chlorine residual in water delivered to the distribution system was reported to be 0.2 mg/L during the months of June and July of 2022.

*REQUIREMENT: The effluent residual cannot be less than 0.2 mg/l for more than four hours in any 24-hour period [22 CCR Section 64654(b)(1)].*

**2. Number of distribution residual samples collected each month:**

The Company reports one sample from the distribution system to the lab with the monthly coliform sample.

*REQUIREMENT: To residual disinfectant concentration shall, at a minimum, be measured at the same points in the distribution and at the same time as distribution total coliform [22 CCR 64656 (c)].*

**Table 9: No. of Samples with no Detectable Residual and HPC > 500 CFU/ml (2017-2022)**

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |

Notes: NA = not available.

*REQUIREMENT: The residual disinfectant concentrations of samples collected in the distribution shall be detectable or HPC ≤500 CFU/mL in at least 95% of samples collected each month [22 CCR Section 64654(b)(2)].*

**3. Discussion and Appraisal:**

The Company adequately collects the required number of samples to determine compliance with a detectable residual in the distribution. From monthly coliform sample reports, it is shown that adequate residual is present in the distribution system. Since August 5, 2022 the Company has been required to take weekly distribution pressure and chlorine residual samples in the distribution system as the Division has received several complaints by customers that there little to no chlorine residual, and at other times that the residual was too high and affecting customers health. Weekly monitoring data reported by the Company has shown adequate levels of chlorine in the distribution system. The Division has received two (July and October 2022) chlorine contact time compliance reports that had days that did not meet the required chlorine contact time ratio of 1.0 to meet disinfection requirements; The Company states this is due to the low level of the 100,000-gallon tank at the start of plant operations, and that low demand allowed for adequate contact time to be met. Chlorine contact time requirements must be met.

## D. DESIGN AND OPERATIONS STANDARDS

### COAGULTATION AND FLOCCULATION

**1. How is optimum coagulation dose determined?**

The plant does not have an accurate measure for how much polymer is being dosed to the system, nor does it have capabilities to jar test or otherwise determine adequate coagulation dosage. Coagulant dosage is currently based on the filter effluent turbidity readings.

*REQUIREMENT: For new treatment plants, whenever a coagulation process is used, the process selection shall be based on pilot plant or laboratory scale (jar tests) or equivalent results that demonstrate the effectiveness of the coagulant chemicals over the full range of water quality conditions [22 CCR 64658 (c)].*

**2. What chemicals are used for coagulation? Are they ANSI/NSF 60 Certified?**

The Company uses chemicals noted in the following table. All liquid chemicals are ANSI/NSF 60 certified.

**Table 10: Coagulants and Other Chemicals Used**

| Chemical | Purpose | Brand | Is it ANSI/NSF 60 certified? |
|---|---|---|---|
| Cationic Polymer - Clar+Ion A410P | Coagulant aid | General Chemical | Yes |
| Gas Chlorine | Disinfection | | Yes |

*REQUIREMENT: Direct chemical additives shall be ANSI/NSF Standard 60 certified (22 CCR 64590).*

**3. Is acrylamide and/or epichlorohydrin used in drinking water treatment?**

No, these are not used.

*REQUIREMENT: Use of acrylamide and/or epichlorohydrin in drinking water treatment requires annual certification in writing to the Division that the combination of dose and monomer does not exceed the following levels: Acrylamide: 0.05% monomer in polyacrylamide dosed at 1 mg/L, or equivalent. Epichlorohydrin: 0.01% residual of epichlorohydrin dosed at 20 mg/L, or equivalent (22 CCR 64448).*

**Table 11: Monthly Average Peak Raw Water Turbidity, NTU**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2018 | 2.10 | 1.90 | 1.90 | 2.00 | 1.40 | 1.70 | 1.90 | 2.30 | 1.40 | 4.10 | 4.10 | 3.20 |
| 2019 | 2.60 | 2.90 | 2.30 | 2.20 | 3.10 | 2.10 | 1.40 | 1.50 | 1.70 | 2.70 | 3.40 | 4.90 |
| 2020 | 3.50 | 3.80 | 3.50 | 3.60 | 3.00 | 2.00 | 1.50 | 1.50 | 2.00 | 2.80 | 3.10 | 3.60 |
| 2021 | 2.50 | 2.50 | 2.40 | 2.00 | 1.70 | 1.60 | 1.30 | 1.80 | 1.60 | 2.10 | 2.00 | 1.80 |
| 2022 | 1.80 | NR | NR | NR | NR | NR | NR | 3.00 | 2.50 | 2.40 | | |

Notes: NA = not available.

**Table 12: Monthly Average Effluent Turbidity, NTU**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2018 | 0.12 | 0.12 | 0.1 | 0.12 | 0.1 | 0.1 | 0.1 | 0.10 | 0.12 | 0.14 | 0.16 | 0.14 |
| 2019 | 0.16 | 0.17 | 0.18 | 0.19 | 0.18 | 0.17 | 0.18 | 0.18 | 0.19 | 0.19 | 0.19 | 0.20 |
| 2020 | 0.17 | 0.18 | 0.18 | 0.19 | 0.17 | 0.16 | 0.17 | 0.17 | 0.12 | 0.14 | 0.13 | 0.09 |
| 2021 | 0.12 | 0.16 | 0.12 | 0.12 | 0.12 | 0.11 | 0.15 | 0.13 | 0.19 | 0.09 | 0.11 | .08 |
| 2022 | .09 | NR | NR | NR | 0.17 | 0.16 | 0.17 | 0.19 | 0.18 | 0.18 | | |

Notes: NA = not available.

**Table 13: Percent Reduction of Monthly Average Raw Water Turbidity**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2018 | 94.3 | 93.8 | 94.5 | 94.2 | 92.7 | 94.1 | 94.4 | 95.5 | 91.2 | 96.6 | 96.2 | 95.6 |
| 2019 | 95.0 | 95.2 | 94.3 | 94.5 | 95.8 | 94.8 | 91.4 | 92.0 | 91.8 | 94.8 | 95.9 | 96.7 |
| 2020 | 96.0 | 96.3 | 96.3 | 96.4 | 95.7 | 93.5 | 91.3 | 92.0 | 95.5 | 97.1 | 97.4 | 97.8 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2021 | 96.4 | 96.4 | 96.3 | 95.5 | 94.7 | 93.8 | 93.1 | 94.4 | 93.8 | 95.7 | 95.5 | 95.5 |
| 2022 | 95.3 | NR | NR | NR | NR | NR | NR | 93.7 | 92.6 | 92.7 | | |

Notes: NR = not reported. NA = not available.

*REQUIREMENT: For conventional and direct filtration, coagulation and flocculation unit processes shall be in use at all times the plant is in operation. The effectiveness of these processes shall be demonstrated by either at least an 80% reduction through the filters of the monthly average raw water turbidity or jar testing, pilot testing or other means to demonstrated optimum coagulation is being achieved [22 CCR Section 64660(b)(9)] OR systems with low raw water turbidity (<2.5 NTU) have a monthly average effluent turbidity less than 0.1 NTU (Division guidance for systems with low raw water turbidity).*

*Cryptosporidium Action Plan Optimization Goals:*
*Sedimentation/Clarification Basin Effluent Goal 1 to 2 NTU*
*Combined Filter Effluent Goal of 0.1 NTU*

### 4. Is Enhanced Coagulation practiced or Alternative Criteria used?

Not applicable as the treatment plant is not conventional. There is no monitoring for total organic carbon (TOC) for process monitoring.

*REQUIREMENT: Systems using conventional and direct filtration are required to provide enhanced coagulation to provide TOC removal per 22 CCR Section 64536.2 unless it meets the alternative criteria in 22 CCR 64536 (a) or (b)*

### 5. Discussion and Appraisal:

Raw water turbidity was not reported from April 2022 to July 2022, so percent reduction was not reported by the Company. Again, as mentioned in Section C, as the plant does not have adequate turbidity monitoring and recording equipment, and samples are not recorded every 15 minutes, monthly average effluent is based on operator observation.

## FILTRATION

### 1. Number of filters:

For surface water treatment, the plant utilizes two stage filtration with three parallel filters in the first stage and two parallel filters in the second stage for a total of five vessels. The Company is required to monitor turbidity at the final two filters or the combined filter effluent for compliance.

*REQUIREMENT: Multiple filter units are required [22 CCR Section 64659(a)(4)].*

**2. Type of filters:**

The EPD filters are high-rate pressure filters that use garnet media for direct in-line filtration; a dedicated basin for flocculation, sedimentation, or flotation is not provided. The treatment process is classified as an Alternative Filtration Technology as defined by Title 22, CCR, Section 64653 (e).

**3. Pre-filtration (if any):**

None.

**4. How is filtration rate controlled?**

Raw water booster pump operation controls overall flow to the filters. Flow rate through the filters is controlled using a priority valve. The Company's treatment operator stated that flows are kept to 60 gpm when the plant is online. The plant does not have an accurate way to measure instantaneous flows in the plant as a totalizer is used to meter production and flow. It was reported by Company operators during the November 9, 2022 inspection that the totalizer may be inaccurate due to the pipe size and plant flow rates.

**5. Filtration rate at maximum flow:**

Maximum flow is 280 gpm, which would require flow rates of 6.9 gpm/$ft^2$ for the first stage and 10.4 gpm/$ft^2$ for the second stage of filters, assuming 13.5 $ft^2$ of media per filter.

*REQUIREMENT: Maximum filtration rates are noted in 22 CCR Section 64660 (b)(1)-(3). Higher filtration rates can be approved if an equal degree of performance can be demonstrated [22 CCR Section 64660(b)(4)]. Alternative Filtration Technologies are specified in permit [22 CCR Section 64653 (h)].*

*The California Surface Water Treatment Alternative Technology Treatment Report dated June 2011 and appendix of the February 10, 1998 permit note 12 gpm is the allowed filtration rate for the EPD filters to treat raw water turbidities up to 6 NTU and 5 gpm for raw water up to 20 NTU.*

**6. Filtration rate at maximum flow with one filter out of service:**

Flow is halted when any filter is out of service.

**7. Maximum flow in the past 12 months:**

Reported to be 60 gpm.

**8. Describe backwash cycle:**

All five filters are backwashed every day of plant operation. Filter backwashing is currently run five to six minutes per filter during which the plant is offline. Only one filter is backwashed at a time. To begin a backwash of the first stage, raw water flow is halted, and the combined filter effluent valve of the first stage is closed. There is no flow through the second stage filters. The filter/backwash valve of the filter to be backwashed is set to the backwash position, closing the raw water influent line and opening the backwash water effluent line. Once the backwash cycle is completed, the plant filters to waste for approximately thirty minutes before placing the filters back online or until the turbidity level is below 0.2 NTU. Currently, due faulty plant controls, manual backwash cycle takes thirty minutes to an hour or more to complete.

**9. Type of surface wash:**

Not applicable

**10. Surface wash rate:**

Not applicable

*REQUIREMENT: For new treatment plants, provide backwash rates and surface or subsurface wash facilities or a combination thereof to clean filter after use to original condition [22 CCR Section 64658(b)(9]).*

**11. Is there a filter-to-waste capability?**

Previously the filter-to-waste was set to 2.5 minutes following a backwash and an automatic Filter-to-waste was enabled whenever the combined effluent of the second stage of filters exceeds 0.2 NTU. Currently the automatic filter to waste does not function properly.

*REQUIREMENT: For new treatment plants, provide for filter-to-waste for each filter unit or addition of coagulant chemicals to the water used for backwashing [22 CCR Section 64658(b)(8)].*

**12. Is the turbidity at the individual filter effluent monitored?**

No, there is one continuous turbidity monitor at the combined filter effluent. As mentioned in Section C., turbidity monitoring equipment is unable to record turbidity values every 15 minutes.

*REQUIREMENT: For direct and conventional filtration, individual filters are required to be monitored continuously for turbidity and recorded at least once every 15 minutes. Two filters or less may be monitored at the combined filter effluent [22 CCR Section 64655 (a)].*

**13. In the past 12 months, were any individual filter effluent (IFE) turbidity triggers exceeded after placing filters online after backwash or other interruption?**

No IFE triggers have been reported.

*REQUIREMENT: For conventional or direct filtration, exceedance of individual filter effluent (IFE) turbidity triggers in 22 CCR Section 64660 (b)(7) after backwash or service interruption requires follow-up actions. IFE triggers for Alternative Filtration Technologies are specified in permit [22 CCR Section 64653 (h)].*

*The Havasu Water Treatment Plant is an alternative treatment facility with plant specific requirements. These are noted in Permit No. 05-13-13P-003, issued March 5, 2013. After the individual filter is placed back into service the filtered water turbidity shall not exceed any of the following:*

*>2.0 NTU at any time during first four hours of filter operation*
*>1.0 NTU in at least 90 percent of the interruption events during any consecutive 12-month period*
*>0. 2 NTU after the filter has been in operation for 4 hours.*

**14. If IFE turbidity triggers were exceeded, was required follow-up action completed?**

Not applicable, there have been no exceedances of IFE triggers reported.

*REQUIREMENT: For conventional and direct filtration, exceedance of IFE triggers requires the follow-up action noted in 22 CCR Section 64660 (b)(7). Follow-up for Alternative Filtration Technologies are specified in permit [22 CCR Section 64653 (h)].*

**15. At what frequency is the combined filter effluent (CFE) monitored for turbidity?**

Continuously.

*REQUIREMENT: For direct and conventional filtration, system serving a population ≥10,000 is required to monitor the CFE continuously and systems servings a population <10,000 are required to sample the CFE at a minimum by grab samples at least every 4 hours. Diatomaceous earth or sallow sand filtration shall sample the CFE at a minimum by grab samples at least every 4 hours. Alternative Filtration Technologies are specified in permit [22 CCR Section 64653 (h)].*

**16. Is turbidity measuring equipment using methods specified in 40 CFR 141.74?**

Yes. Hach-720 C Turbidity Meters are used. The Company also uses a Hach portable 2100 Q turbidity meter to measure samples.

*REQUIREMENT: Federal Regulations require that turbidity measurements used from compliance use either Standard Method 2130B, Standard Method 180.1, Great Lakes*

*Instruments Method 2, Hach FilterTrak 10133, Mitchell M5271, Mitchell M531, AMI Turbiwell, or Orion AQ45000 [40 CFR 141.74(a)(1)].*

**17. Is the filter backwash water recycled?**

No. Filter backwash is discharged to a cement lined pit.

**18. What is the detention time and is this adequate?**

Not applicable, no backwash recycling.

*REQUIREMENT: For new treatment plants, solids removal treatment is required for filter backwash water if it is recycled into the treatment process [22 CCR Section 64658(b)(10)].*

**19. Describe filter maintenance:**

Filter media has been purchased for all filters. Filter media in the second stage filters has been replaced this year. Filter media in the first stage has not been replaced since February 27, 2016. Filter media in the first stage should be replaced.

*REQUIREMENT: Pressure filters shall be physically inspected and evaluated annually for such factors as media condition, mudball formation, and short circuiting. A written record of the inspection shall be maintained at the treatment plant.*
*[22 CCR Section 64660 (b)(8)].*

*The operations plan shall include a description of filter media inspection program [22 CCR Section 64661 (b)]*

**20. Discussion and Appraisal:**

Turbidity monitoring equipment must be repaired or replaced to allow for accurate recordings to be taken every 15 minutes. The Company must replace filter media in the first stage filters. Annual inspections of media must be completed in future. The Company must rehabilitate or repair the backwash automatic controls. It was also noted during the March 23 and November 9, 2022 inspections that filter unit displays were nonfunctional and that the filters were leaking severely. Filter displays must be repaired. The Company must have a comprehensive evaluation of the treatment plant completed.

## DISINFECTION

**1. Type of disinfectant used:**

Chlorine Gas.

**2. Maximum possible dose at maximum flow:**

Chlorine is dosed with an Evoqua gas feed S10K chlorinator. The Division requires additional information regarding plant equipment to calculate the maximum dosage.

*REQUIREMENT: For new treatment plants, provide disinfection equipment sized for the full range of flow conditions expected and capable or feeding accurately at all flow rates [22 CCR Section 64658(b)(12)].*

**3. Supply of disinfectant on hand:**

One 150-pound cylinders were on hand at time of inspection with three empties. Four new bottles were delivered at the end of November 2022.

*REQUIREMENT: Adequate supply of disinfectant is required to provide continuous operation [22 CCR Section 64660(c)(1)].*

**4. What disinfection chemical is used? Is it ANSI/NSF 60 Certified?**

Chlorine gas manufactured by Canexus Corporation and sold by Hill Brothers Chemical System. Chlorine is ANSI/NSF 60 certified.

*REQUIREMENT: Direct chemical additives shall be ANSI/NSF Standard 60 certified (22 CCR 64590).*

**5. Emergency plan of action for disinfection failure:**

There is no formal emergency plan. In the event of a disinfection failure, the plant would need to be shutdown manually and the clearwell would be chlorinated to provide additional disinfection. This does not address continuity of operation or time to correct chlorination failure.

*REQUIREMENT: An emergency plan of action for disinfectant failure must be posted [22 CCR Section 64660(c)(2)]*

# E. RELIABILITY AND MONITORING

**Table 14: Reliability Features and Monitoring Compliance with Title 22, CCR, Section 64659**

| Process | Parameter | Location – Current Practice | Location - Requirement | Frequency - Current Practice | Frequency - Requirement | Alarm or Shutdown for failure - Current Practice | Alarm or Shutdown for failure - Requirement |
|---|---|---|---|---|---|---|---|
| **Coagulation** | Chemical Feed | Polymer feed location is upstream of the filters | Chemical feed location is not specified in regulation | Coagulants fed continuously | Continuous coagulant use is required for conventional and direct filtration in Section 64660 (b)(9) | Polymer feed dosing failure would lead to turbidity increases. The plant does not have a shutdown alarm or other failsafe as automatic flush to waste is nonfunctional. | Warning or shutdown required for failure of coagulation in Section 64659. There is no warning or shutdown for coagulant failure. |
| **Coagulation** | Low Level Chemical Supply | Manual check of chemical supply | Location of chemical supply not specified in regulation | Daily check of chemical supply | Frequency to check chemical supply not specified in regulation | No specific alarm for low chemical supply. The plant does not have a shutdown alarm or other failsafe as automatic flush to waste is nonfunctional. | Warning or shutdown required for failure of coagulation in Section 64659 |

| Process | Parameter | Location – Current Practice | Location - Requirement | Frequency - Current Practice | Frequency - Requirement | Alarm or Shutdown for failure - Current Practice | Alarm or Shutdown for failure - Requirement |
|---|---|---|---|---|---|---|---|
| **Filtration** | Flow | One flow meter at CFE | Flow measurement location not specified in regulation | Flow is continuously monitored and recorded | Flow measuring and recording equipment required in Section 64658(b)(5) | Flow controlled by raw boosters and manually turned on. Flow measurement is not instantaneous and is by a totalizer which does not allow for quick accurate readings. | Warning or shutdown required for filtration failure in Section 64659. Flow must be ≤ max allowed. |
| **Filtration** | Turbidity (raw) | Raw turbidity is sampled at first stage filters | Raw turbidity must be sampled per Section 64654.8(b)(1) | Continuous monitoring of raw turbidity | Raw turbidity must be sampled a minimum of daily per Section 64654.8(b)(1) | No alarm | No alarm or shutdown requirement in regulation for raw turbidity |

| Process | Parameter | Location – Current Practice | Location - Requirement | Frequency - Current Practice | Frequency - Requirement | Alarm or Shutdown for failure - Current Practice | Alarm or Shutdown for failure - Requirement |
|---|---|---|---|---|---|---|---|
| | Turbidity at settled water | Settled water turbidity sampling not applicable | For conventional and direct filtration settled water must be sampled per Section 64654.8(b)(2) | Settled water turbidity sampling not applicable | For conventional and direct filtration settled water turbidity must be sampled at least daily per Section 64654.8(b)(2) | Settled water turbidity sampling not applicable | No alarm or shutdown requirement in regulation for settled water turbidity |
| | Turbidity at individual filter effluent (IFE) | Turbidity is sampled at CFE | Turbidity must be sampled at the IFE (or combined filter effluent if ≤2 filters) per Section 64655 | Turbidity is monitored continuously at the CFE | Turbidity must be sampled continuously at the IFE per Section 64655 | The plant does not have a shutdown alarm or other failsafe as automatic flush to waste is nonfunctional. | Warning or shutdown alarm required for filtration failure in Section 64659 |

| Process | Parameter | Location – Current Practice | Location - Requirement | Frequency - Current Practice | Frequency - Requirement | Alarm or Shutdown for failure - Current Practice | Alarm or Shutdown for failure - Requirement |
|---|---|---|---|---|---|---|---|
| **Filtration** | Turbidity at combined filter effluent (CFE) | Turbidity is sampled at the CFE, prior to clearwell | CFE turbidity must be representative sample prior to clearwell per Section 64655 (a) Table 64655 footnote (b) | CFE turbidity is sampled continuously | Requirement to sample CFE turbidity for population ≤10,000 is by grab sample at least every 4 hours per Section 64655 (a) Table 64655 | The plant does not have a shutdown alarm or other failsafe as automatic flush to waste is nonfunctional. | Warning or shutdown alarm required for filtration failure in Section 64659 |
| | Total organic carbon (TOC) (raw) | TOC is sampled at the source. | For filtration that is not conventional or direct and TOC is sampled, it must be sampled at raw influent per Section 64534.6 (c) | Monthly | For filtration that is not conventional or direct filtration, TOC sampling at raw influent is required monthly or quarterly per Section 64534.6 (c) | Raw influent TOC alarm not required | No alarm requirement specified in regulation for raw TOC |

| Process | Parameter | Location – Current Practice | Location - Requirement | Frequency - Current Practice | Frequency - Requirement | Alarm or Shutdown for failure - Current Practice | Alarm or Shutdown for failure - Requirement |
|---|---|---|---|---|---|---|---|
| **Filtration** | TOC (treated) | TOC is not required but it is sampled in the distribution. | For filtration that is not conventional or direct treated water TOC is not required in Section 64534.6 (c) | Monthly | For filtration that is not conventional or direct filtration, TOC sampling at treated effluent is not required per Section 64534.6 (c) | Treated effluent TOC alarm not required | No alarm requirement specified in regulation for treated water TOC |
| | Alkalinity (raw) | Raw water alkalinity is sampled at the source though sampling is not required. | For conventional and direct filtration alkalinity must be sampled at the source per Section 64534.6 (a) | Raw water alkalinity is sampled monthly though sampling is not required. | For conventional and direct filtration alkalinity must be sampled at the source at least monthly per Section 64534.6 (a) | Raw alkalinity alarm not required | No alarm requirement specified in regulation for raw alkalinity |

| Process | Parameter | Location – Current Practice | Location - Requirement | Frequency - Current Practice | Frequency - Requirement | Alarm or Shutdown for failure - Current Practice | Alarm or Shutdown for failure - Requirement |
|---|---|---|---|---|---|---|---|
| **Disinfection** | Disinfectant Residual - Final | Chlorine residual is measured at hydrotank effluent. | Chlorine residual must be sampled in water delivered per Section 64654(b)(1) | Chlorine residual is measured multiple times daily. | Chlorine residual must be sampled continuously or by grab sample every 4 hours per Section 64656(b) | None | Alarms required for disinfection failure in Section 64659<br><br>Chlorine must be ≥0.2 mg/L in Section 64654(b) |
| | Disinfectant Residual at end of contact time (CT) segment | Chlorine residual is measured at hydrotank effluent. Final residual is used for CT. | For CT, residual must be measured before or at first service connection per Section 64654(a) | Chlorine residual is measured multiple times daily. | Chlorine residual must be sampled continuously or by grab sample every 4 hours per Section 64656(b) | None | Alarms required for disinfection failure in Section 64659<br><br>Must meet contact time |
| | pH | pH is sampled at hydrotank. | pH must be sampled before or at first service connection per Section 64654(a) | pH sampling frequency is unknown. | pH must be measured as noted in the O&M Manual per Section 64654(a) | There is no pH alarm | No alarm requirement specified in regulation for pH |

| Process | Parameter | Location – Current Practice | Location - Requirement | Frequency - Current Practice | Frequency - Requirement | Alarm or Shutdown for failure - Current Practice | Alarm or Shutdown for failure - Requirement |
|---|---|---|---|---|---|---|---|
| **Disinfection** | Temperature | Temperature is sampled at the hydrotank. | Temperature must be measured before or at first service connection per Section 64654(a) | Temperature is by grab sample daily. | Temperature must be measured as noted in O&M Manual per Section 64654(a) | There is no temperature alarm | No alarm requirement specified in regulation for temperature |

Notes:

1. References to regulation are from Title 22, California Code of Regulations (CCR) except where noted.
2. IFE = individual filter effluent.
3. CFE = combined filter effluent.
4. Alternatives to requirements can be accepted if equal degree of reliability provided [22 CCR 64659 (b)]

**1. Standby equipment available:**

The system has spare vacuum regulator, rotameter, chlorine injector, additional tubing material for the chlorine injection pump, tubes, valves, pipes, gaskets, and garnet filter media in addition to repair kits.

*REQUIREMENT: Standby replacement equipment available to assure continuous operation and control of unit processes for coagulation, filtration, and disinfection [22 CCR Section 64659(a)(2)].*

**2. Is there standby power:**

The Company has access to rental generators. The status of the onsite manually operated 35 KW diesel generator is unknown. The status of the one diesel booster for the intake water line is unknown.

**3. Frequency turbidimeters calibrated (primary and secondary)?**

Turbidimeters calibration frequency is unknown.

*REQUIREMENT: Continuous turbidimeter measurements may be substituted for grab sample monitoring provided the supplier validates the accuracy of the measurements on a weekly basis [22 CCR Section 64655 (a), Table 64655 footnote (d)].*

*A supplier shall calibrate turbidimeters used for continuous turbidity monitoring according to the procedure specified by the manufacturer [22 CCR Section 64655 (b)].*

**4. Discussion and Appraisal:**

The Havasu Surface WTP does not have adequate reliability features. Flow rate measurement is not able to be reported accurately as the WTP utilizes an accumulator and not an instantaneous flow measuring device. The Havasu Surface WTP does not have any functioning reliability features or alarms for coagulation, filtration, or disinfection failures. The Company must install or repair equipment to allow for adequate monitoring of coagulation, filtration, and disinfection to meet reliability requirements.

## F. OPERATIONS AND RECORDS

**1. Required level of certification:**

The Havasu Surface WTP has been classified as a T2 facility

**2. Number and level of certified operators:**

The Company employs one T2 operator.

*REQUIREMENT: Operator certification is required by 22 CCR Section 64460(a)*

**3. Has an operations plan been submitted?**

The Division has an October 22, 2018 operations plan on file.

**4. Has the plan been approved by the Division?**

Yes, the plan was approved December 28, 2018.

*REQUIREMENT: A supplier shall operate each treatment plant in accordance with an operations plan that has been approved by the Division [22 CCR Section 64661].*

**5. Describe any changes needed to the plan:**

The plan must be updated to be in line with current operational procedures required to run the Havasu Surface WTP as the current plan is not reflective of the current limited capabilities of the Havasu Surface WTP.

*REQUIREMENT: The operations plan shall consist of a description of the utility's treatment plant performance monitoring program, unit process equipment maintenance program, filter media inspection program, operating personnel, including number of staff, certification levels and responsibilities; how and when each unit processes operate; laboratory procedures; procedures used to determine chemical does rates; records; response to plant and watershed emergencies; and reliability features [22 CCR Section 64661].*

**6. Describe the treatment records maintained:**

Records of daily flow are recorded and estimated by the operator in a logbook; Other records such as CT calculations, turbidity compliance worksheets, coliform monitoring, disinfection byproduct monitoring, and maximum residual disinfectant levels are kept on file by the Company. No turbidity meter tapes are produced to be maintained.

*REQUIREMENT: Minimum records required are results of required monitoring, filter maintenance, plant flows and production, filtration rates, hours of operations, backwash rates, and equipment and process failures [22 CCR Section 64662(a)].*

**7. Discussion and Appraisal (Is the system operating in accordance with the plan? Are records adequate?)**

As mentioned in Section C. Filtration, the Company must record turbidity readings every 15 minutes. These records must be kept by the Company and be available for review by the Division. The Company should look into having additional staff certified as treatment operators or hiring additional treatment operators as system demand may require the

Havasu Surface WTP to be operated for extended shifts, and there is not backup operator availability in case of emergency situations.

## G. OVERALL TREATMENT PLANT APPRAISAL

Overall, the treatment plant is in poor condition and in a state of disrepair. The plant has not met all filtration and disinfection performance standards during the past year. The plant currently does not meet requirements of California Code of Regulations, title 22, sections 64653 Filtration, 64655 Disinfection, and 64659 Reliability.

From the physical inspection and evaluation, the following corrections and information are needed.

1. The floor of the treatment plant was observed to have been severely damaged from water leakage and have severe sagging. The sagging poses a significant risk to the integrity of the treatment plant piping and functionality and must be repaired.

2. The plant has no operational reliability features or alarms. At a minimum the currently nonfunctional automatic flush to waste that actuated when turbidity exceeded 0.2 NTU must be in working order.

3. As the plant has no operational reliability features or alarms, the plant must have a certified treatment operator on site at all times the plant is running to monitor treatment efficacy.

4. Turbidity monitoring equipment must be able to record monitoring results every 15 minutes.

5. The plant flow meter is unable provide accurate flow rates and therefore unable to meet California SDWA as accurate flow rates are required to demonstrate compliance with the disinfection process performance for inactivation by disinfection of Giardia and viruses.

6. NSF 61 certified pumps must be used to dose polymer. The Company must provide documentation that the current LMI-B711 pumps used by the Company are NSF 61 certified or replace the pumps with NSF 61 certified pumps.

7. Chlorine dosing equipment may need to be replaced to allow for accurate dosing of disinfectant depending on the current equipment. Please provide information regarding the dosing equipment capabilities.

8. Plant automatic backwash functions must be repaired.

9. Filter displays and controls must be replaced or repaired so that they are functional.

10. A Watershed Sanitary Survey is required to be submitted every 5 years. The last Watershed Sanitary Survey on file for the Havasu Surface WTP was submitted December 2016. The Company must create and submit a new Watershed Sanitary Survey.

11. The Company must replace the media in the first stage filters. The Company must inspect filter media annually at a minimum.

12. The Company must submit LT2 monitoring data for October 2017 through September 2018 or complete and submit LT2 monitoring for BIN classification. The Division currently only has fecal coliform source monitoring for the sampling period which is not able to be used for LT2 BIN Classification.

13. Stage 2 Filters were reported by Mr. Berry from EPD USA, to potentially have a mechanical failure or compromise that must be repaired.

14. The Company must follow recommendations from Mr. Berry of EPD USA including: cleaning and calibrating turbidimeters, removal of paperwork, nonessential materials and other general housekeeping items in the plant area, replace the water quality control console.

# APPENDIX 8 JUNE 10 DIVISION RESPONSE

# State Water Resources Control Board
## Division of Drinking Water

June 10, 2022

Jennifer Hodges
Havasu Water Company
148821 Havasu Lake Rd.
Havasu Lake, CA 92363

Dear Jennifer Hodges:

**RESPONSE TO HAVASU WATER COMPANY MAY 19, 2022 CORRECTIVE ACTION PLAN SUBMISSION AND REQUEST FOR REVISION (SYSTEM NO. 3610017)**

On March 29, 2022, the State Water Resources Control Board, Division of Drinking Water (Division) issued Compliance Order Number 05-13-22R-001 (Order) for several operational and treatment technique violations and, per Directives 11 and 12, required Havasu Water Company (Company) to submit a Corrective Action Plan (CAP), by April 29, 2022. The Order required all items in the deficiency list appended to the Order be included in the CAP and include dates that the Company will be in compliance.

No CAP was submitted by the Company and a follow up enforcement, citation 05-13-22C-015 (Citation), was issued May 6, 2022, for continued violations and noncompliance with the Order, including not submitting a CAP. The Citation required the CAP to be submitted by May 20, 2022 per Citation Directive 6. The Company submitted a CAP on May 19, 2022 (Appendix 1).

The CAP submitted includes time frames of two months that activities will be completed. Several planned objectives listed on the submitted CAP are not on the proposed CAP timeline, which include the following:

- Water Treatment Plant - Rebuild Filtration Facility
  - Rebuild both Booster Pumps Between 105k Tank and 10k Pressure Tank
  - Replace or Repair Defective Flow Meters
  - Repair or Replace Defective Check Valves
  - Repair Settling Ponds - Clean out all Waste Products
- Clearwell Holding & Pressure Tanks

  - Inspect and Exercise All Valves
  - Inspect Float and Level System
  - Repair or Replace Water/Air Level Sight Gauge
  - Repair or Replace Distribution Accumulator
- Lakefront Pumping Station - Feed Lines
  - Repair Retaining Wall with New Brick
  - Install New Fence with Locking Gate

**The Division requests that the Company submit a revised CAP to include the timelines for the objectives listed above.**

The revised CAP should include specific dates for each activity to be completed, rather than a two-month range. For instance, installation of a new surface water supply pump should have a proposed completion date, rather than sometime between June and July.

If any activity has already been completed, the completion date should be reported on the revised CAP. It provides clarity when the Company provides planned completion dates in the planned objective section with each planned objective. If a planned objective requires several steps, it should be broken down as necessary, with planned completion dates for each activity**. The Division suggests the Company use the following tables as examples for all planned activities (objectives) in the revised CAP**:

Table 1 (Example):

| Planned Objectives: Water Treatment Plant | Planned Completion Date | Actual Completion Date |
|---|---|---|
| 1. Demo & Remove Defective Old Equipment | May 31, 2022 | May 22, 2022 |
| 2. Service repair EPD filtration system | May 31,2022 | May 22, 2022 |

Table 2 (Example):

| Planned Objectives: Clearwell Tank (105,000 gallons) | Planned Completion Date | Actual Completion Date |
|---|---|---|
| 1. Inspection for corrosion | April 30, 2022 | May 8, 2022 |
| 2. Label influent and effluent locations | June 30, 2022 | |

The current CAP does not include several required items on the Deficiency List. The list of items not included on the CAP are shown on Appendix 2. **The Company should include the items in Appendix 2 in the revised CAP.**

Some items on the CAP are also listed twice under the current timeline, and the Division would like to confirm these items are intended. **Please clarify the following items in the revised CAP:**

- "Install new Effluent Turbidimeter" is listed under both June to July and October to November sections.
- "Dive operations to service and repair underwater lines and filters" and "Repair Backwash Automation on Filtration System" are both listed under the June to July and August to September sections.

Please prepare and submit for review the revised CAP by June 24, 2022.The revised CAP should address the requirements that the Division highlighted in **bold font** in the earlier text**:** to include specific dates for all planned objectives to be completed, to use tables for clarity, to include all items on the Deficiency List from the Order, and to clarify timeline duplicates.

If you have any questions, please contact Jarrett Hamud at (909) 383-5289 or jarrett.hamud@waterboards.ca.gov.

Sincerely,

Wei H. Chang, P.E.
District Engineer
San Bernardino District
Southern California Field Operations Branch

Appendix

1. Havasu Water Company May 19, 2022 Corrective Action Plan
2. Deficiency List Items Missing from Corrective Action Plan

cc: Gabriela Garcia, San Bernardino County EHS, gabriella.garcia@dph.sbcounty.gov David Alaniz, San Bernardino County EHS, david.alaniz@dph.sbcounty.gov
Bruce DeBerry, CPUC Water Division, bruce.deberry@cpuc.ca.gov Moises Chavez, CPUC Water Division, moises.chavez@cpuc.ca.gov
Wilson Tsai, CPUC Water Division, Wilson.Tsai@cpuc.ca.gov CPUC Public Advocates Office Water Branch, DRAWaterAL@cpuc.ca.gov

# Appendix 1:

Havasu Water Company May 19, 2022
Corrective Action Plan

# Havasu Water Company

## Corrective Action Plan & Timelines

### Planned Objectives:

**Water Treatment Plant - Rebuild Filtration Facility**

Demo & Remove Defective Old Equipment
Service & Repair EDP Filtration System
Rebuild both Booster Pumps Between 105k Tank and 10k Pressure Tank
Replace or Repair Defective Flow Meters
Replace Turbidimeters & Reporting Equipment
Repair or Replace Defective Check Valves
Repair Settling Ponds - Clean out all Waste Products
Repair & Update Plant Control & Monitoring Systems
Update Required Inventory for both Standard Repairs & Emergency Repairs
Repair Clearwell Tank Level System and Integrate to Controls, Monitoring and Pump Controls

**Clearwell Holding & Pressure Tanks**

***Clearwell Tank – 105k Gallon***
Inspect Tank for Corrosion and Cleanliness
Clean and Service Tank if Needed
Inspect and Exercise All Valves
Inspect Float and Level System
Labeling Effluent and Influent Points

***Pressure Tank – 10k Gallon***
Inspect Tank for Corrosion and Cleanliness
Clean and Service Tank if Needed
Inspect and Exercise All Valves
Repair or Replace Water/Air Level Sight Gauge
Repair or Replace Distribution Accumulator

**Lakefront Pumping Station - Feed Lines**

***Pumping Station***
Demo & Remove Defective Old Equipment & Concrete
Repair or Replace Primary Pumps and Repair or Replace Secondary Pumps
Repair or Replace Defective Check Valves
Repair Retaining Wall w/ New Brick
Concrete Entire Area & New Pump Bases
Install New Fence with Locking Gate

***Lake Feed Lines***
Perform Dive Operations to Inspect Inlets for Water System
Replacing any Damaged Pipe or Deficiencies Found
Ensure Pipe and Inlet is not Laying on lake Floor

## Corrective Action Plan Timelines:

**April - May**

**Water Treatment Plant**
Install New Media from EPD and Inspect Filter Housing
Repair all Leaking Lines and Seals on Filtration System
Repair Chlorine Pump System
Repair LMI Dosing Pumps
Changing to T-Flock 1419 Polymer from Thatcher
Correcting Deficiencies and Capping all Open Connections

**Lakefront – Pump Station**
Perform Dive Operation to Inspect Underwater Lines and Inlet to Determine Condition
Correct Electrical Deficiencies with Exposed Wiring and Starters Cleanup Site Electrical
Secure Location and Post No Trespassing Sign

**June-July**

**Water Treatment Plant**
Install New Effluent Turbidimeter
Repair Backwash Automation on Filtration System

**Lakefront – Pump Station**
Perform Dive Operation to Service and Repair Underwater Lines and Inlet Filters
Clean Up Site and Pour New Concrete and Pump Bases
Repair or Replace Existing Surface Water Supply Pumps
Install New Surface Water Supply Pump

**August-September**

**Water Treatment Plant**
Install New Influent Turbidimeter
Repair Backwash Automation on Filtration System
Install Transfer Switch w/Generator Connections

**Lakefront – Pump Station**
Perform Dive Operation to Service and Repair Underwater Lines and Filters

**October-November**

**Water Treatment Plant**
Install New Effluent Turbidimeter
Tank Inspections and Cleaning

**Lakefront – Pump Station**
Build Canopy and Install LED Lighting
Dive Operation to Inspect New Anchors/Pipe/Filtration

## Achieved Objectives:

**Milestones Achieved**

1. Plant has Been Producing Potable Water for Several Weeks
2. Repairs are Being Accomplished Every Week
3. Ordered New Turbidimeter and Chlorine Testers from Hach
4. Repaired Polly Dosing Pumps & Installed Flow Meters
5. Repaired Chlorine Diagram & Flushed System
6. Serviced Old Automatic Transfer Switch – Now Functional
7. Test Ran w/Backup Generator
8. New EPD Filtration Media/Parts Ordered
9. New Hach Service Agreement with Repairs & Certification
10. Treatment system operational

# Corrective Action Plan Summary

Planning ahead…

Arranging inspection and document the condition and placement of the water supply intake point (influent turbidity exceeds expected numbers). The system seems to require more frequent backwashing than necessary to keep pressure differentials in check.

Ordering t-flock 1419 polymer from Thatcher chem to help with the filtering process and get the ntu numbers into less than .1 (or better) range so we have some tolerance for variation without exceeding the .2 standard, so we can have some wiggle room:

Also, I have started conversation with EPD (filter mfg) into control repairs, updates etc. Also filtering media replacement, filter tank seal sets to stop leaks, the procedures to readjust the priority valves so we can slow the flow of water, all working toward our NTU drop goals.

We have verified the disinfection (chlorine system) is functioning properly and we can adjust it up or down to maintain the desired levels. We also have discussed the move from Chlorine gas to liquid chlorine injection system once the immediate needs of the Facility, the Water Board and those dependent on the water delivery system are met.

We have Performed multiple random flushing at hydrants throughout the system to verify chlorine is detected at these points and clear the main lines of settled particulates. Only visual comparisons of “turbid” to “clear” water have been applied thus far. Actual NTU and free chlorine readings with the new, calibrated handheld meters will be available upon delivery of new meters.

# Appendix 2:

## Deficiency List Items Missing from Corrective Action Plan

| SIGNIFICANT DEFICIENCIES IDENTIFIED | COMMENTS |
|---|---|
| **Reservoir Level Indicator:** Level Indicators should be plugged or screened to prevent the entry of surface contamination, insects, other animals, and dirt and debris. | **No additional comments** |
| **POTENTIAL HEALTH HAZARD DEFICIENCIES IDENTIFIED** | **COMMENTS** |
| **Treatment Plant Condition:** Treatment plant building footpad is sagging under weight of treatment plant equipment and causing bowing of plant piping. | **No additional comments** |
| **Plant Automatic Flush to Waste:** Automatic plant flush to waste is set to .5 NTU and would allow for turbidities greater than .2 NTU to flow into the system. | **No additional comments** |
| **Plant Polymer Storage:** Plant polymer storage barrel was observed to not be adequately covered. A shirt or cloth was used to cover the polymer dosing line. Only NSF 61 certified material should be used to cover storage barrels. | **Polymer replacement has been ordered. Storage must be adequate** |
| **Polymer Dosing Pump NSF 61 Certification:** It is unknown if the polymer dosing pumps are NSF 61 certified. Only NSF 61 certified pumps should be used in chemical dosing. | **Polymer pumps listed as repaired per 4/14/2022, and primary pump repaired 4/29/2022 per log entries however no mention if pumps meet NSF 61 standards** |
| **Stage 1 Polymer Injection Point:** Stage 1 polymer dosing has expanding foam covering the injection point. The injection point should be adequately tapped to prevent leakage using NSF 61 certified materials. | **No additional comments** |
| **System Fire Hydrants Condition:** A unknown number of fire hydrants in system are reported to be nonfunctional. The Company should investigate and replace or repair as necessary. | **Several entries reporting hydrant flushing, photos included. No verification if all hydrants in working order** |
| **Distribution System Valve Condition:** An unknown number of valves in the distribution system are reported to be non functional. The Company should investigate and replace or repair as necessary. Additionally the Company should develop a valve exercise plan to regularly exercise valves in the system. | **No additional comments** |
| **Exposed Main Line:** An exposed six-inch main line was observed in the distribution system. It was reported to have been in this state for several years as it requires frequent repairs. The Company should replace or | **No additional comments** |

| | |
|---|---|
| retrofit this section of the distribution system so that the mainline will be adequately protected. | |
| **MINOR DEFICIENCIES IDENTIFIED** | **COMMENTS** |
| **Hydrotank Meter:** The meter at the influent to the hydrotank was reported to be broken. The meter should be replaced or repaired. | **This is listed on the planned objectives but not the CAP timeline.** |
| **Clearwell Overflow:** The clearwells overflow pipe was not secured adequately and is free floating from the clearwells exterior. The overflow pipe should be securely fastened. | **No additional comments** |
| **REQUESTS AND RECOMMENDATIONS** | **COMMENTS** |
| **Submit a Technical Report:** The Company must provide information related to technical, managerial, and financial capacity and sustainability, and information related to achieving the goals of affordability and accessibility, purusant to Health and Safety Code 116530. | **No additional comments** |

# APPENDIX 9 EVALUATION REPORT FROM MR. PAUL BERRY, PRESIDENT OF THE MANUFACTURER OF HAVASU WTP FILTERS

Clean Water for the World

**EPD USA Inc. Site Evaluation Report**

**For**

**Havasu Water Company Filter System**

**Site Location:** 148821 Havasu Lake Road, Havasu Lake Ca.
**Site evaluation Date:** 1/18/23
**Personnel attending:** Sean Chapin H.W.C., Pat Hoban H.W.C., Paul Berry EPD USA Inc.

**Existing Facility**

1. The existing facility was built as a containerized system and put on site in 1995.

The filter system consists of 5, 13.5 sq. ft. filter vessels 3 in the 1st stage and 2 in the 2nd stage.
As well as 1, 3- way backwash valve and 2 tank isolation valves on each vessel and 4" manifold piping.
Control of the system was controlled by 3 separate control units. 2, automatic backwash control schedulers and a central control enclosure (Water Quality Control Console) (WQCC). The WQCC controls the rinse to waste functions and high turbidity alarm functions as well as powering the coagulant pumps.
The WQCC has incoming 120V power to direct power to the turbidity tum out valve with linkage to open and close 2 valves with 1 actuator.
The WQCC also housed 2 turbidimeters, 1 for monitoring 1st stage effluent turbidity and to power 1st stage coagulant pump and 1 turbidimeter to monitor and control the alarm function of the 2nd stage as well as the 2nd stage coagulant pump.
The WQCC also included an auto dialer to accomplish the alarm call out function.

None of the automatic features on the system were functional at the time of the visit.

Also there is a possible mechanical failure or compromise in the 2nd stage filter (s), either in the filters internal components or the piping just prior to exiting the container.
This is assumed by the extremely high differential pressure reading (12 PSI) on the 2nd stage gauge panel after backwashing. Typically, DP on a clean filter would be approximately 5-6 PSI as was the case on the 1st stage filters at the time of the site visit.

2. As mentioned above, the system was constructed in a 40 foot overseas shipping container with a wooden floor.
   Because of multiple leaks over the years the wooden floor is seriously compromised, to the point of ultimate failure.

**Suggested Immediate Site Improvements**

It is hard to say which improvements need to come first so the following is based on a "community first" point of view. NOTE: These recommendations and focus is for the EPD filter system and components only, although other parts and components may be mentioned.

1. Making clean water is critical in the short term so, solving the water quality issue with the 2nd stage is a starting point.

Disassemble the 2nd stage filters to discover what is causing the high differential pressure and make necessary repairs.

2. Clean and calibrate Turbidimeters as well as maintaining sample location integrity so turbidity readings will be consistent and reliable.
3. Maintain disinfection (Chlorine) levels to assure the two essentials of"filtration and disinfection."
4. Remove all nonessential parts, material and even nonessential paperwork accumulated in the container. In short, major house keeping must be done.

**Suggested Long term system Improvements.**

Because none of the automatic functions of the system are currently working, this would be the starting point on the system itself for improvement and compliance.

1. Replace old WQCC with new Controls. EPD USA Inc. does make a PLC base control panel called Aquatic Intelligence Control System (AICS)Which would accomplish this. However, any control that can accomplish all of the control functions could be used.
2. Replace the rinse to waste (turnout) linkage valve with 2, individual motor actuated butterfly valves to better control the rinse to waste alarm function.
3. Replace the outdated/ obsolete turbidimeters with current models that also have the appropriate analog and digital outputs to be controlled by a PLC based control.
4. For the continuous proportional coagulant feed to work in concert with turbidity monitoring, confirm the existing coagulant pumps are capable of receiving analog signals from the new turbidimeters and external power control from the control system. if not, then new electronic coagulant pumps designed for external/ internal control should be purchased.
5. With a new control system would come the basic capability to also develop an automatic data acquisition system and remote monitoring and control (SCADA) system. The site already has a telephone line in place, all that would be needed is a central control location and the equipment to receive data and manipulate controls remotely; basically a computer and internet access.

**Suggested over all site Improvement.**

There is only one overarching non system improvement to make, and that is to either immediately begin replacing the floor of the container to stabilize the filter system within the container or abandon the container altogether and develop another structure on site to house the system.
I don't propose to suggest how to replace the floor in the container, I think the owners have a firm grasp on the possibilities regarding that work, nor do I assume to guide them in selection of alternate structures. However, EPD systems have been installed in simple structures from open sided canopy on concrete slab to fully enclosed concrete block buildings.
The only consideration to be aware of in building any new structure is the necessity of having the controls in an area (room) that is climate controlled. No modern control equipment will operate long in the temperature extremes experienced at Havasu Lake. As a matter of fact, I think it's quite amazing that the existing instruments are still functional. Typically, the temperature should be maintained at under 100 degrees F. for system longevity.

**Conclusion**

The fatigued nature of the Havasu filter system both structurally and in its performance does not mean the system cannot be rehabilitated to not only operate correctly by perform to a point of compliance with state regulations.

Unfortunately this is more of a budgetary problem than anything else so, The Company should diligently seek help finding federal or state grant money from the EPA, USDA or the Bureau of Reclamation.

This may be difficult so it is possible to get help through the California Rural Water Association.

Whatever happens, EPD USA Inc. will help in every way we can.

Paul Berry



President

EPDUSAinc.