

ENGINEERING COMMITTEE MEETING AGENDA

September 20, 2023 – 4:30 P.M.
Phelan Community Center
4128 Warbler Road, Phelan, CA 92371
& Via Conference Call (see below)

ENGINEERING COMMITTEE MEETING – 4:30 P.M.

Call to Order – Pledge of Allegiance

Roll Call

1) **Approval of Agenda**

2) **Public Comment** – Under this item, any member of the public wishing to directly address the Board on any item of interest that may or may not be within the subject matter jurisdiction of the Board, but not listed on the agenda, may do so at this time. However, the Board is prohibited by law from taking any action on any item not appearing on the agenda unless the action is otherwise authorized by the Brown Act. Any member of the public wishing to directly address the Board on any item listed on the agenda may do so when the item is being considered by the Board. *If you wish to address the Board, please do so by the method listed on the first page of this agenda.* Speakers are requested to be brief in their remarks. The Chair may limit each speaker to a comment period of five (5) minutes.

3) **Approval of Minutes** – June 21, 2023

4) **Oeste Recharge Study Project**

5) **Discussion Regarding Water System**

- Pumps and Wells Services Agreement
- 10-Year Tank Rehabilitation & Maintenance Service
- Water Quality
- Service Line Replacement Program Update
- Other Repairs/Replacements/Updates/Maintenance

6) **Smithson Springs Update**

7) **State Regulations Update**

8) **GIS Presentation**

9) **Review of Current Projects**

- New Well No. 15
- Well No. 17
- Tank 6A

10) **Staff Reports**



Mission Statement:

The Mission of the Phelan Piñon Hills Community Services District is to efficiently provide authorized services and maximize resources for the benefit of the community.

Authorized Services:

- Water
- Parks & Recreation
- Street Lighting
- Solid Waste & Recycling

11) Review of Action Items

- a) **Prior Meeting**
- b) **Current Meeting**

12) Set Agenda for Next Meeting – October 18, 2023**13) Adjournment**

Pursuant to Government Code Section 54954.2(a), any request for a disability-related modification or accommodation, including auxiliary aids or services, that is sought in order to participate in the above-agendized public meeting should be directed to the District's General Manager at (760) 868-1212 at least 24 hours prior to said meeting.

Agenda materials can be viewed online at www.pphcsd.org

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<https://www.pphcsd.org/meetings>

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Written Comments:

You may also email your public comment to the Board Secretary at ksevy@pphcsd.org by the meeting start time listed on this agenda. Your comment will be added to the record by the Board Secretary.

Please check the District website for updates on this meeting. We encourage you to sign up for our email notifications by emailing ksevy@pphcsd.org or by visiting our website and completing the signup form at www.pphcsd.org under the "Agendas and Minutes" tab.

SPECIAL ENGINEERING COMMITTEE MEETING MINUTES

June 21, 2023 – 4:30 p.m.
Phelan Community Center
4128 Warbler Road, Phelan, CA 92371
& Remotely Via Zoom or Conference Call

Board Members Present: Mark Roberts, Director (Chair)
Rebecca Kujawa, President

Staff Present: George Cardenas, Engineering Manager
Kim Sevy, HR & Solid Waste Manager/District Clerk
Sean Wright, Water Operations Manager
Chris Cummings, Water Operations Assistant Manager
Tony De La Rosa, Engineering Technician
Jennifer Oakes, Executive Management Analyst

Call to Order

Director Roberts called the meeting to order at 4:31 p.m.

Roll Call

All Committee Members were present at Roll Call.

1) **Approval of Agenda**

Vice President Roberts moved to approve the Agenda. President Kujawa seconded the motion. Motion passed unanimously.

2) **Public Comment** – None

3) **Approval of Minutes**

President Kujawa moved to approve the Minutes. Vice President Roberts seconded the motion. Motion passed unanimously.

4) **Oeste Recharge Study Project**

Mr. Wright provided an update.

5) **Discussion Regarding Water System**

- **Pumps and Wells Services Agreement**
- **10-Year Tank Rehabilitation & Maintenance Service**
- **Water Quality**
- **Service Line Replacement Program**
- **Other Repairs/Replacements/Updates/Maintenance**

Mr. Wright reported on system repairs, tank maintenance, completion of the pipeline project, water meter replacement program, dead-end flushing, the fill station, and water levels. A written report was provided in the agenda packet.

- 6) **Smithson Springs Update**
Mr. Cardenas reported the de-sedimentation pond is weedy. Water flow is low. It is not clear why the flow is low.
- 7) **State Regulations Update**
Establishment of a Chromium-6 MCL by the state is estimated to take place in 8-12 months. An update on conservation is going to the Board at the second meeting in June.
- 8) **Review of Current Projects**
 - **New Well No. 15**
 - **Well No. 17**
 - **Tank 6A**Mr. Wright and Mr. Cardenas provided updates on the current projects.
- 9) **Review of Capital Projects**
No discussion.
- 10) **Staff Reports**
Nothing new to report; a written report is in the agenda packet.
- 11) **Review of Action Items**
 - a) **Prior Meeting**
 - None
 - b) **Current Meeting**
 - Hydrographs
 - Presentation on Chromium-6 to Board in October
- 12) **Set Agenda for Next Meeting** – July 19, 2023
 - Remove Item 9
 - Add Tank 6A to Item 8
- 13) **Adjournment**
With no further business before the Committee, the meeting adjourned at 4:58 p.m.

Agenda materials can be viewed online at www.pphcsd.org

JULY 21, 2022

OESTE MONITORING WELL CLUSTER
WELL CONSTRUCTION REPORT
MOJAVE WATER AGENCY
PINON HILLS, CALIFORNIA

PREPARED FOR:



HARGIS + ASSOCIATES, INC.
ENGINEERING • HYDROGEOLOGY

OESTE MONITORING WELL CLUSTER
WELL CONSTRUCTION REPORT
MOJAVE WATER AGENCY
PINON HILLS, CALIFORNIA

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I WELL COMPLETION REPORTS SUBMITTED TO CALIFORNIA DEPARTMENT
OF WATER RESOURCES

ACRONYMS AND ABBREVIATIONS

ABC	ABC Liovin Drilling
ARCH	Air rotary casing hammer
ASTM	American Society for Testing and Materials
bgs	Below ground surface
H+A	Hargis + Associates, Inc.
MWA	Mojave Water Agency
PVC	Polyvinyl chloride
the Site	APN 309908101 at the west end of Cayucos Drive, Piñon Hills, California
SPLP	Synthetic Precipitation Leaching Procedure

OESTE MONITORING WELL CLUSTER
WELL CONSTRUCTION REPORT
MOJAVE WATER AGENCY
PINON HILLS, CALIFORNIA

1.0 INTRODUCTION

This Oeste Monitoring Well Construction Report has been prepared by Hargis + Associates, Inc. (H+A) on behalf of the Mojave Water Agency (MWA), for the monitoring well cluster located on parcel APN 309908101 at the west end of Cayucos Drive, Piñon Hills, California (the Site) (Figure 1). Activities described in this report were conducted in accordance with the MWA approved scope of services for monitoring well construction management (H+A, 2021).

The MWA parcel of land adjacent to the California Aqueduct near Phelan, California is intended to be used as a future recharge basin site to meet water delivery obligations to the Oeste Subarea. Existing hydrogeologic information in the area is sparse, and the Oeste monitoring well cluster was installed to fill in data gaps to aid in assessing the feasibility of the proposed aquifer recharge activities; measure and track recharge activities; and provide a long-term monitoring point for the Oeste Subarea. The cluster includes a regional water table monitoring well (ORMW1) and a potential perched zone monitoring well (ORMWP). The well cluster provides valuable data related to subsurface lithologic conditions, groundwater levels, and groundwater quality.

H+A was responsible for providing construction management during the drilling and construction of the wells to ensure that drilling-related activities were conducted in accordance with Technical Specifications specified in the driller contract documents (MWA, 2021). MWA contracted directly with the drilling contractor, ABC Liovin Drilling (ABC).

2.0 CONSTRUCTION ACTIVITIES

The following sections describe the general construction activities by task. The Technical Specifications provide a general description of well drilling, well construction, and well development procedures. This report describes the preparation, drilling, installation, development, and Site clean-up for the monitoring wells.

2.1 PERMITTING AND UTILITY CLEARANCE

Permitting requirements included obtaining County of San Bernardino well construction permits. Permit applications were prepared and submitted by ABC, with review by H+A and MWA. Approved well permits are provided in Appendix A.

Prior to mobilization, H+A conducted a Site visit with MWA and ABC to review rig and drilling footprints and well locations which were cleared for underground utilities by Underground Service Alert. The two well locations located at the northeast corner of the Site were designated with a separation of approximately 33 feet between wells (Figure 2). Well locations were cleared down to approximately 6 to 8 feet below ground surface (bgs) using air-knife excavation.

2.2 BOREHOLE DRILLING

The following sections summarize details of borehole drilling. Monitoring well ORMWP was drilled during the period December 20, 2021 through January 3, 2022. Monitoring well ORMW1 was drilled during the period January 31, 2022 through February 8, 2022.

2.2.1 Drilling of ORMWP

The borehole for monitoring well ORMWP was advanced using sonic drilling methods. Temporary steel casing was driven into the formation using a telescoping approach, with 10-inch diameter casing to 100 feet bgs, 8-inch diameter casing to 320 feet bgs, 6-inch diameter casing to 375 feet bgs, and 4-inch diameter casing to 400 feet bgs (Table 1). The sonic well borehole was drilled using a Terrasonic 600 drill rig.



Terrasonic 600 drill rig

The ORMWP borehole was advanced to a total depth of 400 feet bgs. From the recovered core, which could be as large as seven inches in diameter in the uppermost interval, a narrower core was subsampled and saved to standard core boxes for lithologic description and archiving. Lithologic logging and soil sampling were conducted during borehole drilling as described in Section 2.2.3.

2.2.2 Drilling of ORMW1

The borehole for ORMW1 was advanced using the air rotary casing hammer (ARCH) drilling method. Temporary steel casing is driven into the formation using a hydraulic hammer, with a standard tricone bit of similar diameter drilling just ahead of the casing. Compressed air is used as the circulating fluid, thus no water is added during the drilling process. The temporary casing was advanced using a telescoping approach, with 11¾-inch diameter casing to 240 feet bgs and 10-inch diameter casing to the total depth of 660 feet bgs (Table 1). The ORMW1 borehole was drilled using a Speedstar 50K rotary drill rig configured for ARCH.



Speedstar 50K rotary drill rig configured for ARCH

The well borehole was advanced to the total depth of 660 feet bgs. Drill cutting samples were collected for lithologic description at 5-foot intervals using a sieve-type catcher placed below the cyclone where the air stream with drill cuttings discharges into a hopper. Undisturbed soil core samples were collected from predetermined intervals using a modified California split-spoon sampler driven by a standard 140-pound hammer. Lithologic logging and soil sampling were conducted during borehole drilling as described in Section 2.2.3.

2.2.3 Lithologic Logging and Soil Sampling

Lithologic logging was performed to define the lithology of geologic materials and to characterize subsurface geologic and hydrogeologic conditions. Lithologic logs were compiled based on the description of continuous core samples obtained during sonic drilling of monitoring well ORMWP and on description of drill cutting samples recovered at land surface during ARCH drilling of monitoring well ORMW1.

Soil type was characterized using the Unified Soil Classification System (American Society for Testing and Materials [ASTM], 2009). Soil color was described using Munsell Soil Color Charts (Munsell Soil Color Charts, 1992). Grain size was estimated using ASTM standards (ASTM, 2009). Lithologic logs are included in Appendix B.

Subsamples of continuous core obtained during drilling of ORMWP were submitted to an environmental laboratory for a laboratory leaching test using Synthetic Precipitation Leaching Procedure (SPLP). Sample intervals were selected to target fine grained zones with the potential for mineralogy that may result in leaching of constituents that may negatively affect groundwater quality. The test used synthetic water with chemical and physical properties similar to the State Project water that will be used for future recharge. Results of leachate sampling have been summarized (Tables 2 and 3) and laboratory reports are included in Appendix C. A data verification was conducted and all reported data is valid.

Undisturbed soil samples obtained during drilling of ORMW1 were submitted to a geotechnical laboratory for analysis of grain size distribution, effective porosity, dry bulk density, vertical hydraulic conductivity, and unsaturated zone soil retention curves. Sample intervals were selected to represent a range of observed lithology. Soil physical properties are summarized in Table 4. Geotechnical laboratory reports are provided in Appendix D.

2.3 WELL CONSTRUCTION

Following drilling of each borehole, H+A and MWA determined the final well design for ORMWP and ORMW1 based on lithology and apparent depth to water encountered during drilling. Final as-built monitoring well construction details are provided in Table 1 and Figures 3 and 4.

2.3.1 Monitoring Well ORMWP

Construction of well ORMWP was completed on January 5, 2022. ORMWP was installed in a dry borehole, and is intended to act as a monitoring well screened in soil that may become saturated above a potential perching layer during future recharge events. Well construction details for ORMWP are summarized in Table 1 and Figure 3.

The bottom seal (portion of the borehole below the target depth for well construction) was backfilled with 50 percent No. 8 granular bentonite / 50 percent Monterey No. 3 sand by weight. The bentonite/sand seal was emplaced by pouring materials into the dry borehole from the surface, utilizing the temporary casing as a tremie pipe. The bentonite/sand seal was emplaced into the borehole from the bottom up, withdrawing the temporary casing as the borehole was backfilled.

Nominal 2-inch diameter Schedule 80 polyvinyl chloride (PVC) well screen (0.020-inch factory slotted) and nominal 2-inch diameter Schedule 80 PVC blank well casing was used to construct the monitoring well. Centralizers were installed at the top and bottom of the screen interval and at approximate 40-foot intervals along the blank well casing.

A filter pack consisting of Monterey No. 3 sand was emplaced dry in the annulus between the well screen and the borehole wall. A filter pack transition seal (intermediate seal) consisting of 50 percent No. 8 granular bentonite / 50 percent Monterey No. 3 sand by weight was emplaced into the annulus above the filter pack using the temporary casing as a tremie pipe, as described above. The temporary casing was gradually withdrawn as the bentonite/sand level rose during emplacement. The sanitary seal consists of neat cement grout containing 5 percent bentonite emplaced from the top of the intermediate seal to 2 feet bgs. From approximately 2 feet bgs to land surface, the annulus was filled with concrete in order to set the above-ground monument vault (see Section 2.3.3).

2.3.2 Monitoring Well ORMW1

Construction of monitoring well ORMW1 was completed on February 14, 2022. Well construction details for ORMW1 are summarized in Table 1 and Figure 4. Prior to beginning well construction activities, the bottom of the borehole was tagged at 552 feet bgs, indicating slough filled the bottom 8 feet of the borehole.

Nominal 4-inch diameter Schedule 80 PVC well screen (0.020-inch factory slotted) and nominal 4-inch diameter Schedule 80 PVC blank well casing was used to construct the well. Centralizers were installed at the top, center and bottom of the screen interval and at approximate 40-foot intervals along the blank well casing.

A filter pack consisting of Monterey No. 3 sand was emplaced in the annulus between the well screen and the borehole wall, using the temporary casing as a tremie pipe. A filter pack transition seal (intermediate seal) consisting of 50 percent medium bentonite chips / 50 percent 8 x 16 No. 12 mesh sand by volume was emplaced into the annulus above the filter pack using the temporary casing as a tremie pipe, as described above. The temporary casing was gradually withdrawn as the bentonite/sand level rose during emplacement. The sanitary seal consists of neat cement grout containing 5 percent bentonite was emplaced from the top of the intermediate

seal to 3 feet bgs. From approximately 3 feet bgs to land surface, the annulus was filled with concrete in order to set the above-ground monument vault (Section 2.3.3).

2.3.3 Surface Completion

Monitoring wells were completed with above-ground monument-type well vaults. Well vaults are constructed of steel tubing set in concrete slightly above the surrounding land surface (Figures 3 and 4). Well vaults are surrounded by steel bollards set in concrete. The monument vault and bollards are painted bright yellow for visibility.

2.4 GEOPHYSICAL LOGGING

Following construction of ORMW1, geophysical logging was conducted using downhole wireline logging tools within the PVC well casing and screen. Geophysical logging was performed on February 15, 2022, by Pacific Surveys, Claremont, California. Geophysical logs are provided in Appendix E.

The following logs were run in the borehole:

- Gamma Ray; and
- Electromagnetic Induction (Dual Induction)

Geophysical logs were used to generally confirm subsurface geology based on samples collected during ARCH drilling operations. The dual induction log was also collected to assess the moisture condition of the formation surrounding the borehole, to allow comparison of its present condition with changes in soil moisture following initiation of future recharge events.

2.5 WELL DEVELOPMENT AND GROUNDWATER SAMPLING

Well development was not conducted at ORMWP because the well was dry at the time of installation.

Initial development of ORMW1 was performed immediately following placement of the filter pack and consisted of gentle swabbing to settle the filter pack. No settling occurred; thus no additional filter pack sand was added.

Final development of monitoring well ORMW1 was performed during the period March 1 through March 16, 2022. Monitoring well development details have been provided (Table 5; Appendix F). Development methods for monitoring well ORMW1 incorporated swabbing, bailing, pumping and dual-tube airlifting. Water generated during well development was discharged to the land surface on-property.

Bailing of monitoring well ORMW1 was conducted to remove approximately 10 feet of sediment from the bottom of the screen interval. Bailing proved to be minimally effective despite attempts using several bailer designs. While approximately 2.9 feet of sediment and 38 gallons of water was bailed from the bottom of the well, additional sediment entered the well during the process, resulting in approximately 20 feet of sediment at the bottom of the well. After consultation with ABC and MWA, it was decided to discontinue bailing and attempt to remove the remaining sediment using dual-tube air lifting. Due to airline submergence limitations, it was not anticipated that effective development via dual-tube airlifting would be possible without increasing the level of submergence in the well by adding municipal potable water from the adjacent hydrant. Therefore, pumping development and subsequent collection of the initial groundwater sample was conducted prior to resuming removal of the sediment via air lifting/addition of hydrant water to ensure the sample is representative of groundwater conditions and not impacted by the addition of hydrant water to the well.

During pumping development, the well was pumped at a rate of approximately two gallons per minute, and approximately 364 gallons of water was removed by pumping. Turbidity decreased throughout pumping development, with a final turbidity of 3.7 nephelometric turbidity units indicating that the well was sufficiently developed (Appendix F). At the end of pumping development on March 2, 2022, the initial groundwater sample was collected from ORMW1 by

MWA personnel. Approximately 6.7 casing volumes of water was removed from the well by bailing and pumping prior to collecting the initial groundwater sample. Chain-of-custody documentation was enclosed with the sample shipment and groundwater samples were analyzed by the MWA laboratory. Results of groundwater sample analysis have been summarized in Table 5 and the laboratory report is included in Appendix G. A data verification was conducted and all reported data is valid.

Dual tube airlifting to attempt removal of the sediment remaining in the bottom of the well was conducted on March 14 to 16, 2022. To maintain adequate submergence, municipal potable water was added from the adjacent hydrant as needed. It was necessary to add a total of approximately 136,150 gallons of municipal water to maintain circulation. After approximately 9½ hours of airlifting and removal of 1,725 gallons of water, approximately 7 feet of sediment remained at the bottom of the well.

2.6 SITE CLEANUP, WELL SURVEY, AND WELL COMPLETION REPORT

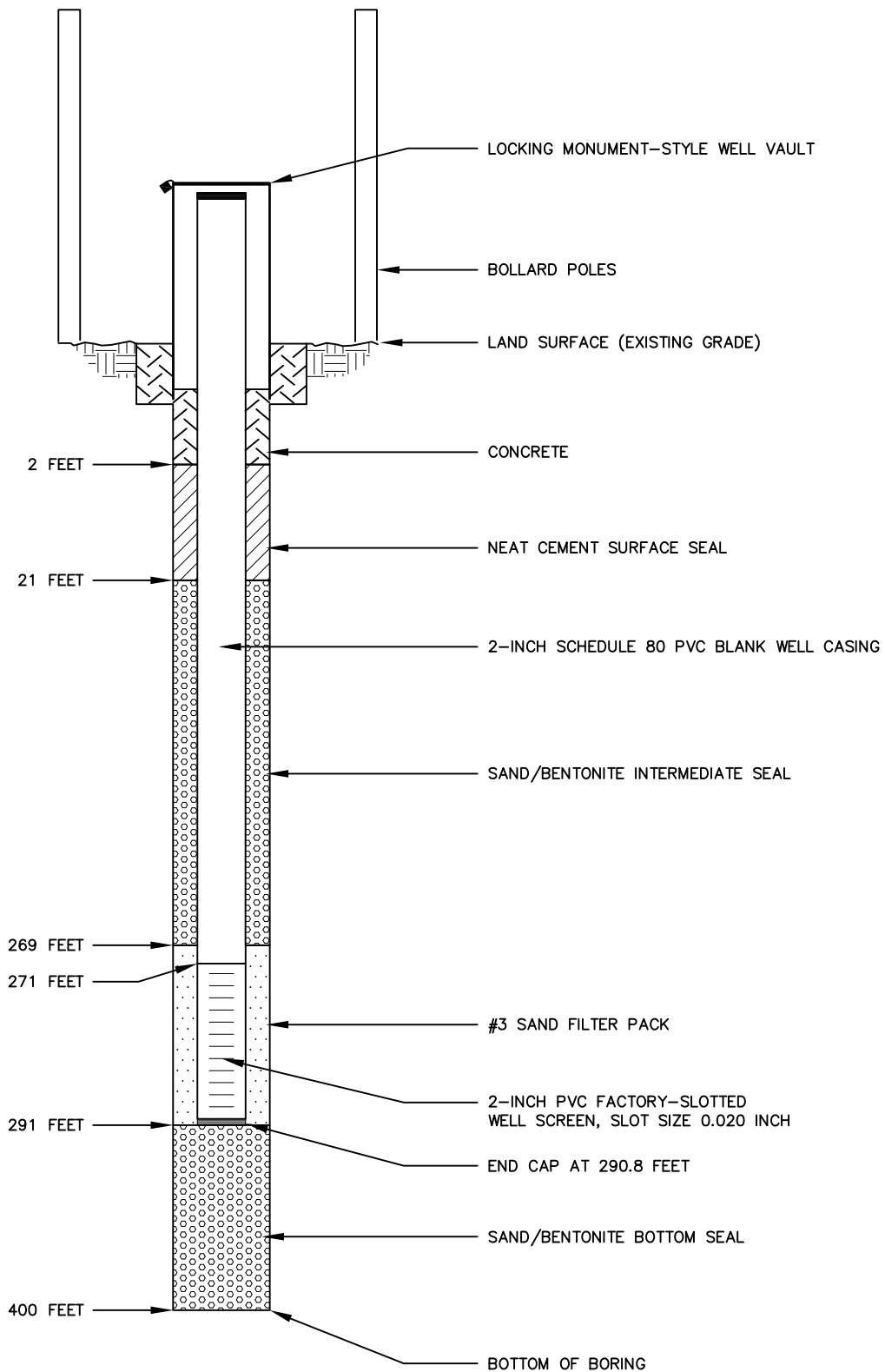
After well installation and development the Site was cleaned up and left in restored condition. Drill cuttings were spread out over land surface, without disturbing Joshua trees that occur on the property. Litter and other waste were removed from the drill site. MWA conducted a site walk with H+A and ABC staff and approved the restored site conditions.

Following well installation and surface completion, a survey of well locations and elevations was conducted by MWA. The survey was conducted on March 23, 2022. The MWA Well Canvassing Sheet for ORMW1 is provided in Appendix H.

A Well Completion Report for each well was submitted to the California Department of Water Resources on April 4, 2022 (Appendix I).

DEPTH BELOW
LAND SURFACE

AS-BUILT



NOT TO SCALE

Jul 20, 2022 - 12:51pm ESS - T: \2022\1200-1299\1296 Mojave Water Agency\Well Diagram\710-0961.dwg



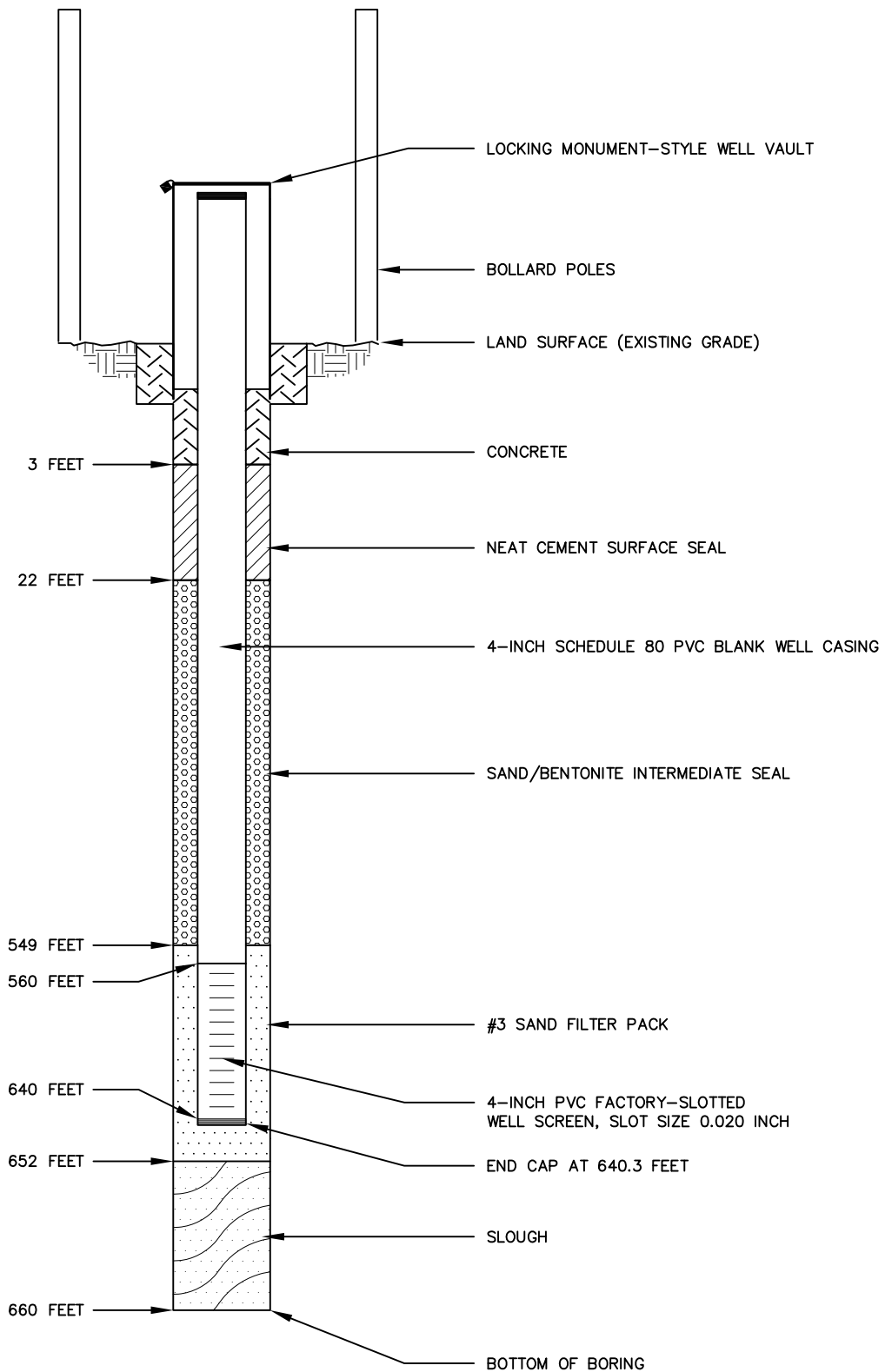
HARGIS+ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

7/22 | RPT NO.1311.01 | 710-0961 | A

FIGURE 3.
SCHEMATIC CONSTRUCTION DIAGRAM,
MONITORING WELL ORMWP

DEPTH BELOW
LAND SURFACE

AS-BUILT



NOT TO SCALE

Jul 20, 2022 - 12:52pm ESS - T: \2022\1200-1299\1296 Mojave Water Agency\Well Diagram\710-0962.dwg



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7/22 | RPT NO.1311.01 | 710-0962 | A

FIGURE 4.
SCHEMATIC CONSTRUCTION DIAGRAM,
MONITORING WELL ORMW1

MONITORING WELL ORMW1

DATES DRILLED : 1/31/2022-2/08/2022 DATE COMPLETED: 2/14/2022

DRILLING COMPANY: ABC Liovin DRILLING METHOD: Air Rotary Casing Hammer

LOGGED BY: G. Cranham PG# 5897 BOREHOLE DIA.: 11.75"-10.0" at 240'

REVIEWED BY: S. Prazen PG# 9816 GROUND SURFACE ELEV: 3466.2

SAMPLING METHOD: Grab; Mod Cal TOTAL DEPTH OF BORING: 660 feet bgs

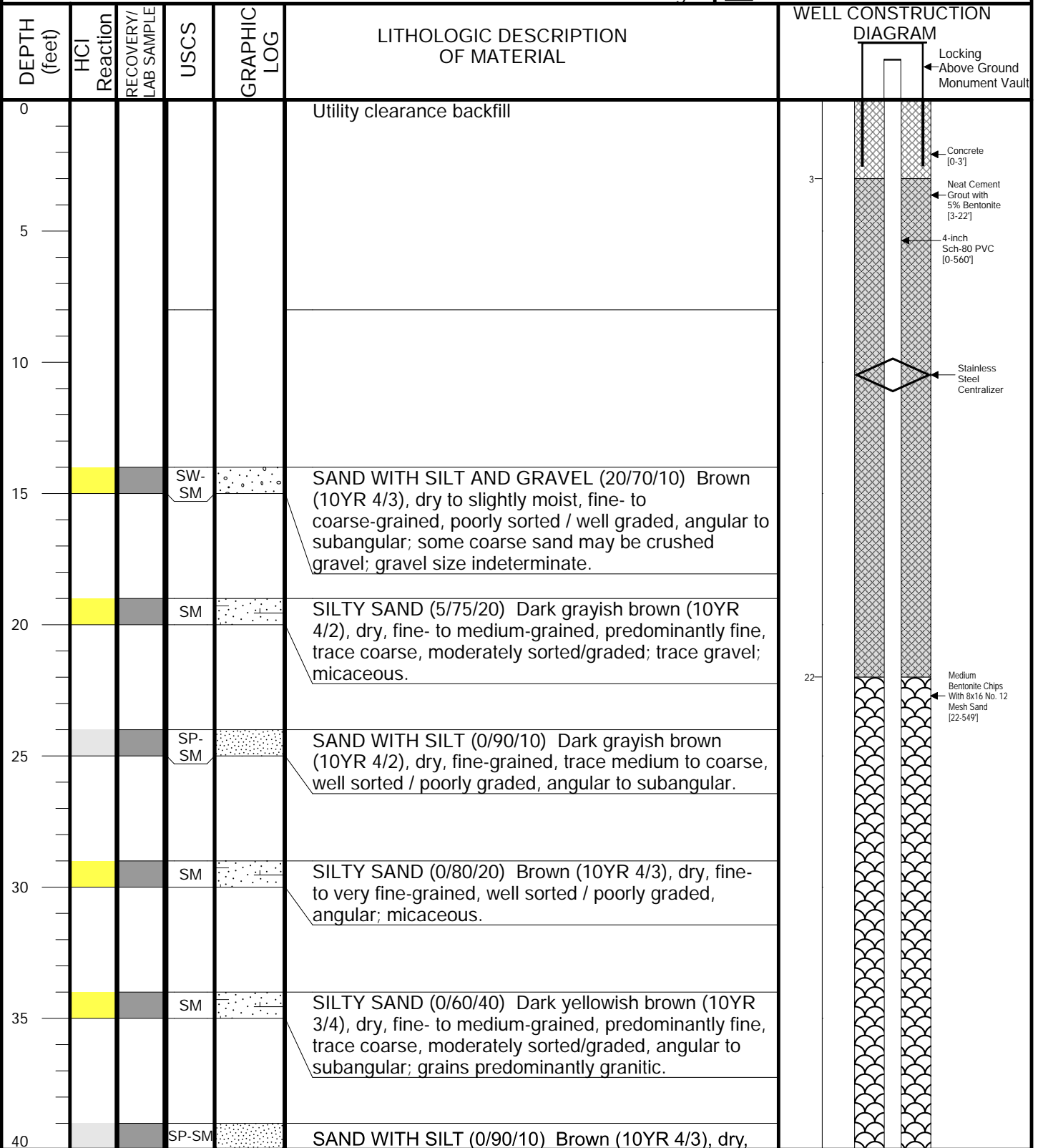
PROJECT: MWA-Oeste

PROJECT NUMBER: 1311.01

LOCATION: Oeste Area-Cayucos St.

Legend:

- No Reaction
- Weak
- Moderate
- Strong
- Mod Cal Core Sample



MONITORING WELL ORMW1

DATES DRILLED : 1/31/2022-2/08/2022 DATE COMPLETED: 2/14/2022

DRILLING COMPANY: ABC Liovin DRILLING METHOD: Air Rotary Casing Hammer

LOGGED BY: G. Cranham PG# 5897 BOREHOLE DIA.: 11.75"-10.0" at 240'

REVIEWED BY: S. Prazen PG# 9816 GROUND SURFACE ELEV: 3466.2

SAMPLING METHOD: Grab; Mod Cal TOTAL DEPTH OF BORING: 660 feet bgs

PROJECT: MWA-Oeste

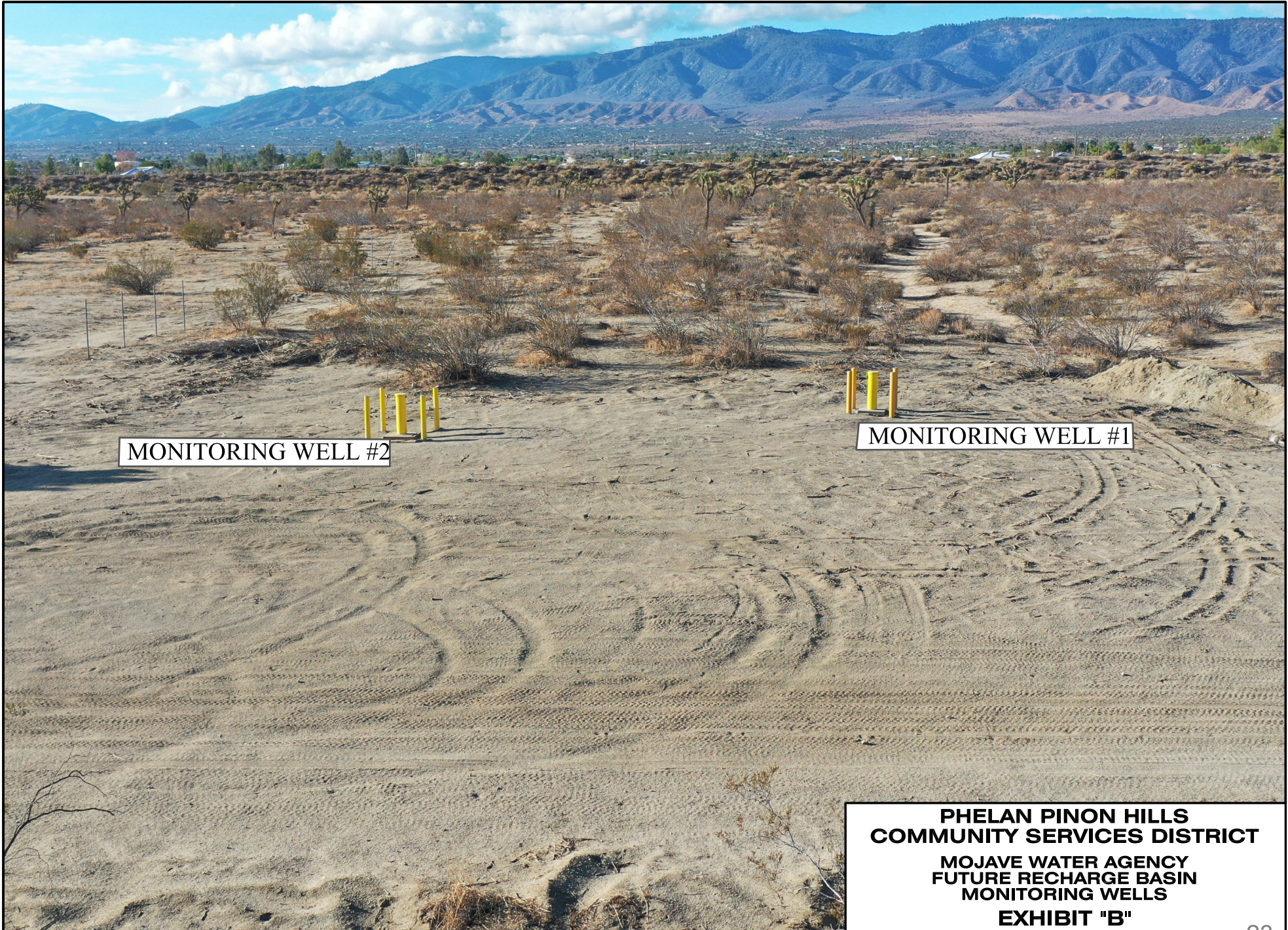
PROJECT NUMBER: 1311.01

LOCATION: Oeste Area-Cayucos St.

Legend:

- No Reaction
- Moderate
- Weak
- Strong
- Mod Cal Core Sample

DEPTH (feet)	HCI Reaction	RECOVERY/LAB SAMPLE	USCS	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL CONSTRUCTION DIAGRAM
40					fine- to coarse-grained, predominantly fine, moderately sorted/graded, angular to subangular; possible trace gravel, some coarse sand may be crushed gravel.	
45			SP		SAND (5/90/5) Dark grayish brown (10YR 4/2), dry, fine- to medium-grained, predominantly fine, trace coarse, moderately sorted/graded, angular to subangular; trace silt; trace gravel.	
50			SP-SM		SAND WITH SILT (5/85/10) Dark grayish brown (10YR 4/2), dry, fine- to medium-grained, predominantly fine, trace coarse, moderately sorted/graded, angular to subangular; trace gravel, some coarse sand may be crushed gravel.	
55			SW-SM		SAND WITH SILT (10/80/10) Olive brown (2.5Y 4/3), dry, fine- to coarse-grained, poorly sorted / well graded, angular to subangular; trace gravel, some coarse sand may be crushed gravel.	
60			SP-SM		SAND WITH SILT AND GRAVEL (20/70/10) Brown (10YR 4/3), dry, fine- to coarse-grained, predominantly fine, moderately sorted/graded, angular to subangular; some coarse sand may be crushed gravel; few possible schist clasts; few carbonate-cemented nodules,	
65			SP-SM		SAND WITH SILT (0/90/10) Dark yellowish brown (10YR 4/4), dry, fine- to medium-grained, predominantly fine, trace coarse, moderately sorted/graded, angular to subangular.	
70			SP-SM		SAND WITH SILT (0/90/10) Same as above.	
75			SP		SAND (0/95/5) Brown (10YR 4/3), dry, fine-grained, trace medium to coarse, well sorted / poorly graded, angular to subangular; trace silt.	
80			SP-SM		SAND WITH SILT (0/90/10) Yellowish brown (10YR	



MONITORING WELL #2

MONITORING WELL #1

**PHELAN PINON HILLS
COMMUNITY SERVICES DISTRICT
MOJAVE WATER AGENCY
FUTURE RECHARGE BASIN
MONITORING WELLS
EXHIBIT "B"**



Water Operations Manager's Report August 2023

Introduction

The Phelan Piñon Hills Community Services District (District) maintains a large water distribution system that includes over three hundred & forty miles of water lines. The following are District statistics and information related to the operations of this distribution system and the quality of the water supplied to District customers.

Summary

The District's water distribution system is in compliance with the State Water Resources Control Board- Division of Drinking Water, The Environmental Protection Agency, the Safe Drinking Water Act, Cal OSHA, and all other governing agencies.

Current chlorine demand has remained low and steady due to routine maintenance and flushing. Chlorine demand is found by subtracting the chlorine residual from the total chlorine added to the water system. A low chlorine demand indicates water-free or nearly free of pathogenic microorganisms.

Water Quality Samples

The following is a summary of all water quality samples collected this month and any pertinent information related to said samples.

TEST TYPE	NO. OF COLLECTIONS THIS MONTH	TESTING SCHEDULE	NOTES
Raw water and Bac-t samples	53 samples	Monthly	All in compliance, Sampled Weekly
General physical samples	6 samples	Monthly	All in compliance, Sampled Weekly
TTHM/HAA5	4 samples sets	Quarterly	All in compliance.
Title 22	0 sample sets	TBD	All in Compliance.
Inorganics	0 samples	Yearly	All in compliance.
Radiological (Gross Alpha)	0 samples	Every 3 Years	All in compliance.
Trichloropropane 1,2,3-TCP	0 samples	Quarterly	All in compliance.
Regulated VOC	2 samples	As needed	All in compliance.
Nitrate as N	8 samples	As needed	All in Compliance.
Chromium 6	14 samples	Quarterly	All in Compliance.
Secondary GP'S	1 samples	As needed	All in Compliance.
Uranium	0 samples	As needed	All in Compliance

Production and Service Order Report

The following is a summary of the District's water production and service orders for the current month.

Total Monthly Production	287.31 A. F. 11 % less than 2022
2022 Monthly Production	321.72 A. F.
USA's Marked	273
Service Orders Completed	586 service orders completed
Main/Service Line Leaks	51 service line leaks repaired. 5 Main line leak/ breaks repaired
Hydrant Repairs/Replacements	1 hydrant repaired/1 replaced
Residential Meters Sold	10
Commercial Meters Sold	0
YTD Total Meters Sold (Calendar)	31 (86 in 2022) (95 in 2021)
Construction Meters Out	3
Service Lines Replaced	2

Job Code Summary

Job Code	Total Completed
C-Lock - Lock	17
C-Read & Unlock-Open - Read & Unlock - Opening	0
C-Read & Unlock-OC-DM - Read & Unlock - Opening-OC-DM	48
D-Closing Read & Lck - Closing Read & Lock DO NOT USE	0
D-Closing Read-OC-DM - Closing Read & Lock-OC-DM DO NOT USE	5
M- Investigate Lock - Verify Meter Still Locked	18
M- Verify Acct Class - Verify Account Class	0
M- Water Audit - Audit Water Usage	2
M-Backflow - Backflow Information	0
M-Cost Estimate Req - Cost Estimate Request	1
M-Data - Data Log	4
M-Bees- Bees	0
M-Investigate Leak - Investigate Leak	0
M-Investigate No Wtr - Investigate No Water	1
M-Lock No N/O Info - Meter Locked No New Owner Info	0
M-Low/No Consumption - Investigate Low/No Consumption	11
M-Meter Leaking - Meter Leaking	0
M-Meter UTL - Buried - Meter UTL - Buried	0
M-Pressure Ck Hi-Low - Pressure Check Hi-Low	1
M-R/R Angle Stop - Repair/ Replace Angle Stop	2
M-R/R Gate Valve - Repair/ Replace Gate Valve	2
M-Read - Read (do not update Read)	0
M-Repair Svc Line - Repair Service Line	51
M-Repair/Install Box - Meter Box	2
M-Replace Serv Line - Replace Service Line	2

M-Stake Meter Loc - Stake Meter Location	2
M-Status - Status	7
M-Turn off-Cust Req - Turn off - Customer Request	4
M-UNLOCK – UNLOCK	27
M-Verify Leak Repair - Verify Leak Repaired	2
M-Water Loss Leak - Door Hanger Water Loss Leak	18
M-Water Quality Taste - Water Quality - Taste	2
S- Replace Register - Register Not Sending Signal	208
S- Meter Downsize - Meter Downsizing	0
Service Change - Service Status Change	0
S-Replace Mtr & Reg - Replace Entire Meter Max Life Usage	0
S-Replace Reg Hotrod - Replace Register Hotrod Died	2
S-Replace Register - Replace Register Mueller	0
S-Replace Mtr- Replace Entire Meter Bottom Seal Leaking	1
Grand Totals	586

Summary of Current Projects

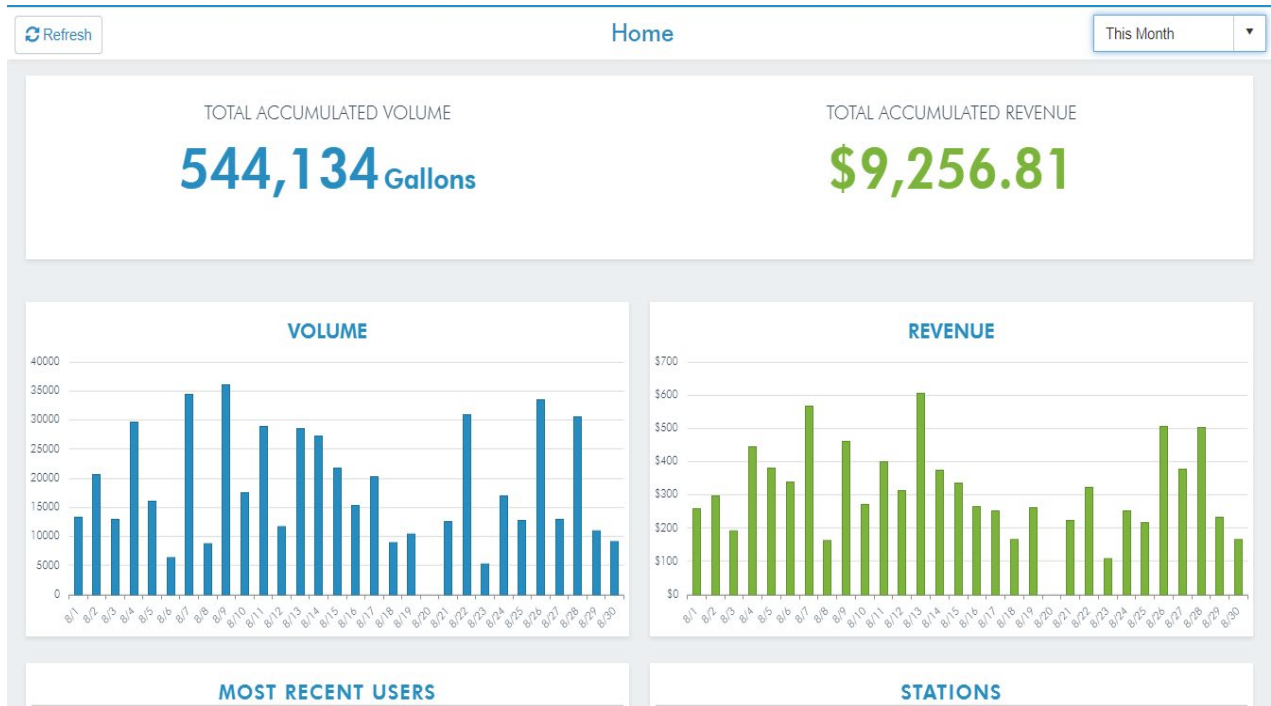
The following is a brief summary of all current and completed projects for the reported period

- Well Soundings at all wells are being done monthly
- Well 14 Production for August 0.18 AF, YTD 6.88 AF @ \$1055 per AF replacement C/Y 2023
- Valves and Hydrants Maintenance: 3 hydrants flushed and painted YTD Total-66
- Service line replacement program. 24 Replaced Calendar Year to Date, 11 Replaced Fiscal Year to Date
- Air-Vac maintenance & flushing program-0 Flushed & Maintenance YTD-0 of 336 Total Project 0% Complete
- Cla-Val automatic controls valves being systematically rebuilt as a water conservation measure- 23 Complete YTD Water savings from this project is 17 GPM and counting in conjunction with operational efficiency @ 7MG
- Water Meter Replacement Project- 5638 of 7204 Replaced – 78.3 % Complete
- Tank 1C-2 Interior coating sand, blast, re-coat- 100% Complete
- Outfitting & Equipping of Mountain well (Well 17)- 96% Complete
- Drilling, Outfitting, and Equipping of Well # 15- 75% Complete (Started 12/5/22)
- Pipeline Protection Project phase 3- Sonora Rd between Phelan Rd & Hollister- 100% Complete
- Pinon Hills Pipeline Project- 1,270' on Pinon Hills Rd- 100% Complete
- Well 1B pulled due to failure for rehabilitation-100% Complete
- Mainline extensions @ Coyote & Wagon Train and Smoketree & Beaver- 100% Complete

Projects Completed

- Well 15 Pipeline 5900' of 12" Ductile Iron Installed -100% Complete.
- Booster 3A-B Suction can hole repair- 100% Complete
- Well Meter and inter-tie Meter annual accuracy program FY 22/23- 100 % Complete
- Electrical Efficiency test performed @ every booster and well within the District- 100% Complete with summaries of notable replacements attached
- Oil Changes and greasing at all district wells 100% Complete Boosters 100 % Complete
- 0 Valves Turned this month as part of the district Valve Exercising Program, 41 Year to Date Turned of 4291
- 168 Dead ends flushed of 317 = every year no matter what < No goal, this is mandatory
- 1936 hydrants = 50 flushed this Year to Date 162 Painted Goal is 968 annually, this is done Bi-Annual
- Tank washouts of 10&11, 3B,2A-1,4B,3A,2A,4A,5A,1A-2,8A Complete

- The Fill Station Stats For the Month of August 2023



- The Fill Station Stats For Year to Date 2023

